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'Challenges & Opportunities'

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The Asian Business and Management Conference 2010

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Friday – Manhattan Crane
4:45-5:45

Special Panel: Business practice, Development and Experience of Transition Economies

Panel Chair: Marina Dabic

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Domagoj Hruska
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Faculty of Economics and Business, University of Zagreb (164) (Page 38)

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Graduate School of International Management, Aoyama Gakuin University, Japan (049) (Page 52)

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Saturday October 9, 2010

SATURDAY SESSION 1 – 9:00-10:30

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Faculty of Business, Athabasca University, Canada (008) (Page 168)
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ROOM: TAKASAGO
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Mohd Nazari Ismail, University of Malaya
Faculty of Business Management, Universiti Teknologi MARA, Malaysia (072) (Page 187)

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Lee Kong Chian School of Business, Singapore Management University (126) (Page 198)

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Department of Engineering, Tokyo University of Science, Japan (061) (Page 208)

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College of Management, Yuan Ze University, Taiwan (052) (Page 218)

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Faculty of Business Management, Universiti Teknologi MARA, Malaysia (080) (Page 228)

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Australian Catholic University, Australia (020) (Page 691)

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Hadijah Iberahim*
Faculty of Business Management, Universiti Teknologi MARA, Malaysia (076) (Page 263)

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Will Baber*
Graduate School of Management, Kyoto University, Japan (112) (See Page 682)

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ROOM: TAKASAGO
10:45-12:15

Session Chair: Thomas Ruble

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Sabeen Sheikh, Survey Research Manager*
Alex Chisholm, R&D Senior Analyst*
Graduate Management Admission Council® (GMAC), USA (029) (See Page 682)

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Thomas Ruble*
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College of Business Administration, Rider University, USA (044) (Page 276)

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Session Chair: Kathleen Walsh

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Multimedia University, Malaysia (21) (Page 287)

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Department of Engineering, Tokyo University of Science, Japan (060) (Page 347)

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RMIT University, Australia (097) (Page 361)

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Ling Deng*
School of Management, RMIT University, Australia (081) (See Page 682)

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Carlos Arruda*
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Faculty of Economics & Muamalat, Islamic Science University of Malaysia
Graduate School of Management, La Trobe University, Australia (038) (Page 393)

Innovation in Pedagogy for Engineers' Entrepreneurial Culture?
Catherine Leger-Jarniou
Entrepreneurship Centre, Universit2 Paris-Dauphine, France (067) (Page 704)

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Bernard Morard
Christophe Jeannette*
Alexandru Stancu*
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Session Chair: Sierk Horn

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Hsin-Mei Lin
Wen Chung Hsu
I-Fan Yen*
Yi-Tien Shih
Department of International Business Studies, National Chi Nan University, Taiwan (089) (Page 424)

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Jiyoung Shin*
Jon Jungbien Moon
Korea University Business School, Korea University, Korea (104) (Page 439)

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Sierk A. Horn*
Adam Cross
Department of East Asian Studies, University of Leeds, UK (107) No Paper

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Lifang Xu*
Pengfei Wang
HKUST, Hong Kong (151) (See Page 682)

IT Portfolio Management Framework: Anti-Money Laundering System in Indonesian Banks
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International University of Japan (115) (Page 458)

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Nathasa Mazna Ramli*
Faculty of Economics and Muamalat, Islamic Science University of Malaysia
School of Economics and Finance, La Trobe University (113) (Page 460)
Darren Henry
School of Economics and Finance, La Trobe University, Australia (113)

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Michiko Miyamoto*
Xin Lu
Yoshiaki Shimazaki
Dept of Management Science & Engineering, Akita Prefectural University, Japan (085) (Page 480)

Attack of Asian Companies on the Global Market
Cacik Rut Damayanti*
Business Administration Department, Administrative Science Faculty,
University of Brawijaya, Indonesia (201) (Page 493)

Analysis of customer behavior focused on time information
Takashi Togawa*
Yumi Asahi
Toshikazu Yamaguchi
Department of Engineering, Tokyo University of Science, Japan (058) (Page 505)

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Suwanee Suwanthanasan*
Heritage Asia Pacific
Sasin, Chulalongkorn University, Thailand (085) (Appendix 1)

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Tatsuo Masuda*
The NUCB Graduate School, Japan (200) (Appendix 2)

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A Contractual Analysis of State Versus Private Ownership
Susheng Wang
Kun Jiang*
Economics Department, HKUST, China (042) (See Page 682)

China's Law Reforms on Land and Real Estate Property and the Paradoxes
Richard Hu*
Faculty of Business and Government, University of Canberra, Australia (103) (Page 529)

Hyper-rich and Hyper-luxury in China: the case of the most expensive gated communities
GIROIR Guillaume*
Department of Geography, University of Orléans, France (005) (Page 538)

18. ABMC Session Topic – Financial Crisis: Challenges & Opportunities for Banks and Markets – Panel A

ROOM: TAKASAGO
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Session Chair: Chan Sok-Gee

China's Changing Business Model of Banking
Helena Xiang Li*
Frankfurt School of Finance & Management, Germany (040) (Page 558)
Horst Loechel
China Europe International Business School, German Centre of Banking and Finance
Frankfurt School of Finance & Management

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Yihong Wang*
Peter F. Chen
Hong Kong University of Science & Technology, Hong Kong (143) (See Page 682)

Corporate Governance, Board Diversity and Bank Efficiency: The Case of Commercial Banks in Malaysia
Sok-Gee Chan*
Institute of China Studies, University of Malaya, Malaysia (055) (Page 576)
Lee Teck Heang
Monash University, Sunway Campus School of Business, Malaysia

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ROOM: DENEB III
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Session Chair: Bhimaraya Metri

Doing Business in the 'Rising India': Challenges and Opportunities
Gautam Ray
Graduate School of Management, Kyoto University, Japan (037) (Page 596)

Revival of The Golden Bird – The Rise of India
Krishna Priya Rolla
Dr. Babasaheb Ambedkar Marathwada University (77) (Page 618)

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Bhimaraya Metri
Management Development Institute, India (078) No Paper

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Session Chair: Terry Boulter

Corporate Risk Management: The Hedging Footprint
Peter MacKay*
HKUST, Hong Kong (011) (See Page 682)
Sara Moeller
University of Pittsburgh, USA

Thai Hedging Practices: Post Asian Financial Crisis
Vanlapa Wongchan*
Payap University, Thailand
Terry Boulter*
Deakin Business School, Deakin University, Australia (122) (Page 629)

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Remarks By

Rev Professor Stuart DB Picken, Chairman, IAFOR International Advisory Board

Dr David Wilkinson, ABMC 2010 Conference Chair

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Chi-hsun Lee*
National United University, Taiwan (048) (Page 645)
Wen-yeh Huang
Yuan-Ze University, Taiwan
Jui-line Su
Yuan-Ze University, Taiwan

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Gary Keller*
College of Business & Management, Cardinal Stritch University, USA (94) (Page 650)

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Valerio Pesic*
Department of Banks, Insurance and Markets, University La Sapienza of Rome (054) (Page 664)

Foreign Direct Investment in Emerging East European Markets: An Examination of the EU versus Croatia and Turkey

Marina Dabic
Professor of International Business and Entrepreneurship
Faculty of Economics & Business
University of Zagreb
J.F. Kennedy Square 6
Zagreb, Croatia
mdabic@efzg.h

R. Glenn Richey, Jr.
Associate Professor of International Marketing and Supply Chain Management
Morrow Faculty Excellence Fellow
Management & Marketing Department
The University of Alabama
361 Stadium Drive
Tuscaloosa, AL 35487
205-348-8922
grichey@cba.ua.edu

&

Frank G. Adams
Doctoral Candidate
Management & Marketing Department
The University of Alabama
361 Stadium Drive
Tuscaloosa, AL 35487
fgadams@cba.ua.edu

Original Submission

* Please send all correspondence to Marina Dabic

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Marina Dabic
Professor of International Business and Entrepreneurship
Faculty of Economics & Business

R. Glenn Richey, Jr.
Associate Professor of International Marketing and Supply Chain Management
Morrow Faculty Excellence Fellow
Management & Marketing Department
The University of Alabama

Frank G. Adams
Doctoral Candidate
Management & Marketing Department
The University of Alabama

Abstract

International Business research has long looked at the environment as a determinant of business strategy. Increasing globalization, the rise of economic unions, and overall market instability is creating an environment where researchers and practitioners need to revisit the industrial economic impacts on foreign direct investments and the impact of those investments on said economies. Moreover, with the saturation of "more developed" markets, many business are looking to emerging markets as the best venues for continued growth and potential profit expansion. In this study we examine the impact foreign direct investment has had on two important and very different emerging economies – Croatia and Turkey. This discussion leads us to a call for research concerning both the viability Eastern European emerging markets and the impact that such investments have on these developing or "redeveloping" economies.

Keywords: Foreign Direct Investment, Global Marketing, Resource Development, EU, Turkey, Croatia, Industrial Economics

Introduction

Understanding the growing influence of global factors on commercial exchange is one of the most important issues in marketing (Harvey, et al 2008). Developing a better understanding that the role foreign direct investment (FDI) plays in shaping the growth of global trade is a matter of great importance to both scholars and practitioners (Markusen and Venables 1999). Intercontinental trade growth has experienced a rapid boom since 1500, with about 1% annual growth in 1500-1799 (about three times the growth rate of European GDP in that period). In 1800-1992, intercontinental trade grew at an average annual rate close to 4% (O'Rourke and Williamson, 2004; 2004a). In the last two decades, the rate of world trade growth has continued to surpass that of world income growth, and foreign direct investment (FDI) has grown about twice as fast as the world income (OECD, 2002; UCTAD 2003, 2004)[i]. Northrup (2005) dates the start of this trend of a "great convergence" as far back as 1000 A.D., when regional empires started to consolidate disparate peoples and overlaid their traditions with a common culture, world religions spread universalistic beliefs, and long-distance traders spread ideas and technologies as well as goods. In the last two decades, the rate of world trade growth has continued to surpass that of world income growth, and foreign direct investment has grown about twice as fast as the world income. The 1980's were a time of great emphasis on cost focused growth strategy. Firms at this time employed foreign direct investments (largely mergers and acquisitions) as a method of control based market entry. The 1980's approach has resurfaced in recent years with the 2004 announcement of $1.95 trillion growth in FDI (Wall Street Journal, 2005). World income escalated by 6.1% per year, world exports by 7.5% per year and world FDI stock rose by 12.7% per year in the 1982 to 2005 period (UNCTAD, 2006).

The rising levels of foreign direct investment (FDI) over the past decade are well documented by UNCTAD, OECD and national statistics. Global FDI inflows surpassed the one-trillion-dollar mark in 1999, reaching $1.1 trillion, an increase of 55 percent over 1998. In 2000, global FDI inflows increased by 18 percent over 1999 levels to $1.3 trillion (UNCTAD 2001). This number increased by $1 trillion in 2005. Value added created by MNC affiliates abroad accounted for 6% of world GDP in 1982 and 10% in 2005 (UNCTAD, 2007). From 2003-2009, the average annual growth of FDI projects was 11.5%, job creation 13%, and capital investment 16%. The growth of the FDI market came to an end in 2009, with FDI Intelligence recording a 14% decline in projects and over one-third decline in capital investment and job creation. The decline in FDI projects was almost identical to the decline in world trade, which was 14.4% in 2009. However, despite the decline, globalization did not stop. Companies continued to invest overseas and it has become a best way of achieving economic integration (Brenton, et al 1999).

In spite of the decline global trade that accompanied the world-wide economic slow-down, $1 trillion was committed to greenfield FDI in 2009, creating 2.6 million jobs. In developed countries alone, FDI inflows reached over 1,248 billion dollars. The EU accounted for two thirds of FDI inflows directed towards developed countries. Globally, FDI reached a record high of 1,833 billion dollars in 2007, marking the fourth uninterrupted year of growth, and exceeding the previous peak in year 2000 by 400 billion. The average growth rate of Inward FDI since the period of 1986-1990 grew from 15.1% to 22% a year in 2007.

Four of the top five destination countries for FDI remain the same in 2009 compared to 2008- Germany (7th in 2008) replaced France (from 5th in 2008 to 8th in 2009). The US surpassed China as the leading recipient of FDI inflows, witha 26% increase in FDI projects whilst FDI project numbers into China fell 25%. The UK attracted a total of 1032 FDI projects representing an increase of +19%. Singapore was the only top ten city to witness a rise in FDI projects + 30%. (FDI markets.com). However, the debate remains open as to whether growth causes FDI or FDI causes growth (Chowdhury and Mavrotas 2006).

Today, doors are opening for greater inclusion of all markets into the world economy. Influences driving these changes include globalization, liberalization of trade, and the transition of economies from more planned to more open models (especially in Eastern Europe).

A striking example of this trend is the focus of this study. New OECD members from the formerly planned economies of Central and Eastern Europe, saw some of the world's most rapid growth in inward FDI . The contribution of FDI as a share of gross domestic product (GDP) in the new OECD members grew from close to zero in 1990 to about 47% in 2006, about twice as much as the world average in that year (UNCTAD, 2007). The new EU members' ratio of FDI stock to GDP was 45% in 2006 (up from 0.3% in 1990 and 28.5% in 2000), much more than the 24% ratio for developed countries and the 31% ratio for developing countries in 2006. Central Europe also had a 25% contribution of FDI to annual capital formation in 2005 compared to 9% in developed countries and 15% in developing countries (UNCTAD 2007).

Conceptual Background

As FDI continues to increase, it is important to note that the distribution of investment is uneven across the world. Extant literature has unsuccessfully tried to explain this varying allocation of FDI into emerging/transitioning economies (Kaminski, 2001; Bornstein et al. 1998; Tuselmann, 1999; Kuznecovs and Maslows, 2004; Barry, 2002, Brenton et al 1999). For instance, Bennet and Green (1972) point out political instability as a determinant of FDI. Henisz' research (2000), one of the key motivators of this work, analyzed the importance of institutional economic environment for attractiveness of entry models and supporting a link between market entry mode choice and the degree of strategic uncertainty. Firms pursuing international business opportunities analyze a number of factors regarding the FDI location decision (Dunning, 1999, 2000; Porter, 2000, Makino, et al. 2004). Overall, Dunning (1981;2000; 2003), concluding that foreign countries that attract investments by multinational firms typically are defined by a large and growing market, a high gross domestic product (GDP), low factors of production costs, and relative political stability. Other authors have built upon Dunning's framework to empirically assess factors that influence FDI (Wasseem 2007) and the importance of country of origin (Wang, et al 2009).

Bitzer and Görg (2005) provide an updated literature review with particular emphasis on the influence of inward and outward influence of FDI. They employ a large panel analysis of countries to explain that spillovers in one country can enable more general conclusions for the OECD as a group and open research for cross-country variation. Bevan and Estrin (2000) found that FDI inflows to CEE are motivated by several factors including low unit labor costs; large market size; the credit rating of the FDI recipient country, and economic geography (geographical proximity is associated with increased FDI).

At the same time, nations as diverse as the United States and the United Arab Emirates compete to attract foreign firm FDI inflows. While it seems plausible that FDI will be attracted to regions characterized by more favorable environmental factors (Kobrin 1976), legal systems (Perry, 2003), and governance infrastructures (Globeman and Shapiro1999, 2003, Daniel, 2002), all other things constant, most of the relevant literature has focused on economic determinants of FDI inflows. It is, of course, true that the international business literature has acknowledged the importance of country-specific political risk (Kobrin, 1976, Ahmed et al.2002; Akther and Lusch, 1988). As such, empirical analyses of FDI now routinely include variables to control for inter-country differences in the broad political environment so that volatility does not create study bias (Altomonte, 2000; Nicoletti et al. 2003; Bevan & Estrin, 2000; Mody & Srinivasan, 1998; Morisset, 2000; Stevens, 2000; Tuman & Emmert, 1999), albeit with somewhat mixed results (Dawson, 1998). Nevertheless, controls are needed to better assess the impact of FDI.

Bevan and Estrin, (2004) anlysed the determinants of FDI from Western countries, mainly in the European Union (EU), to Central and Eastern European ones. Demirbag et al 2007; Meyer, 2001 used institutional and transaction costs perspectives in explaining foreign equity ventures' performance in an emerging market economy. Different authors focused their research to explore the most important influences to FDI and carried out macroeconomics performance (Kornecki; Rhoades 2007; Kornecki; 2008) country characteristics (Christman, et al. 1999); unit labor costs (Johnson (2006), Bevan et al. (2004), Pusterla and Resmini (2005), Clausing and Dorobantu (2005), Disdier and Mayer (2004), gravity factors (Asiedu (2006), Ismail(2009)), market size (Ledyaeva, (2009), Birsan and Buiga (2008)) , sectorial patterns (Resmini, 2001.) competitive advantage (Zámborský, 2008) and proximity. In brief, the dynamics of FDI are broad and the effects are difficult to fully cover in any model. Thus, we suggest a re-visitation or even a revival of FDI research that includes more holistic models, better samples, and a focus on strategic impacts on the firm and the environments in emerging markets.

Research Focus

The purpose of this study is to estimate the effects of FDI on economic growth inspired by the work of Kornecki (2008). We have conducted macroeconomics performance analysis on the initial European Union (EU) 15, new members EU 12 (states of the CEE region), and two different yet important EU candidate countries (Croatia and Turkey) for the period 1992-2009 on the relationship between foreign direct investment (FDI) and performance in CEE countries.
EU(15) represents following 15 countries: Six founders: Belgium, France, Germany, Italy, Luxembourg and Netherlands, preceding Denmark, Ireland and the United Kingdom who joined in 1973. Greece became the 10th member of the EU prior to Spain and Portugal five years later.

Furthermore in 1995 three more countries expanded the union, Austria, Finland and Sweden putting together the EU (15). As for the EU (12) countries Czech Republic, Cyprus, Estonia, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia joined in May 2004 and Bulgaria and Romania in January 2007. Countries considered as candidates are Croatia, Turkey and Macedonia (History of the European Union).

EU membership requires the adoption of EU legislation across the range of commercial and civil law, including trade rules, financial regulation, and competition policy so we analyzed macroeconomic factor through inward FDI Performance Index. Inward FDI Performance Index is the ratio of a country's share of global FDI inflows to its share in global GDP. If the Inward FDI Performance Index value is greater than one, the country received more FDI than its relative economic size. A value below one indicates that the country received less FDI than its relative economic size (UNCTAD, 2004 in Kornecki 2008).

EQUATION 1:

$$INDi = \frac{\mathbf{FDIi / FDIw}}{\mathbf{GDPi / GDPw}}$$

INDi = The Inward FDI Performance Index of the ith country

FDIi = The FDI inflows in the ith country

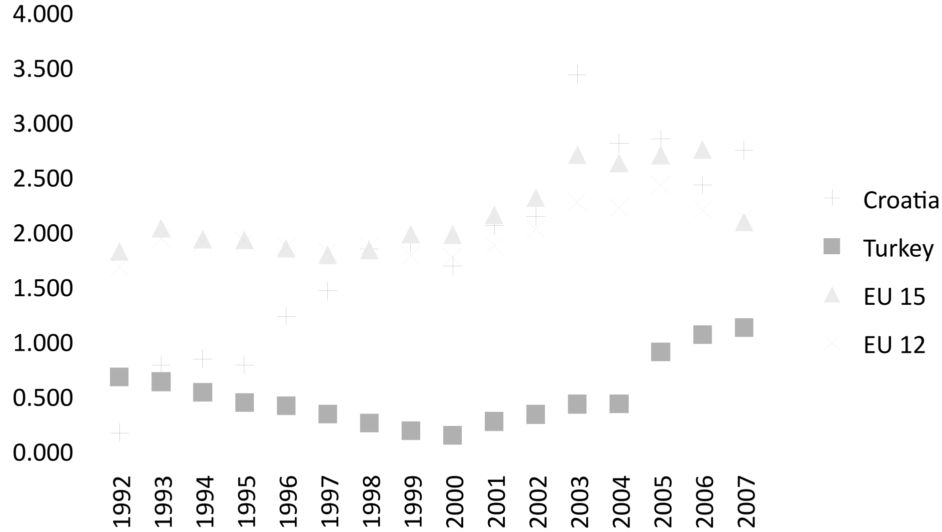
FDIw = World FDI inflows

GDPi = GDP in the ith country

GDPw = World GDP

An inward FDI performance index was used to examine country-level secondary datasets. This comparison is one of the CEE countries inward FDI against the World Performance Index (1992 – 2007). The indication is that the FDI performance of CEE transitioning economies was above the world average performance. We hope that this and the related information offer new theoretical insights and openings for empirical tests that analyze how performance is driven by industrial economic factors.

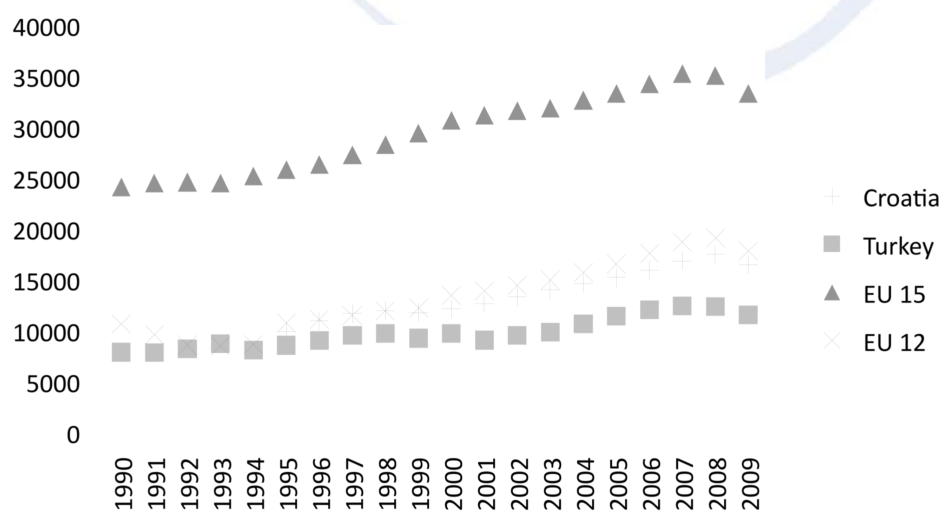
Table 1: Inward FDI performance index



Source: (blinded author)
http://www.unctad.org/Templates/WebFlyer.asp?intItemID=2471&lang=1

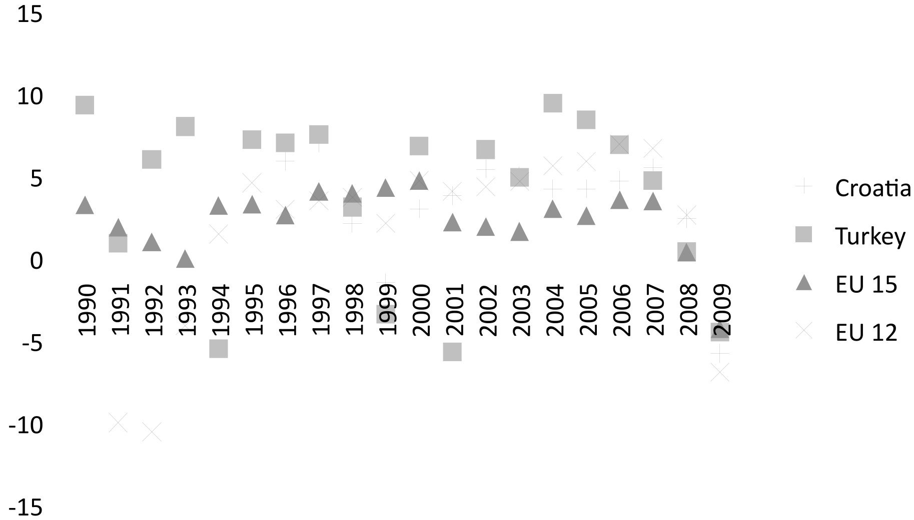
As demonstrated by Table 1, Croatia experienced sharper increases in inflows of FDI between 1992 and 2003, surpassing all other EU nations by 2001. This high increase in FDI was partially due to the intensive privatization process that was going on since the year 2000. However, by 2003, Croatia experienced a sharp drop in foreign direct investment. Turkey, on the other hand, received much lower levels of FDI between 1992 and 2000 and has been experiencing steadily increasing levels of FDI ever since. However, as of this study, the levels of foreign investment in Turkey are still roughly ½ those of the top 15 EU recipients of FDI.

Table 2: GDP per Capita, US$, at prices and PPPs of 2005



Source: (blinded author) http://w3.unece.org/ Source: (blinded author) http://w3.unece.org/

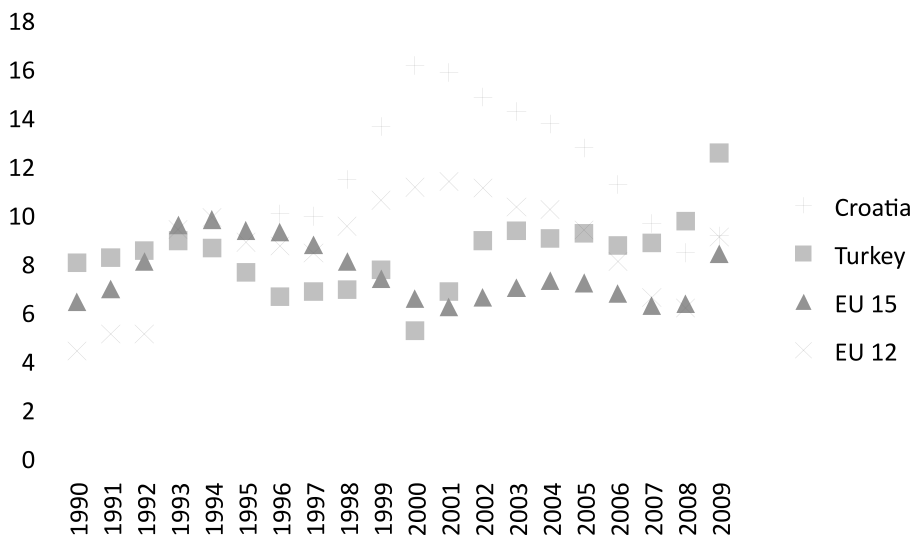
Table 3: GDP at Prices and PPPs of 2005, Growth Rate



Source: (blinded author) http://w3.unece.org/

Orthodoxy describes economic growth as referring to the increase in a specific measure such as gross domestic product, or per capita income. As demonstrated in Table 2 and 3, all nations in this study experienced a similar rate of increase between 1990 and 2007, a direct investment increase of approximately 20 %. Therefore, while mindful of the importance of growth and development, researchers need to examine a broader palette of components that constitute country success in FDI development. This suggests the influence and/or inclusion of all FDI on the productivity of all countries included in the study. As in the case of the amounts of FDI investment discussed in Table 1, GDP increases in Croatia were greater than those experienced in Turkey, suggesting that FDI levels helped drive broader economic conditions. The unstable growth rate in Turkey reflecting economical fluctuations might have been the cause of FDI inflow reserve even more. Borensztein et al. (1998) support that the contribution of FDI to in-country economic growth is evident only when there is an interaction between human capital, FDI, and performance.

Table 4: Unemployment Rate %

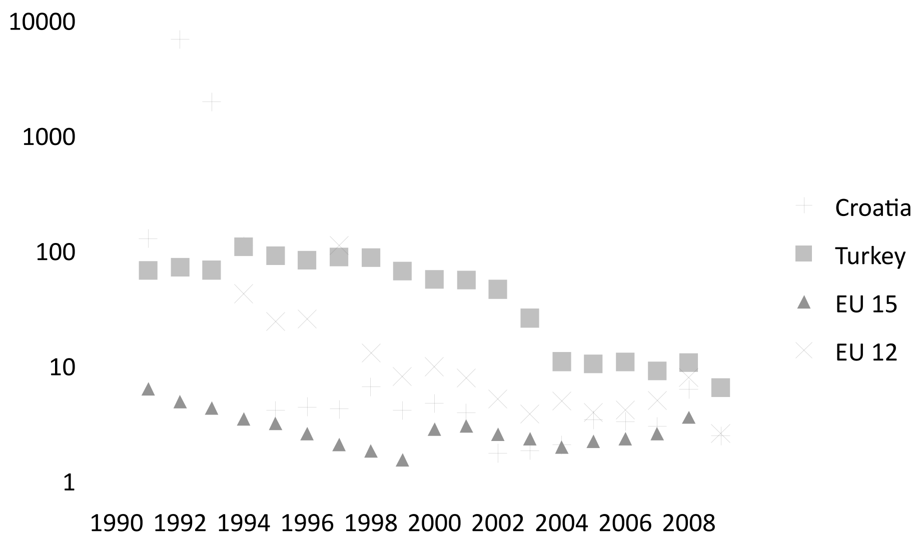


Source: (blinded author) http://w3.unece.org/

As demonstrated in Table 4, from 1996, unemployment rates in Croatia sharply increased. A decrease did not begin until 2000. During the same period, unemployment decreased in Turkey and began to increase in 2000. When compared against the rate of FDI increases in these two countries, this suggests an inverse relationship between FDI and employment in the recipient nation. However, unemployment decreased in Croatia after 2000 while FDI continued to increase.

This suggests that early stages of FDI may displace existing industries or workers with facilities manned by imported, "expert" technicians, while at later stages, as FDI sponsored industries expand, they begin to train and employ local personnel. Additionally, this pattern may represent a diffusion of skills and resources from FDI into the local economy, opening new opportunities for local businesses to start and expand and employ local personnel.

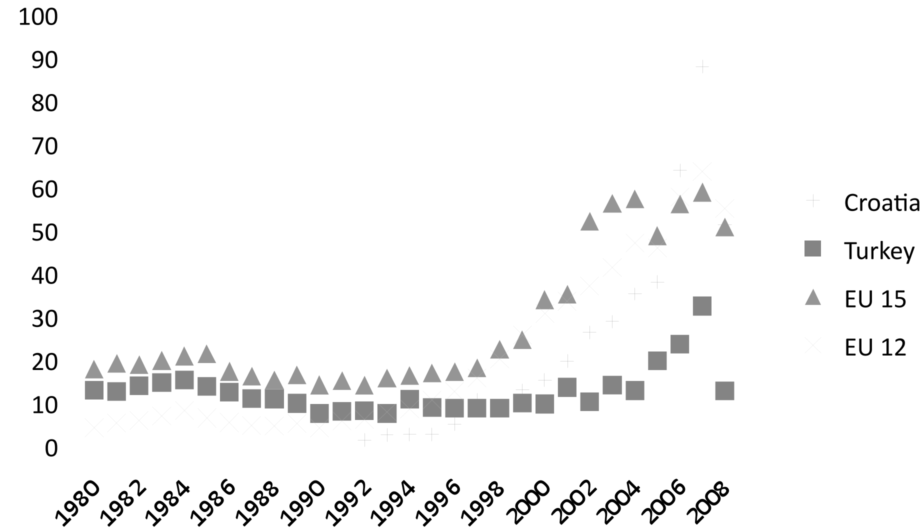
Table 5: Consumer Price Index growth rate; logarithmic scale



Source: (blinded author) http://w3.unece.org/
Original values for the inflation were given in percentages, but since Croatia had a hyper inflation problem in the beginning of the 90ies logarithmic scale was computed for the comparison

As demonstrated in Table 5, prices for all markets studied have fallen since 1992. These rates of decline share an inverse relationship with the rates of increase with the rates of FDI investment. This is particularly evident in Croatia, which was recognized by the EU in 1992, providing its first access to FDI. However, it is particularly interesting to note that prices continue to decline even as FDI began to decline in Croatia, the EU 15 and 12 (see table 1). This suggests the resources built by FDI in a recipient nation may represent durable resource effects described by Penrose (1959) as "sticky".

Table 6: Inward FDI stock; percentage of Gross domestic product



Source: (blinded author) http://stats.unctad.org

Inward FDI stock presents the value of the capital increased by the retained profits that originates from the foreign investor measured as a percentage of GDP. Capital of the subsidiary corresponds to all the companies assets reduced by liabilities towards third parties including the parent.
As demonstrated by Table 6, imported material follows the pattern of FDI. From the point at which FDI begins to increase (year 1992 for Croatia, the EU 12 and the EU15; year 2000 for Turkey), material imports as a percentage of GDP increases and generally decreases once FDI begins to fall off.

Table 7: GDP; Millions of US$, at prices and PPPs of 2005 & Inward FDI stock correlation 1990-2008

Country	Croatia	Turkey	EU 15	EU 12
correlation	,912**	,602**	,860**	,871**
R2	0,831	0,362	0,739	0,758
p value	0,000	0,000	0,000	0,000

Source: http://stats.unctad.org, calculated by author

In order to further explore the influence of FDI on the economic growth using data of the four countries correlation matrix was calculated. Table 7 illustrates positive correlation between real GDP and inward FDI stock. Coefficients are highly significant and this relationship is proven reliable. Highest score was found in Croatian example (0,912), preceding EU 12 (0,871), EU 15 (0,860) and Turkey (0,602).

Conclusion and Future Research

This study illustrates to both domestic and IB researchers the evolving dynamics of FDI in emerging markets. This research area is of growing importance in a globalizing world economy where firms are looking for move new markets. Toyota is building cars in Istanbul, TUK at their #1 quality plant – ThyssenKrupp is soon to manufacture steel in Alabama, US; largely known as a mature service economy with high cost factors of production. The reality is that the global economy is opening doors for new and perhaps guerilla strategy in FDI. Past research in FDI, while important to our understanding of normative expectations, may not be completely relevant to current world economics. As the world changes, so should research and the predictions of empirical studies. In fact it may be possible that the non-normative nature of IB will avoid Theory development due to the ever moving interactions of culture, polity, economic protectionism, and technological. As such, it is our suggestion that evolving contingencies and evolutions in global business are reducing the validity of past FDI studies and opening the door for new work in both emerging market analysis and developed market "re-involvement". Moreover, the discussion needs to be extended to both impacts on the firm (Barney 1986) and impacts on the home county environment (Harvey et al 2009).

Managerial Implications

The growth and restructuring of international entry strategy for global front-runners faces very complex questions. Where firms will place production and focus distribution is in flux to the point that extended market research is needed. Firms must find ways to exploit global cycles of economic instability, political volatility, and stagnation while defining strategic goals and expectations for an FDI.

Encouraging economic development and regional integration between CEE countries, not just with the EU, is one of the main aims in EU's accession policy. Could EU judgments have a decisive impact on the relative performance of the different CEE economies in the longer term via FDI? Should a top global company invest in Croatia or Turkey now or wait for EU involvement. It seems that to research opportunity is open in a practical sense. Firms need more information to help pinpoint when and where to enter the best global locations not only for the benefit of stakeholder, but for the long-term benefit of economic transactions in general.

From a public policy standpoint, governments should think deeper about the fit of an FDI to their economic environment. Speaking from a pure GDP stand point - more FDI is better for a target country. Low-performing economies need FDI to initiate the restructuring that can improve their competitiveness. Yet not all emerging markets need the same FDI. If new entry cuts existing local employment – the foreign investment could have a negative implication. Governance of who, when, and where is vitally important to FDI and host country success. As such, there may need to be a shift in strategies for pan-European markets (and beyond) and FDI inflows may drop off, holding back economic integration and progress in transitional economies as well. We should point out that current research opportunities are immediately important in the EU.

Limitations and Future Research

Our initial discussion was that the both firm and economic performance are important for FDI. This is a good starting point for increasing the economic activity in the host state. But we have concluded that the past macroeconomic indicators are not playing a decisive role in the localization of foreign investments. We must be very open that examinations of interaction effects have been under studied in FDI research. As the field of research has opened to new ideas, we now offer opportunities for important research across gaps in our existing knowledge. We end with a proposal of options as research "area" questions (RAQ). It is our hope that readers will leverage these questions as areas of future study.

Research Area Question 1:

RAQ1

What is the relationship between FDI and employment in the home country? Findings of this study suggest that FDI initially inversely correlates with recipient country employment, and yet later may positively correlates with the employment in recipient countries. Are these changes in correlation consistent in other FDI recipient countries and, if so, what influences drive such a relationship?

RAQ2

Does FDI build resources that diffuse into the recipient country's economy? Findings of this study indicate a positive correlation between FDI inflows and recipient country GDP and an inverse correlation between FDI inflows and consumer prices in the recipient country in the early stages of FD investment. Yet, in later time periods, even when FDI inflows decrease, recipient country GDP continue to increase and consumer prices continue to decrease. Does this indicate resources established by FDI that are "repurposed" to drive other effects on the recipient economy?

RAQ3

What role does cultural distance between an acquiring firm and an acquired firm play in helping the acquired firm assimilate the acquiring firm's goals and in helping the acquiring firm extend its implicit contract beyond the acquired firm to the acquired firm's employees? Do the correlations observed hold in a larger sample? As noted by Franke and Richey (2010), the sample size of international studies is determined by the number of distinct cultures represented, not by the total number of respondents. What relationships are likely to emerge if larger numbers of cultures are included?

RAQ4

What role does global marketing capability play in helping acquiring firms better identify potential acquisitions in the global market that may more easily assimilate into the purchasing firm? Are firms that are better equipped to understand the needs and interests of potential employees in FDI recipient countries better able to adapt the means by which they integrate the employees of acquired firms into their operations?

RAQ5

What control factors are significant in examining relationships such as these? Conditions in the global business arena vary by individual currency, level of competition, degree of political risk, import/export barriers, degree of ethnocentrism toward foreign brands or offerings, and level of employee education and training, among others. Future research should consider such potential covariates.

RAQ6

What is the relationship between the factors that draw FDI to a given country and the outcomes that investing firms harvest? What influences allow investing firms to turn the potential customer demand and employee skill resources of a given market into a profitable return?

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Marina Dabic

Dr. Marina Dabic is Full Professor of Entrepreneurship and International Business at Faculty of Economics & Business, University of Zagreb, Croatia. Her research appeared in wide variety of journals including *Journal of International Business Studies, Journal of World Business, European Management Journal, Thunderbird Business Review, Management Decision* and others. Her research areas include innovation, Management of Technology, Entrepreneurship, Technology Transfer and the impact of innovation on CEE countries. She is a reviewer for European Science Foundation. Currently Dr Dabic is a grant holder of EU JP TEMPUS Project Fostering Entrepreneurships in Higher Education for 12 EU partners and Israel with budget of aprox 1, mil Euros. She has been grant holder of several EU Projects. In 2004 she was visiting Professor at Strathclyde University, Scotland sponsored by EU.

Frank G. Adams

Mr. Adams is a Marketing Doctoral Student at the University of Alabama's Cullverhouse College of Commerce and Business Administration, studying the fields of supply chain management, marketing strategy and international business marketing. Prior to entering academe, Mr. Adams served as an artillery officer in the US Army Reserves and worked for 10 years as an operations and logistics manager in the medical device industry. Mr. Adams has been published in *International Journal of Physical Distribution and Logistics Management*, and *The International Journal of Transitions and Innovation Systems.*

R. Glenn Richey, Jr.

Dr. Richey is an Associate Professor of Marketing and Supply Chain Management and the Robert C. and Rosa P. Morrow Faculty Excellence Fellow at The University of Alabama. Dr. Richey's research has appeared in numerous scholarly journals including *Business Horizons, Industrial Marketing Management, Journal of Applied Psychology, Journal of Business Logistics, Journal of Business Research, Organizational Dynamics, Management Decision* and others. His specialty areas include domestic and international supply chain management, inter-organizational marketing relationships, and resource management and strategy. Prior to entering academe, Dr.

Richey worked for 10 years in purchasing/sourcing, operations, sales, and supply chain management with two US based fortune 100 business.

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[i] Foreign direct investment (FDI) is defined as an investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate).
Source: World Investment Report 2007: Transnational Corporations, Extractive Industries and Development p. 245. http://www.unctad.org/en/docs/wir2007p4_en.pdf

[2] FDI implies that the investor exerts a significant degree of influence on the management of the enterprise resident in the other economy. Such investment involves both the initial transaction between the two entities and all subsequent transactions between them and among foreign affiliates, both incorporated and unincorporated. FDI may be undertaken by individuals as well as business entities. ibid

Prof. Darko Tipuric, PhD

Faculty of Economics & Business, University of Zagreb, Croatia

dtipuric@efzg.hr

Marina Mesin, M.Sc.

Faculty of Economics & Business, University of Zagreb, Croatia

mmesin@efzg.hr

Tanja Sliskovic, M.Sc.

Faculty of Economics & Business, University of Zagreb, Croatia

tsliskovic@efzg.hr

Independent Directors Myth in Transition Countries – Comparison of Empirical Evidence from China and Croatia

Independent Directors Myth in Transition Countries – Comparison of Empirical Evidence from China and Croatia

Darko Tipuric, Marina Mesin, Tanja Sliskovic

Faculty of Economics & Business, University of Zagreb, Croatia

Abstract:

The situation in the corporate governance of transition countries remains one of the key issues in development of an efficient business environment. As the world increasingly turns to the market and away from regulation and control, the governance of the corporation and the role of the board of directors in governance take on heightened importance. Independent directors are the cornerstone of good corporate governance. Their duty is to provide an unbiased, independent, varied and experienced perspective to the board. In this paper we analyze and quantify influence of board composition in respect to dependence/independence of its members in the sample of largest non-financial firms in Croatia. While it is reasonable to expect that lack of independent directors creates room for violations of rights and infringement legitimate interests of shareholders what in turn represents a significant obstacle in increasing the level of competitiveness, research results show that there is no such connection. On the contrary, research shows how companies with dominant influence of dependent directors perform better than companies which are dominantly governed by independent directors. The comparison of research results with another country which is characterized by internal system of corporate governance - China, leads us to discussion about existence and role of *truly* independent directors.

JEL: G30, L20, P31
Key words: transition, corporate governance, board of directors, independent directors

1. Introduction

Development of good corporate governance practice is *conditio sine qua non* both for companies that strive to achieve competitive advantage and for countries that seek to attract foreign investments and create a context for economic growth. There is no 'golden rule' or a 'universal combination' of corporate governance mechanisms that will ensure efficient corporate governance. On the contrary, structural features of every country, its historical legacy and development as well as the regulatory framework have an effect on the efficiency of corporate governance.

Corporate governance in developed countries exhibits well developed governance mechanism, where as transition countries still have very underdeveloped mechanisms. Political and regulatory environment significantly affect corporate governance. Countries that have weak investor protection laws and slow judicial systems have less effective corporate governance which manifests in below average financial performance, management entrenchment and expropriation of minority shareholders. (LaPorta, Lopez-de-Salinas, Shleifer, 1999).

Transition economies are former planned economies that are reformed and are now market economies. One of the critical aspects of transition is the reform of corporate governance (Dharwadkar, George, Brandes, 2000). Some of the most important deficiencies in the corporate governance structures in the Central European transitional economies include: (1)combining the ownership, supervisory and executive functions – very often managers are also one of the controlling shareholders of the company; (2)concentration of the voting rights in the hands of corporate top managers by using different proxy mechanisms; (3)combination of the hired employee function with the control governance function (an employee being a supervisory board member), which sometimes creates a complicated system of subordination in the company; (4) avoidance of experts representation, i.e. outside independent directors, in the governing bodies. (Pučko 2005, pp.10-11).

As the world increasingly turns to the market and away from regulation and control, the governance of the corporation and the role of the board of directors in governance take on heightened importance. Efficiency of corporate boards is one of the key issues in corporate governance research. Questions raised around the issue of boards are fundamentally intertwined. The makeup of boards is influenced by a desire to affect what they do and the makeup of boards affects what the board does. Independent directors are the cornerstone of good corporate governance. Their duty is to provide an unbiased, independent, varied and experienced perspective to the board.

The focus of this paper is in analyzing and quantifying the influence of board composition in respect to dependence/independence of its members in the sample of largest non-financial firms in Croatia. As well, we analyze independent directors in China. Croatia and China have very different transition paths. China has started its slow transformation period cca 30 years ago while Croatia went through privatization "shock therapy" in the beginning of the 1990s. Still, similarities in corporate practices can be found in both of these transition countries. For example, concentration of both control and ownership of listed firms can often be found in both countries because of weak protection for investors and thus concentration is argued to be a rational response by private entrepreneurs to the lack of investor protection (La Porta et al. 2000)

When analyzing existing research it is reasonable to expect that lack of independent directors creates room for violations of rights and infringement legitimate interests of shareholders what in turn represents a significant obstacle in increasing the level of competitiveness, our research found that there is no such connection in Croatian companies. On the contrary, research shows how companies with dominant influence of dependent directors perform better than companies which are dominantly governed by independent directors.

The reminder of this paper is organized as follows. Section 2 analyses the role of independent directors. Section 3 presents the determinats of corporate governance in China and Croatia. Section 4 resumes emirical evidence on the role of independent directors in China. Setion 5 presents empirical evidence on independent directors in Croatian supervisory boards. Section 6 concludes.

2. The role of independent directors in corporate governance

Boards are generally made up of a mixture of insiders and outsiders in the Anglo-American corporate practices. It is assumed that outside directors play the monitoring role, and they are therefore excluded from the principal-agent incentive model.[1] Agency theory poses that outside directors improve the monitoring function of boards of directors (Conyon, Peck, 1998; Dalton, Daily, Ellstrand, Johnson, 1998; Farrell, Whidbee, 2000; Monks, Minow, 2001). To be considered an outsider, a director's primary employment must be with a different organization that the company on which board s/he is a member of. Outside directors typically have backgrounds that will enable them to be valuable to a board, or to represent an important constituency (Adams, Hermalin, Weisbach, 2008).

Outside directors are often taken to be independent directors, yet the independence of some directors is questionable by definition which will be further explained in the paper.[2] Outside directors are usually bankers, venture capitalists who fund the company, politically-connected individuals when a firm deals with government, or has significant contracts with the government, CEOs of another firm, or stakeholder representatives where particularly important set of such stakeholders is labor.

Between 1993 and 2000 at least 18 countries saw publication of guidelines that propose minimum representation of outside directors on corporate boards (Dahya, McConnell, 2003). The role of independent directors has significantly increased after Sarbanes-Oxley act (in 2002) which followed Enron and WorldCom corporate scandals. The public increased its demand for scrutiny over corporate governance and thus made boards larger, more independent, meet more often, and generally have more responsibilities and risk.

The US government has recommended the non-employed directors on the boards of joint-stock companies since the 1930s. In a sample of 508 US corporation Fich and Shivdasani (2006) found that 55% of board members are outsiders, insiders make 30% and affiliated directors the remaining 15% (data from 2002). Moreover, corporate-governance reforms issued by the NYSE, Amex, and Nasdaq require that listed firms (with some exceptions) have independent boards (Hwang, Kim, 2009). Britain's experience with corporate fraud scandals led to Cadbury Report which recommends a greater role of outside and independent directors (Dahya, McConnell, 2007). In comparison, during 1998, in the UK, outsiders were a majority of the board for 257 of the FT 500 firms, and 62.3% of all LSE listed companies had at least three outside directors (Dahya, McConnell, 2003).

Probably the most discussed question concerning boards is; does having more outside members increase corporate performance? Many papers have been written and surveys published on the matter. On the one hand, some researchers agree that independent directors do have a positive relationship on firm's corporate performance such as Fama and Jensen (1983), Lee, Rosenstein and Rangan (Lee et al., 1992), as well as Pearce and Zahra (1992), Baysinger and Butler (1985), Millstein and MacAvoy (1998), Rosenstein and Wyatt (1997) or Dahya and McConnell (2007) for UK. Also, Bhagat and Black (2000) and Hermalin and

[1] Their incentives yet are not clear according to the great majority of empirical studies done on the matter. Fama (1980) and Fama and Jensen (1983) emphasize the fact that they have incentives to build reputations as expert monitors. On the other hand, a reputation as a board member who does not make a hassle to the CEO is also a valuable attribute (Hermalin, Weisbach 2003).

[2] Examples of these directors are lawyers or bankers who do business with the company they are board members of.

Weisbach (1998) have found that the probability of independent directors being added to the board rises following poor firm performance.

On the other hand, MacAvoy et al. (1983), Hermalin and Weisbach (1991, 2003), Mehran (1995), Klein (1998) and Bhagat and Black (1999) all report insignificant relationships between accounting performance measures and the fraction of outside directors on the board. A meta-analysis conducted by Dalton, Daily, Ellstrand, and Johnson in 1998, which included 159 studies covering 40,160 companies over more than 40 years concluded that 'empirical work in the area does not provide consistent guidance on the relationship between company performance and board independence' (Daily and Dalton, 1998, p.7).

The problem arising in trying to look into the issue raised is the fact that there are both theoretical and empirical evidence to suggest board structure is endogenous (Hermalin and Weisbach, 1988, 1998, 2003, Demsetz and Lehn (1985), then it was Himmelberg et al. (1999), Palia (2001), Coles et al. (2007). The unobservability of the board's independence, together with the endogeneity issue makes it hard for empirical evidence to confirm the assumption.

The results of Cohen, Frazzini and Malloy's research (2008), as well as Hwang and Kim's (2009) challenge the widely held view that appointments of independent directors necessarily add objectivity to the board of a firm because of their questionable *independence*. Actual judgment made by the independent director is encountered with great danger of distorting the truth because of distorted information disclosures or incompleteness of received information. According to mentioned authors, under such circumstances, it is not possible for the independent director to effectively supervise the behavior of managerial personnel (Chen, Wang, 2009).

It can be determined that outside directors probably are better from shareholders perspective, but because they tend to be added to the board after company's poor performance or most demonstrate their value in crisis situations, the relation between outsider directors and firm value is obscured.

3. Determinants of corporate governance in China nad Croatia

3.1. Characteristics of corporate governance in China

China is the world's largest transition economy that has launched a major reform from planned to market economy in 1978. After China's entrance to WTO in 2001, the Chinese government started introducing serious reforms in the corporate governance policy which resulted in bringing new legislative concerning more sound corporate governance practices (Lau, Fan, Young, Wu, 2007).

The introduction of a set of Laws provided a legal foundation for State Owned Enterprise (SOE) reform, including SOE Law, Company Law, and Securities Law.[3]These laws required corporations to form three statutory corporate governing bodies: the shareholders, the board of directors, and the board of supervisors (Li, Naughton, Hovey, 2008). The state no longer

[3] In 2001, the China Securities Regulatory Commision (CSRC) declared a "year of market supervision". One of the aims of these initiatives is to increase transparency and enhance the credibility of financial statements (Firth, Fung, Rui, 2007).

orders managers to reach a certain profit target but appoints managers in the hands of directors who should represent profit-oriented shareholders (Clarke, 2006).

Chinese listed firms have a unique two-tier internal governance structure made up of Supervisory board and a Board of directors (Li, Naughton, Hovey, 2008). Although it is in fact a two tiered system it differs greatly from, for example, German or Japanese two-tiered boards because the Company Law actually doesn't give the Supervisory board any significant powers or providing structurally for its independence from those it supervises because they are company employees. The German board of supervisors, by contrast, has the power to appoint and dismiss members of the management board.[4] Management employee and foreign shares do not constitute major voting blocks (Firth et al., 2002). Most shares are designated as state, legal person and individual and on average each accounts for about one-third of a firm's issued shares, with 10% going to foreigners and employee shares (Clarke, 2006). Chinese companies are also characterized with very low managerial ownership, in a sample of 5284 publicly traded Chinese firms, Wei et al. (2005) report an average stock holding of merely 0.015% by senior managers and directors.

State owned enterprise reforms has resulted in transformation of 80% of small and medium state-owned enterprises into a corporate entity under the Company Law or some other regulation, and more than 1200 large enterprises have restructured themselves into joint stock companies which raise funds through public issuing of shares on one of China's two stock exchanges, the number of listed companies has reached 1400 by 2009[5] (Tenev, Zhang, 2002; Chen, Wang 2009). Chen and Wang found that the largest single shareholders held on average 48% of outstanding shares (Chen, Wang 2009). It is reported that in 2001, 177 out of 1206 listed companies 15 % were more than 66% owned by a single shareholder, 42% were more than 50% owned and 74% were more than 30% owned (Fang, Hongqi, 2002). In the end of 2005, 77.91 percent of all the listed companies still retain residual state ownership. The average percentage of state shareholding for all the companies is 34.51 percent (Li, Wang, Deng, 2008).

Problems facing Chinese corporate governance can be found in the following: in using its control for purposes other than value maximization such as the maintenance of urban employment levels, direct control over sensitive industries, or politically-motivated job placement, the state exploits minority shareholders who have no other way to benefit from their investment (Clarke, 2003; Berkman et al., 2002; Xu and Wang, 1997). Agency problems in China are acute due to the poorly defined property right and weak investor protection (Kato, Long, 2006; Allen et al., 2005). One of the most prevalent issues concerning the current governing regimes is that there is too much "insider control" in governing boards unfettered by effective accountability mechanisms, with the result of assets that are in fact company's property get converted through various manners into the personal property of management. These phenomena, the so-called asset stripping is familiar in transition countries, present in Croatia as well. Another complaint is that management responds "too well" to the board under the control of the state as the dominant shareholder which detriments the rights of minority shareholders[6](Clarke, 2006; according to Meng Hui et al., 2004;

[4] For more information on the Company Law related to the supervisory bord powers see Article 126 of the original Company Law

[5] Stock markets were created in Shenzhen and Shanghai in the early 1990s, and more than 1400 companies were listed on China's stock market by 2003 (Walter & Howie, 2003)

[6] A 2002 study of corporate governance by the CSRC and the SETC showed that 40% of listed companies engaged in related party transactions with their top ten shareholders.

Ruiying et al.,2003). Then, the lack of both hostile takeover and proxy contests facilitates management entrenchment. The incentive alignment between the shareholders and management is inadequate, which consequently invite some immoral and opportunist behaviors (Li, Wang, Deng, 2008). Introducing the mandatory element of independent directors in the governing boards is one mean of combating the inadequacies of the state of Chinese corporate governance.

3.2. Corporate governance in Croatia

Declaring its independence in the beginning of 1990s, Croatia started the transition process and with it the process of privatization. Development of corporate governance started parallel with the process of privatization which transformed the workers self-governing into the market economy. The privatization process in Croatia is still an ongoing process, even after almost 20 years since it started, which results in a fact that the state still represent a significant shareholder in Croatian public companies.

By its characteristics, Croatia belongs to countries that are characterized by an internal or a continental corporate governance system. Even though the privatization process produced a relatively dispersed ownership structure in some Central European transition counties, like Slovenia, that wasn't the case in Croatia. Croatia has a concentrated ownership structure, which implicates that there is a small number of shareholders that own large blocks of shares that enable them, and give them an incentive, to take an active part in governing the company. The largest shareholder in Croatian companies owns on average 51% of company's' equity (Tipurić, 2008, p. 53), and the largest ten shareholders owned on average 81% of the company's shares (Tipurić, 2008, p.55).

Besides concentrated ownership, Croatia's corporate governance is characterized by a high state ownership, which portrays the fact that the privatization process is still not finished. The state (government institutions) is the largest shareholder in 21% of the largest Croatian public companies (USAID, 2005). In the sample of 148 listed companies we find that a trend of gradual reduction of state ownership (Table 1). One of the problems related to state ownership is that the state, as the owner, can sometimes have conflicting goals, that is, it can 'sacrifice' the economic performance of a company for achieving other social, objectives like preserving workplaces.

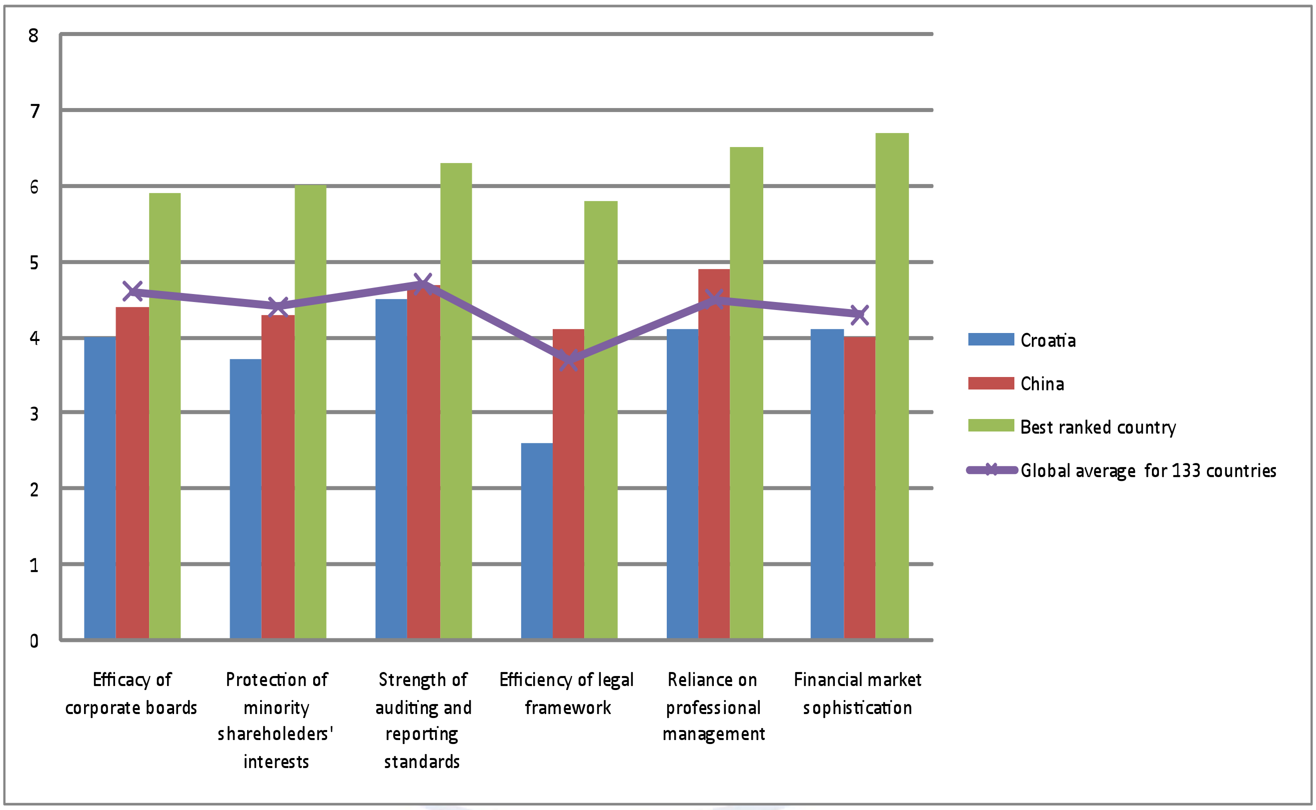
Table 1. State ownership in Croatia, 2000-2008, 148 selected listed companies

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Percentage of state ownership	36,1%	26,7%	25,1%	23,8%	23,1%	16,3%	15,6%	17,1%	12,4%

Corporate governance in Croatia demonstrates similar weaknesses as many other Central European transition countries and in particular China and that are underdeveloped capital market, weak investors' legal protection, especially the protection of minority shareholders.

In observing corporate governance in Croatia, a good overview can be seen in The Global Competitiveness Report made by The World Economic Forum. The following figure shows the categories relevant for evaluating corporate governance and comparison with China.

Figure 1. Scores in categories relevant to Corporate Governance in Croatia and China according to The Global Competitiveness Report 2009-2010 (World Economic Forum)



Looking at the scores for Croatia in a particular category, compared to the best ranked country and to the global average, we can see that Croatia is ranked below both. In comparison to China, Croatia ranked below in almost every category and in particular in the efficiency of the legal framework.

European transitional countries were able to choose between the Anglo-American one-tier, and so called German, two-tier, model of corporate governance. Croatia, like many other transitional countries, adopted the two-tier model. The governing structures in the two-tier model are organized into two boards: the **Supervisory Board**, who appoints and dismisses managers and monitors their performance and has a strategic role in governing the company; and the **Management Board,** which is comprised of company's top managers, meaning the directors cannot be outsiders and they cannot be, at the same time, members of the supervisory board, is responsible for administrating and running the day-to-day business. The two-tier governance model assures a strict separation of the supervisory and the administrative function. Supervisory board members are elected by the shareholders assembly and every member has an equal role in their work. Supervisory board then elects the Management board. So the supervisory board represents a link between the shareholders and the top management.

Croatian joint stock companies were required by law to have a two-tier governance model all until recently. In 2008 changes were made in the Company's Law regarding the required model of corporate governance, enabling Croatian companies to choose between one-tier or two-tier model. Since then, only a few companies changed to a one-tier model.

4. Analyses of empirical evidence on the role of independent directors in China

The institute of independent director has come as a potential solution to the problems facing Chinese corporate governance. The major institutional reform considering the independent directors institute has been brought through the Guidance Opinion on the Establishment of an Independent Director system in Listed companies ((2001) Independent Director Opinion) issued by CSRC in August 2001.[7]

In 2003 the legislative concerning the independent director institution suggested that for initial public offer of shares and listing, at least one-third of the members of the board of directors shall be independent directors. The 2006 New company Law provides a new legal basis for the independent director, all in favor of strengthening the importance of board independence, and protect the interests of nearly 60 million Chinese shareholders. By the end of 2004, 1382 out of 1386 listed companies had independent directors on the board. There were 4559 independent directors in total, yielding an average of just over three per company.[8] The reason for introducing the independent directors in China is to provide more protection to minority shareholders but also to alleviate the problem the controlling shareholders bring. Independent directors thus should monitor related-party transactions, which has shown to be a practice in Chinese business circles as stated before.

Number of Chinese studies indicates the effectiveness of independent directors with higher returns such as Liang and Li (1999) and Chen et al. (2006). On the other hand, different research findings have seem to failed to find empirical support in China for the effectiveness of independent directors in improving corporate performance (Tian, Lau, 2001; He, Wang, 2002; Minghua, Shouli, 2002; Clarke 2006). Overall, it has to be emphasized that all the studies observe is independent directors labeled as *independent* and *reported* corporate results and the reality of both may not reflect true state of the matter.

Further in text we state some of the most compelling issues related to independent directors in China. First, in reality, independent directors are often selected by controlling shareholders, not by themselves or through the board considering that any director must be

[7] The basic rules of the 2001 Opinion include:

a. Each listed companies to have at least two independent directors by June 30, 2002. Also, each listed corporation has to have one third of its board comprised of independent directors by June 30, 2003.
b. Of these independent directors, at least one must be an accounting professional
c. An independent director can work as an independent director for 5 listed companies

[8] The Road to Perfecting the Independent Director System is Still Long, Market News, Sept 14, 2004, according to Clarke, 2006.

elected to office by a vote of the majority of shares at a shareholder's meeting. Unlike independent directors, i.e., in the US who share education and business experience with inside directors, Chinese independent directors have a significantly different background. A 2004 study put the number of professors or researchers from institutes at 45%; 28% come from other companies, while lawyers, accountants and other industry professionals accounted for 14%, remaining 13% are stated as other (Quingtang, 2004). In the case of the independent director as a brain trust or consultant, if giving advice is the appropriate function, why do the directors have to satisfy any criterion of independence at all? The last function mentioned is that of serving public interest, where the independent director can be put on board as a "mole" for state's interests and prevent managerial waste. One can pose a question why does there need to be a special independent director to carry out this task (Xiangsong, Zongping, 2002)?

5. Empirical evidence on independent directors in Croatian supervisory boards

Independence of the Supervisory Board represents one of the most important requirements of sound corporate governance. Supervisory Board should not represent the interest of only one group of stakeholders, namely the largest shareholder, but should in their representation of interests, treat all the stakeholders equally. But the situation in Croatian companies is a bit different. Current research shows that 31% of supervisory board members in Croatian companies represent the largest shareholder, 25% represent employees, 18% represent the minority shareholder and about 7% represent central or local government (Tipurić, 2006, p. 156). The Croatian Code of Corporate Governance emphasizes 'that the supervisory board of a company should be comprised mostly of independent directors that are not related in business, family or any other way, with the company; with the controlling shareholder or a group of large shareholders; with the members of the management board or with the members of the supervisory board of the company or the controlling shareholder.' As well, The Code gives the detailed guidelines that define an independent director.

However, the concept of independent directors is fairly new in Croatian corporate governance. The Croatian Code of Corporate Governance was introduced only in 2007 by the Croatian Financial Services Supervisory Agency Securities Commission and The Zagreb Stock Exchange. Unlike China, Croatia doesn't have special guidance for representation of independent directors in supervisory boards and the relevance of their representation is still not fully recognized. Even though the institute of independent directors is still evolving, some positive steps have been made. The pioneer in that field is the Croatian association of certified board members (HUCNO) who is constantly working on the promotion and raising awareness of the importance of higher representation of independent experts in supervisory boards in Croatian companies. The efforts HUCNO is making are being more recognized by the Croatian government, who just announced that by the end of 2010 it will start with the changes in the regulatory framework, especially regarding the supervisory board composition in state-owned companies, removing the government officials from the supervisory boards and increasing the proportion of independent expert directors.

There is a growing number of research on board composition, it effectiveness, and especially on the role of independent directors, but in Croatia, these questions are just being raised.

In order to answer some of the questions regarding independent directors in supervisory boards in Croatia and their influence on firm performance, we used a sample of 148 non-financial public companies listed on the Zagreb Stock exchange. The data on the independent directors was collected from the Annual Questionnaire of the Code of Corporate Governance. Even though the Code of Corporate Governance represents non-obligatory recommendations, it is based on the principle 'comply or explain', which means that all listed companies have to give an annual statement if they acted in compliance with the Code, and if not, they have to explain why they didn't. That statement is given in the Annual Questionnaire. One of the questions in the Questionnaire was about the composition of the supervisory board, i.e. is the supervisory board comprised mostly of independent directors and the companies have to state their names.

As a firm performance measure we used the BEX (Business Excellence) index which measures firm performance in two dimensions: lagging and leading. BEX index was used because it is constructed in accordance with the business environment in Croatia. BEX is a structural index comprised of four indicators. If the value of BEX index is higher than 1 it indicates good firm performance, and if it is lower than 1 it indicates poor firm performance. Figure 2 shows the structure of BEX index.

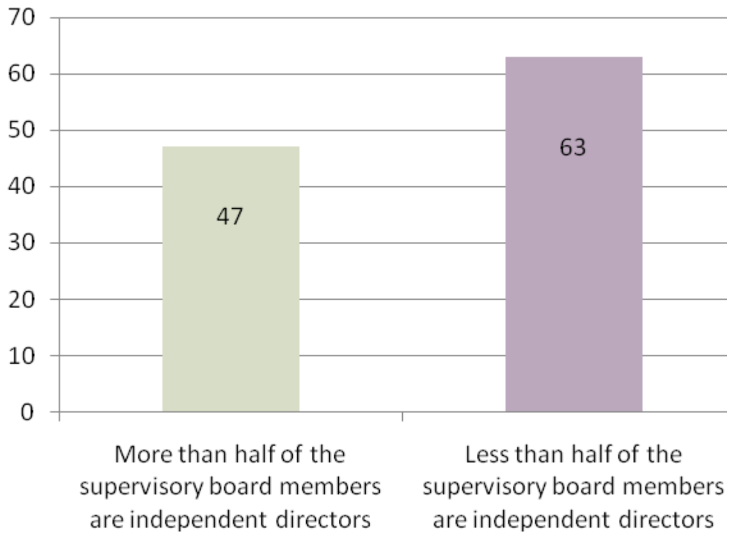
Figure 2. The structure of the BEX index

ex_1 = Profitability ex_1 = EBIT / TOTAL ASSETS	**ex_2 = Adding value** ex_2 = PROFIT AFTER TAXES/(EQUITY x PRICE)
ex_3 = Liquidity ex_3 = WORKING CAPITAL/TOTAL ASSETS	**ex_4 = Financial strength** ex_4 = 5(PROFIT+DEPRECIATION+AMORTIZATION)/TOTAL LIABILITIES

$$\mathbf{BEX = 0{,}388\ ex_1 + 0{,}579\ ex_2 + 0{,}153\ ex_3 + 0{,}316\ ex_4}$$

Out of the 148 companies in the sample, 110 submitted the Annual Questionnaire to the Zagreb Stock Exchange and the performance data was obtained for all of those companies. 47 of those companies declared to have their supervisory board comprised mostly of independent directors, that is, more than half of the supervisory board members were independent directors. While 63 companies declared that less than half of their supervisory board members were independent directors. The average supervisory board has 5 members, 82% of which are men, and 18% are women.

Figure 3. Representation of independent directors in supervisory boards of public Croatian companies



In trying to observe the influence of independent director representation and firm performance we wanted to see does firm performance differ between companies with respect to the proportion of independent directors in their supervisory boards.

Table 2. Composition of the supervisory board and firm performance measured by BEX index

	Average BEX index		
Composition of the supervisory board	(N)	Mean	Std. deviation (SD)
Dependent SB	63	1,215048	2,7914841
Independent SB	47	,513889	2,6695640
Total	110	,915462	2,7497851

From the above table it can be see that the companies whose proportion of independent directors in their supervisory board was less than half have an average BEX index of 1,215, while the companies whose supervisory board was comprised mostly of independent directors have an average BEX index of 0,513889. This leads us to a conclusion that the former had better firm performance, than later.

Even though little over 40% of the companies said to have more than half of their supervisory board comprised of independent directors, this should be taken with a reserve. We believe the percentage is in reality much lower.

6. Conclusion

Understanding the role of boards of directors is of crucial importance both for our understanding of corporate behavior and in relation to policy setting towards regulating corporate activities. The motivation of introducing the independent director system seems clear at first glance, but upon closer and more detailed examination it is surprisingly amorphous and unclear. The motivations may be driven, like the Sarbanes-Oxley act, in some respect simply by desire to do something even if it is not exactly clear that the “medicine will cure the disease”(Romano, 2004).

In China, the CSRC has no authority to establish civil law standards. According to Clarke (2003, 2006), the incentive for management and dominant shareholders to install directors who will pass an individualized after-the-fact examination of independence does not really exist in China. Chinese corporate law does not contain any doctrine under which shareholders can sue management for engaging in self-delegating transactions (Kato, Long, 2006). In Croatia, the institute of independent directors is just starting to develop. Unlike China, corporate governance framework in Croatia still does not have regulatory requirements for the representation of independent directors.

The problems of both Croatian and Chinese corporate governance practices can be solved by such institutions as shareholder derivative suits, more efficient market for corporate control or the managerial labor market, none of which still exists in a developed form in China or Croatia. Regulatory authorities have limited jurisdiction and civil litigation by shareholders is tightly restricted. Thus, a better system for preventing abuse of state control should be implemented, including the after-the-fact remedial litigation. A system of corporate governance with Chinese or Croatian characteristics and its particular conditions should be developed, concerning all the cultural and local traditional business practices instead of simply replicating western style corporate practices.

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Prof. Darko Tipuric, PhD

Faculty of Economics & Business, University of Zagreb, Croatia

dtipuric@efzg.hr

Domagoj Hruska, PhD

Faculty of Economics & Business, University of Zagreb, Croatia

dhruska@efzg.hr

Maja Darabos, MA

Faculty of Economics & Business, University of Zagreb, Croatia

mdarabos@efzg.hr

Comparative Analysis of Managerial Ownership and its Effect on Corporate Performance in Selected Asian and European Transition Economies

Comparative Analysis of Managerial Ownership and its Effect on Corporate Performance in Selected Asian and European Transition Economies

Darko Tipuric, Domagoj Hruska, Maja Darabos

Faculty of Economics & Business, University of Zagreb, Croatia

Abstract:

This paper analyses determinants and consequences of managerial ownership within ownership structures of the selected European and Asian transition countries. Focus of the analysis is on influence of the specific unification of ownership and control on corporate performance. Findings in the paper are based on research that produced empirical data for Croatia which is subsequently compared with evidence from other Asian and European transition countries facing the same issues. Consequently, transitional ownership structures, influenced by actual privatization process, like emergent corporate governance mechanisms, highly concentrated ownership and undeveloped markets for corporate control are also described. Research findings show that direct or indirect managerial ownership are important phenomena in transition countries, research has also shown that stable and concentrated managerial ownership have positive effects on firm profitability in the observed transitional environments.

JEL: G32, G30, L20, P31

Key words: transition, corporate governance, market for corporate control, ownership structure, managerial ownership

1. Introduction

The development of suitable mechanisms of corporate governance in transition countries differs from the same process in developed countries. One of the most notable differences is faulty legal framework and the lack of financial institutions. The legal system of transition economies has to adopt private ownership, financial reporting and bankruptcy laws. Although this kind of legislation is likely to exist in most of transition economies, its efficacy can differ from country to country. Transition economies of Europe and Asia differ significantly in their history and the current institutional environment but they also share some common traits. All of these countries have or have had a large number of state - owned corporations which needed to be restructured.

In this paper we examine the relationship between shareholders and managers in transition economies with the focus on phenomena of managerial ownership. Firstly we show literature survey on the influence of managerial ownership on corporate performance. Secondly we offer results from empirical research on managerial ownership on the sample of biggest Croatian companies. And thirdly we offer comparative analysis of the phenomena in different European and Asian countries.

2. Framework for analysis of managerial ownership in transition countries

In spite of the relevance of managerial ownership for corporate governance research, there is no empirical or theoretical consensus about the nature and consequences of managerial ownership.

Most research looks at the influence of managerial ownership on the performance of the company. Several important studies set the path for the research of that problem. Demsetz and Lehn study from 1985 call for optimal ownership share determination to eliminate the influence of ownership on the company's performance. They suppose that companies constantly create new contracts because there are no costs of adapting to the owners' and managers' interests.

Morck, Shleifer and Vishny (1988) think that managerial co-ownership should be more present and that in that case companies would perform better. Their study is about the influence of managerial ownership and the Tobin q for 371 Fortune 500 company in 1980. It was found that the Tobin q increases as the managerial ownership increases from 0 to 5%. When managerial ownership increases from 5 to 25 %, Tobin's q decreases but increases again after the share of managerial ownership grows past 25 %. The increase of Tobin's q supports the effect of stimulus while the decrease of Tobin's q supports the theory of managerial entrenchment.

McConnel and Servaes (1990) confirm the non-linear correlation, but in a different way than Morck et al. (1988). They found a positive correlation until the level of 40-50% and a negative correlation on a level higher than that. The McConell and Servaes (1990) approve of the positive correlation between managerial ownership and firm performance; profitability increases as the share of managerial ownership increases. These studies mostly interpret the positive correlation between managerial ownership and firm performance at a low level of managerial ownership as a proof of aligned interests of principals and agents. The negative correlation at a high level of managerial ownership is interpreted as a proof managerial entrenchment so that managers do not maximize the benefit for the company without being disciplined by the shareholders. Similarly, Short and Keasey (1999) have found that the interests of managers and owners align on low levels of management ownership and that managerial entrenchment appears at high levels of managerial ownership.

When it comes to managerial entrenchment, the argument is based on the negative correlation between managerial ownership and profitability, especially at high levels of managerial ownership. The higher the ownership share of managers, the harder it is for external owners to control the management. Taking into account the hypothesis of stimulus and entrenchment, the authors have found a non-linear correlation between managerial ownership and company performance (Mueller, Spitz, 2001).

Managerial ownership in the interval from 0 to 5 % implies a better company performance in most of the studies (Holderness et al. 1999; Kroszner, Sheehan, 1999; Morck et al., 1988). There is opinion that managers do not have a tendency towards large quantities of stocks due to diversification of risk in their portfolio. From a manager's perspective, an optimal contract should take a manager's wish for diversification of specific components of corporate risk into account (Garvey and Milbourn, 2003 and Jin, 2002 according to Florackis, Kostakis and Ozkan, 2009). Core and Larcker (2002) claim that adopting plans of managerial ownership is a good strategy because it requires managers to own a minimal amount of shares which results in a better company performance.

Holderness, Kroszner and Sheehan (1999) have made the most comprehensive comparison between managerial ownership and firm performance on 1500 companies based on data from 1935 and 1995. They have found that managerial ownership amounted for 13 % on average in 1935 and 21 % in 1995. The market value of the company decreased in cases of managerial ownership levels from 5 to 25 % and increased in cases of managerial ownership levels above 25 %. They also claim that the increase of managerial ownership in the examined period of 60 years is not a result of the substitution of ownership with another means of solving the agency problem but that the increase of managerial ownership is a part of the general growth in the intensity of various alignments of interests in the modern corporation.

3. Managerial ownership in Croatia

We analyze managerial ownership in sample consists of 149 nonfinancial companies which is around 65% of such business entities in Croatia[1]. Financial companies are taken out of the analysis due to their specific accounting records. Hence data used in the research spreads in the period of nine years, from 2000 until end of 2008.

Number of companies in the research differs from year to year because of availability of data for each case. Therefore our sample ranges from lowest number of 142 in 2001 to 149 companies in several following years. Such level of data deficiency should be comprehensible and it cannot significantly influence research results.

Level of managerial ownership can be examined from different points of view. One of the most usual approaches is to examine companies in which managers are also biggest shareholders. In such companies managers undeniably have high influence, even if ownership concentration is low. In Croatia relatively small number of companies had managers as biggest shareholders. Percentage of such companies is relatively stable during the observed period, from 6.16% to 8.84% of the companies in the sample (Table 1). Only in 8 of the 149 companies in the survey managerial ownership was constant through all observed years.

That information, however, does not tell us very much about the nature and level of control in the hands of managers/shareholders, nor does it say much about level of agency problem at such instances. More valuable information would give us insight on level of managerial ownership in respect to holdings of other shareholders. From that point of view our research shows how at average 74.48% of the surveyed companies managers do not have any shares of the company they work in.

[1] For investigation of importance of managerial ownership in Croatian practice of corporate governance we have used population of the biggest nonfinancial corporations in Croatia. According to Croatian capital market law all companies that had at least 100 shareholders and equity of 30 million kuna, had to disclose its performance records as well as other relevant information. The law has been changed from beginning of 2009 since the companies are not obliged to disclose information anymore.

Table 1. Number of companies in which managers were biggest shareholders

Year	Number of companies	% of total number of companies in the survey
2000	7	6,25%
2001	9	7,04%
2002	10	7,69%
2003	11	7,48%
2004	11	7,48%
2005	13	8,84%
2006	11	7,48%
2007	9	6,16%
2008	9	6,21%

In some cases (8.42%) managers have up to 5% of shares. Primary intention of those ownership levels is remuneration of top managers since it does not give them much of the controlling power. It is interesting to notice that in smaller number of cases (6.26%) managers have between 5 and 20% of the company shares. Also, there are 5.51% of managers who hold more than 20% of shares in companies they work in and about the same number (5.33%).

Table 2. Levels of managerial ownership in Croatian companies

	2000	2001	2002	2003	2004	2005	2006	2007	2008
0%	120	115	93	99	111	104	111	112	109
0,01-5%	11	12	19	17	10	14	10	9	8
5,01-20%	5	5	9	11	8	11	9	12	12
20,01-50%	7	7	13	11	8	6	7	7	6
50,01% +	1	3	9	9	10	12	10	6	9
Total	144	142	143	147	147	147	147	146	144

This analysis brings us to important question of corporate control and managerial ownership. We argue that in transitional corporate governance context managers who hold less than 20% of shares usually do not exercise significant level of corporate control. Of course that is so in the situation where they are not shareholder with highest holdings, but that is rarely the case. Levels of ownership concentration in Croatia as well as in other transition countries give support to such assertion. Since in insider model of corporate governance (Europe and Japan) ownership concentration is higher than in outsider model (Anglo- Saxon), so in use of corporate control, we assume that managers need to have at least 20% of shares.

Significantly higher level of ownership concentration in transition countries in respect to ownership levels in developed economies points to the fact that higher level of managerial ownership is also required in pursuit of exercising significant level of corporate control. Therefore, in our analysis we are mostly interested in companies in which managers hold more that 20% of the company's shares, which is 10.48% of the companies in the sample.

However, our research of the link between managerial ownership and firm performance did not find any significant associations with number of accounting measures we used (net profit, EBIT, return on sales).

Even if companies from the sample do not show any significant relation between managerial ownership and corporate performance data offer us one more interesting insight – levels of managerial levels in respect to industry in which company competes in.

Companies from the sample compete in several areas. Almost all surveyed companies come from one of the seven large sectors: agriculture, forestry and fishing; manufacturing; construction; trade; transport; tourism; technical, scientific and expert services. Most companies from the sample are from manufacturing sector (44%) and tourism sector (23%) while other areas comprise around 4% to 8% each.

Managerial ownership in Croatia, according to data from the research, significantly differs between industry sectors (Table 3).

Table 3. Managerial ownership in different industry sectors

Industry sector	No of companies in the sector	2000	2001	2002	2003	2004	2005	2006	2007	2008	% average per sector
Agriculture, forestry and fishing	7	0	0	1	2	1	2	2	1	2	17,46%
Manufacturing	65	15	15	23	25	21	24	19	19	18	30,60%
Construction	6	3	3	6	5	5	5	6	5	5	79,63%
Trade	12	4	4	7	6	3	2	2	2	4	31,48%
Transport	11	0	1	3	2	1	2	3	3	2	17,17%
Tourism	34	1	3	9	6	4	6	3	3	4	12,75%
Technical, scientific and expert services	7	1	1	1	2	1	2	1	1	1	17,46%
Other sectors	6	0	0	0	0	0	0	0	0	0	0%

In sector of construction almost 80% of the companies have some level of managerial ownership. In two other sectors: manufacturing and trade managerial ownership can be found in about 30% of companies from the sample. According to our research tourism sector demonstrate lowest level of managerial ownership (12.75%). These significant differences imply different evolutionary path of managerial ownership in different sectors which probably have its roots in dissimilar level of attractiveness and industrial enacted environments (Weick, 1995).

4. Firm performance and managerial ownership – empirical evidence across the world

Research results of firm performance and managerial ownership in different corporate governance context show contradictory evidence. In the following part of the paper we offer comparative analysis of the research of managerial ownership. Firstly we examine situation in European transition countries namely in Poland, Czech Republic and Slovenia. After that, we compare determinants and consequences of managerial ownership in European transition countries with evidence from selected Asian countries: China, Pakistan and Japan.

Due to the specificity of transition and the special functions of insider and managerial ownership, the effects of managerial ownership and firm performance are more complicated in transition countries. Empirical studies mostly record a negative correlation between managerial ownership and firm performance (Earle and Estrin 1997, Carlin et al. 1995, Frydman et al. 1999, Claessens and Djankov 1998).

Most of the research studying financial results of a company's performance show that managerial ownership increases as the performance results improve in the interval of 0 to 5%, while the evidence of other intervals are not significant enough to identify a correlation. However, authors mostly agree upon the fact that managerial ownership higher than 50 % makes it impossible to lay off managers. That results in problems concerning managerial entrenchment.

4.1. Selected European countries

Privatization in Central and Eastern Europe provides a good opportunity to study the change in corporate governance in newly privatized firms. One of the explicit motivations for rapid privatization in these countries was the need to improve corporate governance of the previously state-owned enterprises.

For the last 20 years Polish enterprises have been a playground for deep and wide institutional changes including, first of all, ownership and control. The background of these changes as well as their outcomes has varied significantly over time. Both politically forced re-arrangement of control without ownership changes and market driven reforms affecting ownership (privatization) and (for some enterprises to a lesser extent) control rescheduling could be observed within this period of time. In Poland – especially in smaller firms – managerial ownership is quite large. Frequently, managers are also the company founders and first or second largest block-holder.

The first evidence on ownership structure is reported in Belka et al. (1995). He found that in 23 out of 200 analyzed enterprises ownership was concentrated. The largest shareholder usually held about 50% of shares with a tendency towards 70%-85%. The ownership was additionally limited to a very narrow circle. In a few cases, ownership was shared by two partners (50/50 or 49/51). Eight out of 23 corporations were in the hands of senior managers and/or employees, 10 were controlled by private individuals and 10 by foreign or joint venture entities. The position of managers and employees in privatized corporations was further investigated. In 22 out of 40 cases managers and other employees together held a dominant position among shareholders. Managers owned on average 21.6% of shares compared to 48.8% in employees' hands. Domestic private banks (average shareholding of 3%), investment funds, individuals and firms were reported among minority shareholders. Belka et al. (1995) concludes that the position of managers in governance of privatized enterprises was very strong.

In an extensive study Kozarzewski (1999) documented that employee shareholdings declined over time while managers and outsiders leveraged their positions. In about 35 cases, it was noted that managers held blocks of shares ranging from 5% up to 93% with an average block of 28.5%. Moreover, in 20 corporations the blocks owned by managers were simultaneously the largest ones and in 10 cases the second largest. In the majority of these cases managers belonged to a narrow group of founders.

A lot of the empirical work on the relation between ownership structure and corporate performance has had difficulty controlling for the possible feedback of firm characteristics to ownership, especially since it has focused mainly on market economies with low transaction costs in changing ownership. The design of the Czech privatization program precluded the adjustment of ownership to firm characteristics. In particular, the decision to change ownership was taken by the state, while the rules of the bidding process prevented participating agents from obtaining optimal ownership structure.

Consequently, we can study the link between concentrated ownership and firm performance following voucher privatization. The Czech voucher scheme prevented insiders from acquiring large ownership stakes, as few direct sales of assets took place before the voucher privatization. The Czech voucher was not transferable so that the accumulation of an individual stake from the percentage of shares allocated to voucher privatization was impossible.

Claessens and Djankov (1999) have related ownership concentration to two corporate performance parameters for a cross section of Czech firms over the period 1992 through 1997. The average stake in firms owned by managers was similar through this period, and it was around 35%. In particular, they have tested whether firms with more concentrated ownership have experienced larger positive changes in profitability and labor productivity. Controlling for some firm-specific variables, they founded that both profitability and productivity changes are positively related to ownership concentration. A 10% increase in concentration leads to a 2% increase in short-term labor productivity and a 3% increase in short-term profitability.

Slovenia's privatization brought about two large groups of owners: inside owners (employees, including managers, former employees and their relatives) and outside owners (Pension and Restitution Funds, Privatization Investment Funds). Within the group of insiders, managers ended up holding only minority stakes (3.86 %) with the support of the employees as the main mechanism for ensuring their discretionary power and fighting the influence of outsiders (Prasnikar and Gregoric, 2002; Gregoric, 2003).

Due to the shrinking employee ownership and hence the reduction of the 'hidden' support for managers in the post-privatization period, Slovenian managers have started strengthening their power by expanding their ownership stakes. These increases have been most prominent in non-listed firms in which the transfer of ownership involves relatively low prices and mostly remains undisclosed to the public. Further, the remaining dissatisfaction of managers (at the end of 2002 the optimal or desired ownership stake of the average Slovenian manager exceeded their actual ownership stake by 10.8%) clearly indicates that the trend of rising managerial ownership in Slovenian firms will also continue in the future.

The empirical analysis (Simoneti and Gregoric, 2004) of managerial ownership and firm performance in the Slovenian post-privatization period does not provide any support for the conclusion that managerial ownership positively influences the long-term economic efficiency of Slovenian firms (measured as total factor productivity growth). The first empirical results indicate that it can be expected that managerial ownership will have a positive effect (and hence create incentives) on firm financial performance, in particular in unlisted firms and in those firms whose managers hold more than 10% of the capital. On the other hand, the nontransparent increase seen in managerial ownership in unlisted firms fortunately seems to have no negative effect on the economic efficiency and hence the long-term performance of Slovenian firms.

Although ideological factors may be relevant to the analysis of privatization in post-communist countries, it is difficult to extend the argument to the rest of the developing world. The political and economic elites in Asia, for instance, have not experienced massive societal demands for a new ownership structure as happened in most of Eastern Europe and Russia (Whitehead, 2000). Nor does privatization in Asia seem to be originated from a project designed by political elite that differed from the previous statist elite in its ideological orientation.

4.2.Selected Asian countries

There are very few studies which have examined Chinese firms for the managerial ownership performance relationship. One apparent reason is that under the unique regulatory environment in China, managerial ownership in listed companies is usually very low. For a sample of 5284 publicly traded Chinese firms, Wei et al. (2005) report an average stock holding of merely 0.015% by senior managers and directors. From this evidence we can conclude that managerial ownership in listed companies is mostly negligible, and this is due to institutional and policy constraints in China. On the other hand, managerial equity holdings can be substantive in small and typically non-listed companies.

Hu and Zhou (2008) provided the first evidence from China for the effect of managerial ownership on firm performance by examining a sample of non-listed Chinese firms. In matching-sample comparisons, they found that firms of significant managerial ownership outperform firms whose managers do not own equity shares. Their further results indicate the relation between firm performance and managerial ownership is nonlinear, and the inflection point at which the relation turns negative occurs at ownership above 50%. They also founded that percentage of firms with managerial ownership is very small (5,5%) as compared to typical situations in a developed market. Furthermore, they also came to conclusion that ownership distribution in China is highly concentrated and that the average managerial ownership of all firms in their sample with managerial ownership was as high as 70% (among which, only four firms' managerial ownership was less than 10%). This observation, together with the fact that a small number of firms had managerial ownership, further suggests that managerial ownership in China was not an equilibrium outcome of incentive contracting but was constrained by government polices and managers' personal wealth.

Most of the empirical studies about the relationship between managerial ownership and firm performance have covered the developed economies and there is little work done on the emerging economies moreover very little work has been done on emerging economy of Pakistan. It is fact that in last few years, the low interest rate environment and investor friendly policies of the Government of Pakistan coupled with positive geopolitical developments have paved the way for the macroeconomic conditions conducive for the development of the equity and money markets of the country. The increased investor's confidence along with the improvements in the corporate earnings has contributed to the impressive performance of the equity markets as compare to all other South East Asian economies.

In Pakistan majority of the shareholdings are with board of directors, company executives and their spouses. In Pakistan, most of the businesses are laying with few big businessmen families. Family firms are a fundamental and intrinsic feature of the Pakistani economy. Approximately 80% of all listed companies on the Karachi Stock Exchange has family involvement or are indirectly affiliated to a large business family (Zaidi, 2005). These family firms were established traders in different parts of united India, and it was a historical accident that gave them opportunity to establish themselves in new land of Pakistan. Post privatization era in Pakistan also brought a new class of industrial and family businesses. Due to this fact, there is a lot of cross ownership in family firms and it has increased the ratio of insider ownership across the whole economy of Pakistan.

Choudhary and Talat (2008) showed that managerial ownership in Pakistan is higher than average managerial ownership stake of all board members in other countries such as Malaysia, USA and UK. Their research also found that average managerial ownership in Pakistan is 53.22 percent, and it has proved that there is strong positive relationship between managerial ownership and firm performance in Pakistan. The above results have provided the positive indications for Pakistani corporate sector to solve the agency problem through stock options for their employees.

Ownership is highly concentrated in Japan, with financial institutions by far the most important large shareholders. Ownership concentration in independent Japanese firms is positively related to the returns from exerting greater control over management. This is not the case in firms that are members of corporate groups (keiretsu). Japan differs from the U.S. because the legal and regulatory environment of Japanese financial institutions permits them to be what Jensen (1989) has termed "active investors" to a much greater extent in corporations. Within Japan there exist differences between firms that are affiliated with keiretsu groups and unaffiliated, independent firms concerning institutional arrangements with suppliers, customers, and financiers. Japanese industrial organization is characterized by groups of enterprises (keiretsu) composed of firms based in different industries, but bound by ties of fractional ownership, and reliant on a large commercial bank as the major lender.

Management shareholding in Japanese companies may be rather less important. Individuals ranking among the top five shareholders of the firm hold on average 3% of the firm's outstanding shares. Even if we assume these individuals are all managers, this still appears low. Kaplan (1992) reported that in a sample of large Japanese firms, only 12.2% of Japanese presidents held more than 0.5% of their company's stock in 1981.

For example, the market for corporate control in Japan appears much less active (at least among large firms) than in the United States. In addition, if management shareholding in Japanese firms is indeed rather less important than it is in the U.S., then the structure of management compensation in Japanese firms by itself might plausibly give managers less incentive than their U.S. counterparts to follow value-maximizing policies.

There is little evidence of any relationship between ownership concentration and profitability for keiretsu or independent firms. We can conclude that, given there is no significant relationship between profitability and ownership concentration in keiretsu firms, confirms that large shareholders of keiretsu firms may have means to monitor and control management other than through their role as a shareholder (Prowse, 1992).

In addition, Teshima (2008) have constructed theoretical model which suggests that as managerial ownership increases, earnings management decreases for both high and low levels of managerial ownership, while it increases for intermediate levels of managerial ownership if the sensitivity of the probability of managerial dismissal to the corporate performance is high enough and/or the manager’s private benefit derived from managerial position is high enough. In a sample of Japanese firms, we find a significant nonmonotonic relationship between managerial ownership and discretionary accruals.

5. Conclusion

Improving corporate governance practice in transition countries represents important research area. According to Stiglitz, the deficiency of corporate governance is one of the main reasons because of which shareholders of private companies in transition countries have consider investments in development less profitable than disinvestment of privatized companies (Stiglitz, 1999). Economic growth of transition countries was lower than expected in the beginning of the transition process, mostly due to the fact that privatization did not bring significant changes in the efficiency of corporations (Gregoric, Prasnikar and Ribnikar, 2000).

By elaborating determinants and consequences of managerial ownership in transition countries this paper enlightens broader area of corporate governance systems and its mechanisms. According to agency theory behavior of managers can potentially be harmful for the shareholders who hire them. In their work from 1976 Jensen and Meckling apply the agency theory to the modern corporation and shape agency costs (Jensen, Meckling, 1976). That way they re-confirm the historical idea that goes all the way to Adam Smith - if the ownership and control and not embodied in one person, there is a possibility of conflict of interests between the manager and the owner (Smith, 1994/1776). Managerial ownership is a way of combining roles of managers and owners in that way represent important research phenomena.

In spite of the importance of managerial ownership for researchers in the area of corporate governance, there is no empirical or theoretical consensus about the influence of managerial ownership on company performance. Our research on the sample of Croatian companies confirms that thesis.

While our research shows little evidence of any relationship between managerial ownership and company performance it opens lot of interesting questions about the phenomena. Those questions lead us to the conclusion that measuring company performance in respect to managerial ownership should be done with qualitative metrological tools which would allow higher level of appreciation of contextual factors.

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Transaction Costs and Technical Resources: Product-level Determinants of Vertical Integration in the Semiconductor Industry

Komatsu Takehiko
Graduate School of International Management, Aoyama Gakuin University
and
Hideo Owan
Institute of Social Science, University of Tokyo

Keywords: Boundaries of the firm, transaction cost economics, resource-based view, asset specificity, patents, and semiconductor.

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Komatsu Takehiko
Graduate School of International Management, Aoyama Gakuin University
and
Hideo Owan
Institute of Social Science, University of Tokyo

Abstract

In this paper, we discuss the question of integration and disintegration from the perspectives of transaction cost economics and resource-based view and conduct an empirical analysis to test the validity and applicability of the theories using data for 2006 on 387 products from 118 semiconductor firms in countries around the world. We collected detailed information of technology used at the product level and technical capability in the form of patents at the firm level. Although our analysis confirms the effectiveness of both theories, significant differences exist in the explanatory power of the theories between sub-samples that are divided by firm age. Close look at the data where model prediction does not coincide with the actual decisions implies that the above differences by firm age might be attributed to other attributes of transactions, technological resources, and adjustment costs that are not quantified in our initial estimation.

Keywords: Boundaries of the firm, transaction cost economics, resource-based view, asset specificity, patents, and semiconductor.

I. Introduction

Heretofore, discussion of the question of the boundaries of the firm has developed with a central focus on transaction cost economics (Coase 1937, Williamson 1985). Its central proposition is that, when asset specificity or other attributes of transactions that make ex-post opportunism likely are present, firms should avoid the risk and economize on transaction costs by internalizing those transactions. This proposition has been tested in many empirical studies, and its validity has been generally supported. Nevertheless, a critical view about whether transaction cost minimization is in fact a dominant decision-making criterion for actual firms is firmly rooted (Santos and Eisenhardt 2005). There is not a sufficient body of research on the question of what interactions with other factors are at work, especially what tradeoffs with other factors are at work in dynamic investment decision-making.

Another influential approach that progressed in recent years is resource-based view, which asserts that differences in the resources owned by individual firms and the nature of resources exert influence as determinants of firm boundaries (Penrose 1957). However, empirical evidence for wide applicability of resource-based view is scant. There are also critical issues in empirical studies on resource-based view. Firm-held resources examined in resource-based view are often firm-specific and difficult to observe directly or quantify. As a result, empirical research is often limited to case studies where focus is made on a specific context in a specific firm. Such limited context, however, makes it difficult to generalize and the applicable range for the implications is often unknown. Once these issues have been overcome, the next question is whether resource-based view can serve as an effective explanation in areas where transaction cost economics cannot offer answers (Conner and Prahalad 1996). Whereas the efficiency of individual transactions is discussed in transaction cost economics, the focus in resource-based view is on the internal development of the resources and the growth of the firm through the utilization of internal resources. This approach from more holistic and dynamic perspective of resource-based view could make it possible to discuss endogenous firm choices that cannot be captured by transaction cost economics (Madhok 2002). However, the relationship between what is explained by these internal resources and what is explained by transaction cost minimization remains unclear.

In this paper, we use the following approach to resolve these issues: first, we focus on patents to construct measures of technical resources accumulated within firms and test the effectiveness of resource-based view using these measures. We examine and quantify the distribution of technical resources along the internal manufacturing process by studying in which technological areas individual firms hold patents. Second, we jointly identify the effects of transaction costs and technical capabilities on the vertical integration decision. Third, we look at the observations where model prediction does not coincide with the actual decision to explore for the question of what other factors might be affecting the vertical integration decisions.

In testing the theories, we use product-level data for 2006 from 118 semiconductor firms around the world. Detailed data collected on fine product classifications make it possible to construct more precise measures of asset specificity and other product characteristics.

In Section 2 we review previous research and identify issues in empirical studies, and in Section 3 we formulate hypotheses. In Section 4 we present details on the dataset collected, and in Section 5 we present our empirical strategy. Section 6 present main results and Section 7 offers exploratory analysis to demonstrate the existence of important unquantifiable data. In Section 8 we summarize our findings and conclude.

II. Previous Research

Past empirical studies on vertical integration decisions in transaction cost economics have indirectly measured transaction costs by assessing the asset specificity of individual transactions. For instance, studies using data from the automotive, chemical, and aviation industries have demonstrated that the likelihood of vertical integration is high in cases where relation-specific investment in plants and facilities is required (Alchian, Crawford, and Klein 1978, Lieberman 1991, Masten 1984). Also, a study of automotive parts by Monteverde and Teece (1982) and a study of semiconductor production by Monteverde (1995) analyze the relationship of the choice of firm boundaries to expertise and skills that are specific to the relationship between the upstream and downstream in the production process and demonstrate that parts production tends to be internalized in cases where human asset specificity is high. Overall, attempts to explain integration decisions based on transaction cost economics have been mostly supported.

However, several limitations exist even in transaction cost economics, the predominant analytical framework for studying firm boundaries. Williamson (1985) mentions as limitations of transaction cost economics that models are primitive thus allows only basic distinctions, that models are incomplete (i.e. only transaction cost minimization is considered) thus tradeoffs with other factors have not yet been adequately considered, that there always are measurement problems with main dimensions for transactions such as asset specificity and uncertainty, that the degree of freedom in interpretation of the concept is large,. Particularly notable among these limitations is that discussion has not developed fully on whether transaction cost minimization, which in transaction cost economics is postulated as a decision-making criterion of firms, is in fact sufficient as a factor to determine firm boundaries or on the question of its relation to other factors (Santos and Eisenhardt 2005).

Next, with regard to resource-based view, Penrose (1957) takes as her point of departure the concept of heterogeneity of resources. The concept of resource heterogeneity regards the firm as an aggregation of management resources and presupposes that individual firms possess different management resources. It also holds that the scope of a firm's business activities is decided according to the scope of these productive resources and their utilization (Penrose 1957, Welnerfelt 1984).

In empirical studies on resource-based view, broadly speaking there are two resource assessment methods: measurement of relative resource differences among firms (Argreys 1996, Mayer and Solomon 2002) and focus on the organizational routines of firms in a study of the semiconductor industry focus on the resources held by individual firms (Leiblein and Miller 2003). Overall, attempts to explain integration decisions based on resource-based view have been mostly supported.

Issues with respect to resourced-based empirical studies based on resourced-based view are the question of measurement how to measure resources and the scope of application of the theory the generalizability of results. In many cases, the resources subject to analysis are firm-specific, and observation and quantification quantifying the amount of resources in focus from outside the firm is difficult. Owing to this constraint, analysis of specific firms and qualitative analysis account for a high proportion of empirical studies look at a few specific firms relying on qualitative analytical methods, and therefore it is generally impossible to show how broadly the insights obtained from the studies can be generalized. They might be applicable only in specific contexts. Another issue related to the effectiveness of resource-based view is that the relationship with transaction cost economics is unclear. Although empirical studies that simultaneously test both transaction cost economics and resource-based view exist (Argyres 1999, Leiblein and Miller 2003), there are nearly no studies that sufficiently discuss whether they complement or substitute each other. In particular, if areas exist in which resource-based theory view leads to different conclusions than transaction cost economics, the raison d'etre of the former theory can be confirmed through the identification of such areas. Barney (1999) points out that even when the risk of opportunistic behavior is high, disintegration may be chosen for the purpose of gaining access to scarce resources. Conner and Prahalad (1996) point out that even when opportunistic behavior is unlikely, integration may be chosen if highly valuable knowledge is applied to the business activity. We believe that discussion of firm boundaries will be enriched further as we accumulate more empirical evidence of areas that cannot be explained by transaction cost efficiency but can be predominantly explained by logic internal to the firm.

III. Hypotheses

In this paper, we formulate and test hypotheses concerning the boundaries of the firm from the perspectives of transaction cost economics and resource-based view. First, in accordance with transaction cost economics, we focus on and assess the degree of standardization of technology used across the boundary between design and manufacturing.

According to Williamson (1985) and Teece (1988), there are two broad categories of technology: technologies for specific applications and general-purpose technologies. They assert that whereas technologies for specific applications require investment in relation-specific assets, general-purpose technologies do not require such investment and can be applied to a broad range of other transactions, and this difference distinguishes efficient governance form for transactions. In the case of semiconductors, standardized methods or technologies exist in physical design and the manufacturing process, and significant differences in versatility occur.

These differences have an impact on the efficient transaction form through two channels. First, in cases where close alignment between design and manufacturing is necessary for optimization, integrated knowledge and skills in product specifications, design, and process technologies are required on the part of the design organization and manufacturing organization alike, and high competence in coordination between design and manufacturing and investment in relation-specific human capital become necessary. When the importance of such relation-specific human capital increases, the risk of the hold-up problem rises and therefore the likelihood of vertical integration should increase. Monteverde (1995) defines the communication among engineers required between design and manufacturing as "unstructured technical dialog" and demonstrates that the likelihood of vertical integration increases in cases where human asset specificity is high. Next, in cases where the degree of standardization and versatility of a selected design method and process technology are low, transactions in connection with the alignment of circuit and process technology become complex and uncertainty arises about whether the customer's required performance is achievable or how much time will be required for alignment. Since for this reason difficulties arise in the predetermination of performance, total cost, and trading volume and in the conclusion of contracts, market transactions can no longer be considered an efficient transaction form. To summarize the preceding discussion, in cases where standardization and versatility are low, transaction complexity and uncertainty increase simultaneously with the specificity of human capital, and this becomes an incentive for the selection of vertical integration. To test this relationship, we formulate the following hypothesis:

Hypothesis 1: When the degree of standardization and versatility of the design method and the process technology chosen for transactions between design and manufacturing is low, production is integrated, and when they are high, disintegration is chosen.

Next, to derive the implication from resource-based view on firm boundaries, in this paper we focus on resource distribution in accordance with the production process within firms. Although in resource-based view decision-making on the boundaries of the firm is thought to be restricted by the resources held by the firm, previous empirical studies have measured resources in terms of the relative level of specific resources owned by firms over potential suppliers or outsources or of organizational routines implemented within the organization and have not examined the scope or distribution of resources owned by firms as a whole.

Firms provide goods and services by owning and utilizing resources in the scope of the business activities they pursue (Wernerfelt 1984). Hence, when discussing vertical boundaries it is suitable to examine the distribution of those resources along the production process (Jacobides and Winter 2005). Put slightly differently, firms develop and accumulate technologies to acquire competitive advantage in their business activities, which in turn imply that a firm's strengths and weaknesses should be reflected in the distribution of technological resources along the internal production process. For this reason, we believe that the boundaries of the firm should be associated with the distribution of technological resources identified. In cases where a downstream firm accumulates and owns manufacturing-related technological resources, the probability that integration will be chosen for the purpose of efficiently utilizing those resources should increase. On the other hand, in cases where a firm does not accumulate or own manufacturing-related technological resources in the business activity in question, the likelihood that it will seek access to external resources through market transactions should increase. In semiconductor production in particular, this tendency presumably should be significant since the amount of capital investment in manufacturing required to achieve minimal efficiency scale is high (i.e. economies of scale is substantial). Accordingly, we formulate the following hypothesis:

Hypothesis 2: When firms own more technological resources relating to manufacturing in the production process, integration of production is chosen, and when firms own fewer resources, disintegration is chosen.

IV. Data

We collected product-level and firm-level data on 118 semiconductor firms from around the world, consisting primarily of firms listed in the 2007 Semiconductor Data Book (an electronic journal) and supplemented by the addition of member firms of the Global Semiconductor Association (GSA) whose 2006 sales were US$100 million or higher. Our data sources includes the 2006 annual reports published by the firms, product data sheets and corporate brochures collected directly or indirectly from the firms, press releases collected primarily from company HPs over the internet, and USPTO patent database. Through these multiple sources, we extracted detailed information concerning the firms and products subject to analysis.

Our cross-section data have product as the unit of observation. Each product is classified into one of the 5 categories and 19 subcategories indicated in Table 1 in accordance with World Semiconductor Trade Statistics (WSTS) product classifications. The total number of products for all firms subject to analysis at this product level was 387 products.

In order to construct a product-level measure of integration, we carefully examined whether each product was produced in house or outsourced based on the above multiple sources of information. Based on this study, we constructed a variable, **Vertical_Integration**, that takes a value of 1 for integration and 0 for disintegration.

To test a hypothesis related to transaction costs, we coded physical design method and manufacturing process technology to construct the measure of standardization and versatility at the product level:. First, we classified physical design methods according to whether the product in question is a cell-based design or a transistor-based design. Cell-based design involves the use of automated design tools to design using cells as product components. Since for this reason the level of coordination between design and manufacturing is relatively low and dependence on automated tools is high, we assess human asset specificity as low. Transistor-based design involves circuit and layout design at the transistor level that applies the experience and skills of numerous designers to optimize the many design parameters involved. Since for this reason the level of communication between design and manufacturing is relatively high, we assess human asset specificity as high. In assessing this factor, we prepared a dummy variable **Physical_Design_Method** that takes a value of 0 for products in the product subcategories in Table 1 for which cell-based design is the ordinarily used design method and a value of 1 for products for which transistor-based design is ordinarily used.

We next classified manufacturing processes as CMOS and other special processes (such as bipolar and compound semiconductor) and constructed an explanatory variable at the product level.[1] In CMOS processes, device fundamentals including transistors and interconnects are drawn by design rule and characterized electrically as design parameters.

On the other hand, non-CMOS processes are used for specific products, primarily analog, and the product performance of each product is optimized through close alignment between circuit design and process. In this case, both the degree of standardization and versatility are low on the interface and close coordination between design engineers and manufacturing engineers is required. Accordingly, we prepared a dummy variable **Process_Technology** that takes a value of 0 for products for which the CMOS process is used and a value of 1 for products for which other special processes are used.

Note that a higher value of both Physical_Design_Method and Process_Technology indicate higher asset specificity, complexity and uncertainty according to our earlier discussion and thus should be correlated with Vertical_Integration.

Next, to test the hypothesis concerning resource-based view, we used patent information to assess the resource distribution of firms. Patent information makes it possible to quantify technological resources at the firm level and has been used in previous quantitative empirical studies.[2] Specifically, we assessed the number of registered U.S. patents from 1980 to 2007 in Section G (Physics) and Section H (Electricity) of the International Patent Classification (IPC). We further selected fields in those sections that are important in semiconductor manufacturing, divided them into two categories, patents relating to systems or designs, or patents concerning manufacturing processes or devices (Table 2), and aggregated the totals. After sorting the patents in this way, we defined two firm-level variables. The first variable is a logarithmic expression of the number of acquired patents concerning manufacturing processes and devices (Process_Device_Pat_Stock), and the second variable is the proportion of patents related to manufacturing processes and devices among acquired patents (Process_Device_Pat_Ratio).

In addition to the abovementioned explanatory variables, we included as control variables in the estimate equation variables that potentially have an impact on integration and disintegration in production. These variables are the number of product types offered (**Num_Products**), a North American firm dummy (**North_America**), and a Japanese firm dummy (**Japan**), each of which is

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[1] CMOS (Complementary Metal Oxide Semiconductor) is one of the most common transistor structures used in semiconductors. CMOS make possible high speed through miniaturization, reduction in power consumption, and improvement in degree of integration. Bipolar is a transistor structure that is also called a junction transistor. While bipolar transistors offer the benefits of high speed and high gain, tradeoff disadvantages include high power consumption and low degree of integration. Compound semiconductor is an expression that indicates semiconductors having multiple elements as materials. Compound semiconductors have special high-performance characteristics such as high mobility and wide band gap.

[2] For instance, Hoetker (2005) uses patents to measure supplier technological capabilities and verifies that purchasers choose suppliers that have higher technological capabilities. In this paper, we took the opposite approach, focusing on patents held by purchasers and preparing explanatory variables by examining those patents in accordance with purchasers' production processes.

a firm-level measurement.

V. Econometric Model

We estimate a logit model in which the dependent variable is Vertical_Integration. Independent variables include product-level variables, Physical_Design_Method and Process_Technology, and firm-level variables that measure patent portfolio composition and firm characteristics. Firm-level variables include Process_Device_Pat_Stock, Process_Device_Pat_Ratio, Num_Products, years in business (log), and two regional dummies. Since integration/disintegration decisions at each product level within firms is expected to be correlated, cluster-robust standard errors are estimated.

To take into account differences in this adjustment cost, in addition to the regression analyses performed on the entire sample of 387 products of 118 companies, we run the same regression using a sub-sample of products of firms with long semiconductor business histories of 30 years or longer (224 items) and, conversely, a sub-sample of products from companies with short histories of less than 30 years (163 items). The comparison of the three regression results will help us evaluate the impact of the adjustment cost or path dependency.

VI. Results

Table 3 summarizes descriptive statistics and correlation for the three samples. It shows that firms with experience of 30 or more years have predominantly greater choice of vertical integration, a higher number of process-device-related patents held, and a more diversified product line than those with experience of less than 30 years. With regard to correlation among variables, two variables for standardization and versatility (reversed), two technical resource variables, a diversification variable, years in business (*i.e.* adjustment cost), Japanese firm dummy are all positively correlated with integration while North American firm dummy is negatively correlated with integration as expected.

Table 4 shows the results for the logit model estimation for vertical integration decisions. Here we test transaction cost economics and resource-based view separately in Model 1 and 2 and jointly in Model 3. For the last integrated model, we have also estimated coefficients for two sub-samples: the products of firms with semiconductor business experience of 30 years or more (30 Years or More) and the products of firms with semiconductor business experience of less than 30 years (Less than 30 Years).

First, Model 1 includes two dummy variables: Physical_Design_Method and Process_Technology, which measure standardization of technology and versatility in the reverse order. Both variables have positively significant coefficients at the 0.1% level, and the hypothesis based on transaction cost economics is supported. In Model 2, which includes patent-related variables, only Process_Device_Pat_Ratio, the variable for the proportion of process/device-related patents, is significant at 0.1% level; the variable for the number of such patents is not significant. This result shows that it is *relative* technological strengths in design and systems vs. processes and devices rather than absolute strengths that affect decision-making with respect to integration and disintegration.

Thirdly, in Model 3, the coefficients of the variables for physical design method, process technology, and process/device-related patent ratio are all positively significant, the significance of the individual variables does not decrease appreciably in comparison with when tested separately, and the relationships among variables are highly robust. This result suggests that the determinants of the boundaries of the firm cannot be explained by transaction cost economics alone and that the resource-based view perspective of effective utilization of internal resources, including technological capabilities among them, is necessary.

Next, the results for the subsample estimates when products are divided according to the firm's business history indicate that the variable for physical design method loses its significance for the products of firms with experience of less than 30 years (but remains significant at 10% level), while the variable for process/device-related patent ratio loses significance for the products of older firms.

Finally, the coefficient signs of the control variables are mostly as predicted, and the magnitude of the coefficients are mostly robust to changes in model specification. The number of product types and integration are positively correlated, implying that firms with more products are more likely to select integration. With regard to the coefficients of the regional dummies, whereas the result indicating a greater tendency for U.S. firms to select disintegration than firms in other regions is as predicted, no clear tendency is detected with regard to Japanese firms.

VII. Discussion

Our regression results in the preceding section have shown that the integration decision is less associated with the standardization measures for firms with less than 30 years in operation. Does it mean that transaction costs have weaker explanatory power for younger firms? On the other hand, our technical resource distribution measure is less associated with the boundary decision for older firms. Does it mean that resource-based view has lower explanatory power for older firms?

One possibility is that our measures to test transaction cost economics and resource-based view may capture only part of relevant attributes of transactions and managerial resources. In order to explore for other missing elements, we take a closer look at the products for which the model prediction for the boundary choice is wrong.

Table 5 shows the product composition for each pair of model prediction and actual choice. Out of 387 products, our estimated econometric model fails to predict the boundary choices of 62 products. More precisely, 25 products are produced in-house when they should be outsourced according to the model while 37 products are outsourced when the model advises not to do so.

In order to find clues for the question of why there are prediction gaps for these 62 products, we collected the information of product characteristics. We searched through annual reports, product datasheets, and press releases, for key words that characterize each product. Key words include high-speed, high-density, high-precision/efficiency, lower power consumption, small size, high-reliability/quality, system/software-functionality, time-to-market, integration, price, delivery, low cost, and others.[3] Table 6 shows the counts of each product characteristics for each pair of model prediction and actual choice.

The third column shows that, for the 40 percent of the products for which integration was chosen despite the opposite model prediction, high-reliability and short time-to-market are key product characteristics. Further investigation of their product types reveals that they are ASSPs （Application Specific Standard Products）, CSICs（Customer Specific Integrated Circuits） and MCUs produced for automobiles and other industry use. Presumably, these customers require high reliability (to enhance the quality and safety of their own products) and short time-to-market (to win intense R&D competition). Natural interpretation is that the above requirements of high reliability and short time-to-market necessitate semiconductor manufacturers to gain the full control of the production process to ensure these goals even when the interface between the design and manufacturing is relatively standardized. Another finding from this investigation is that analog products (either ASSP or CSIC) typically require highly experienced engineers who design custom products for specialized process. This makes the design skills of engineers highly relation-specific. Such asset specificity of human capital is not captured by none of our independent variables.

The fourth column of Table 6 looks at the products which were outsourced despite the apparent benefit of integration from the perspective of transaction cost economics and resource-based view. The manufacturers of more than 40 percent of such products claim that system/software-functionality and low cost are key advantage of their products. Again, a close scrutiny of product information reveals that: (1) the manufacturers of ASSPs in this group tend to choose functionality as their key characteristics; and (2) this group includes "commodities" such as memory products for which low cost or low price is the primary competitive edge. The emphasis on system/software-functionality encourages firms to concentrate their resources to accumulating design know-hows and focus on specific product line or applications. This is why the firms whose competitive advantage is system/software-functionality favors disintegration rather than integration, which encourages investment in process technology and diversification. For commodities, economies of scale work and those firms who cannot achieve competitive efficiency scale are forced to outsource their production.

VIII. Conclusion

In this paper, to examine the determinants of integration and disintegration in semiconductor manufacturing, we have formulated hypotheses from the perspectives of transaction cost economics and resource-based view and tested them using data representing diverse contexts. Furthermore, we have also explored for other determinants of .the boundaries of the firm that are

[3] Difference between price and low cost is that the latter includes the product development cost for the customers.

not considered or measured in our main analyses by comparing the product characteristics between the sample where the model predicts the actual successfully and that where the model fails to predict the actual correctly.

The results show that the coefficients for variables from transaction cost economics and resource-based view are both statistically significant in explaining integration/disintegration decisions and confirm their effectiveness as determinants of the boundaries of the firm.

On the other hand, the limitations for each variable were also confirmed. These include organizational capabilities and relation-specific skills that cannot be expressed in terms of physical design method and process technologies. We have also obtained evidence that complexity and uncertainty are important attributes of transactions but the current set of independent variables do not fully capture them. It is evident in our finding that the firms that claim high reliability and short time-to-market as the characteristics of their products are more likely to integrate the production of the products than the model predicts. Presumably, integration is necessary to overcome potential opportunistic behavior and coordination failure in the face of complexity of making reliable products and uncertainty in the timing completing the development.

Overall, our research has demonstrated that the determinants of the boundaries of the firm cannot be completely explained using a single theory and a few measures. It is necessary to take a multifaceted approach that combines complementary theories and focus on tradeoffs associated with them.

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Table1. Product Classification

Primary Classification	Secondary Classification
Memory	DRAM (Dynamic Random Access Memory)
	Flash Memory
	SRAM (Static Random Access Memory)
	EEPROM (Electrically Erasable Programmable Read Only Memory)
	ROM (Read Only Memory)
Micro	MPU (Micro Processing Unit)
	DSP (Digital Signal Processor)
	MCU (Micro Controller Unit)
Logic	ASSP (Application Specific Standard Product)
	CSIC (Customer Specific Integrated Circuit)
	Standard Logic
	PLD (Programmable Logic Device)
	Display Driver
Analog	ASSP (Application Specific Standard Product)
	CSIC (Customer Specific Integrated Circuit)
	Standard Linear
Discrete	Discrete
	Optoelectronics
	Sensor

Table2. Patent Classification

	Design/System related patents	Process/Device related patents
Section G (PHYSICS)	G06 COMPUTING; CALCULATING; COUNTING	G01 MEASURING; TESTING
	G09 EDUCATING; CRYPTOGRAPHY; DISPLAY; ADVERTISING; SEALS	G02 OPTICS
	G10 MUSICAL INSTRUMENTS; ACOUSTICS	G03 PHOTOGRAPHY
	G11 INFORMATION STORAGE	G05 CONTROLLING; REGULATING
Section H (ELECTRICITY)	H02 GENERATION, CONVERSION, OR DISTRIBUTION OF ELECTRIC POWER	H01 BASIC ELECTRIC ELEMENTS
	H03 BASIC ELECTRONIC CIRCUITRY	
	H04 ELECTRIC COMMUNICATION TECHNIQUE	
	H05 ELECTRIC TECHNIQUES NOT OTHERWISE PROVIDED FOR	

Table3. Descriptive statistics and correlation

	Variables	ALL					> 30 years					< 30 years				
		Obs	Mean	Std.Dev.	Min	Max	Obs	Mean	Std.Dev.	Min	Max	Obs	Mean	Std.Dev.	Min	Max
1	Integration	387	0.65	0.48	0.00	1.00	224	0.83	0.38	0.00	1.00	163	0.40	0.49	0.00	1.00
2	Physical_Design_Method	387	0.67	0.47	0.00	1.00	224	0.71	0.45	0.00	1.00	163	0.62	0.49	0.00	1.00
3	Process_Technology	387	0.36	0.48	0.00	1.00	224	0.44	0.50	0.00	1.00	163	0.25	0.44	0.00	1.00
4	Process_Device_Pat_Stock	387	6.58	2.32	0.00	9.99	224	7.62	2.07	0.00	9.99	163	5.15	1.85	0.00	9.52
5	Process_Device_Pat_Ratio	387	0.39	0.19	0.00	1.00	224	0.44	0.14	0.00	1.00	163	0.33	0.24	0.00	1.00
6	Num_Products	387	1.32	0.69	0.00	2.48	224	1.62	0.63	0.00	2.48	163	0.91	0.55	0.00	1.79
7	Years_in_Business	387	3.42	0.48	1.39	4.11	224	3.77	0.14	3.53	4.11	163	2.95	0.35	1.39	3.37
8	Japan	387	0.33	0.47	0.00	1.00	224	0.51	0.50	0.00	1.00	163	0.08	0.27	0.00	1.00
9	North_America	387	0.48	0.50	0.00	1.00	224	0.34	0.47	0.00	1.00	163	0.68	0.47	0.00	1.00

	Variables	ALL								
		1	2	3	4	5	6	7	8	9
1	Integration	1.00								
2	Physical_Design_Method	0.28	1.00							
3	Process_Technology	0.35	0.51	1.00						
4	Process_Device_Pat_Stock	0.32	0.00	-0.03	1.00					
5	Process_Device_Pat_Ratio	0.41	0.22	0.19	0.14	1.00				
6	Num_Products	0.43	-0.04	0.00	0.56	0.18	1.00			
7	Years_in_Business	0.47	0.12	0.25	0.54	0.28	0.51	1.00		
8	Japan	0.36	0.03	0.08	0.39	0.28	0.36	0.43	1.00	
9	North_America	-0.34	0.01	0.05	-0.27	-0.22	-0.34	-0.22	-0.68	1.00

Table4. Logit Analysis

Variables	model	Model-1	Model2	Model-3		
	sample	ALL	ALL	ALL	> 30 years	< 30 years
Physical_Design_Method		1.10 ***		1.00 **	1.08 *	0.73
		4.20		3.37	2.56	1.72
Process_Technology		1.91 ***		1.91 ***	1.96 ***	2.07 **
		4.38		4.51	3.62	2.89
Process_Device_Pat_Stock			-0.03	0.04	0.08	-0.02
			-0.28	0.51	1.00	-0.08
Process_Device_Pat_Ratio			3.44 ***	2.87 **	1.28	4.03 **
			4.00	3.23	1.00	2.99
Num_Products		1.30 ***	0.86 ***	1.22 ***	1.14 **	1.57 ***
		5.42	3.51	4.83	3.45	3.74
Years_in_Business		1.15 *	1.47 ***	1.02 *	-0.10	1.74
		2.94	4.24	2.47	-0.06	1.65
Japan		0.25	0.17	-0.07	-0.04	-0.42
		0.50	0.33	-0.12	-0.06	-0.30
North_America		-1.52 ***	0.00 *	-1.50 **	-1.68 ***	-1.50 *
		-3.66	-2.29	-3.25	-3.51	-1.98
Constant		-5.31	-6.09	-6.04	-1.37	-8.38
		-4.16	-5.31	-4.29	-0.23	-3.40
N		387	387	387	224	163
Log pseudo likelihood		-152.93	-171.64	-144.86	-72.46	-69.74
Wald chi-square		105.76	113.27	99.85	65.56	67.49
Pseudo R-square		0.39	0.32	0.42	0.30	0.36

* p < 0.05, ** p<0.01, *** p<0.001
upper: estimated coefficient
lower: z value Ēusing clustered standard deviationȅ

Table5. Product Distribution by Predicted and Actual Choice of Integration/Disintegration

Model Prediction	integration	disintegration	disintegration	integration
Actual Coice	integration	disintegration	integration	disintegration
Logic ASSP	11	34	6	10
Analog ASSP	50	23	2	15
Logic CSIC	11	6	3	3
Analog CISC	6	0	1	0
Discrete	27	1	0	1
Display Driver	9	3	0	0
DRAM	9	4	2	1
DSP	3	7	1	0
EEPROM	7	1	1	2
Flash	6	4	2	3
FPGA	2	4	0	0
MCU	18	9	4	0
MPU	4	1	2	1
NV memory	4	0	0	1
Opt	15	1	0	0
ROM	2	0	0	0
Sensor	4	0	0	0
SRAM	5	2	1	0
Standard Linear	25	0	0	0
Standard Logic	7	0	0	0

Table6. Product Characteristics by Predicted and Actual Choice of Integration/Disintegration

Model Prediction	integration	disintegration	disintegration	integration
Actual Coice	integration	disintegration	integration	disintegration
High speed	68	17	6	5
High density	23	2	3	1
High precision/efficiency	107	9	3	6
Low power consumption	137	50	17	18
Small size	109	26	10	13
High reliability/Quality	104	12	11	5
System software functiona	40	58	7	18
Time to marlet	19	29	10	5
Integration	38	35	7	9
Price	9	9	1	5
Deliverly	9	7	0	4
Low cost	42	51	10	16

Rising India: Role of IT Sector in Economic Growth

By:

Dr. Dharminder Singh Ubha
Principal,
GSSDGS Khalsa College,
Patiala (Punjab-India)
savidharm@gmail.com
+09855711380
&

Swaranjit Kaur Ubha

Hamayunpur, Sirhind

Rising India: Role of IT Sector in Economic Growth

Dr. Dharminder Singh Ubha
Principal,
GSSDGS Khalsa College,
Patiala (Punjab-India)
&
Swaranjit Kaur Ubha
Hamayunpur, Sirhind

Abstract

The world is fast changing from industrial to knowledge economy and Indian economy has attracted the attention of the whole globe with its fast growing knowledge sector. In its 11th five year plan (2007-08), the Planning Commission, Government of India observed that Information technology has made a revolutionary change in the history of global trade and services. Today, India has made its presence felt in the field of Information Technology and is considered the premier destination for the global sourcing of IT and IT-enabled Services. The exceptional growth of the Indian IT Software and Services and IT-enabled Services-Business Process Outsourcing (ITES-BPO) sector has made a perceptible impact on the Indian economy. Total export revenues earned by this sector have grown from US$ 7.7 billion in 2001–02 to US$ 47.0 billion in 2008-9. India now accounts for 65% of the global market in the offshore IT and 46% of the ITES market. A majority of the Fortune 500 and Global 2000 corporations are sourcing IT and ITES from India. Dun and Bradstreet in its survey (2008) depicts that the contribution of the IT industry to the GDP of India has grown significantly from 1.8% in 1999-2000 to around 5.8% in 2009. It is with this background in mind that the study of 20 leading Indian IT companies has been made to find out their contribution to and role in the growth of Indian economy.

Keywords: IT Sector, India, Economic Growth, Software, BPO

1. Introduction:

India is one of the fastest growing economies of the world. For the fiscal year 2009-10 India's economy grew by 7.4 percent which is an upward revision from earlier estimates of 7.2 percent due to higher-than-anticipated growth in agriculture, mining and manufacturing sectors. The total foreign investments attracted in 2009-10 amounted to USD 66.5 billion compared to USD 21.3 billion during 2008-09. The services sector has maintained a steady growth pattern since 1996-97, except for the fall in 2000-01. Trade, hotels, transport & communications have witnessed growth, followed by financial services. The services sector accounted for 62.6% of India’s total GDP in 2009.

The world is fast changing from industrial to knowledge economy and Indian economy has attracted the attention of the whole globe with its fast growing knowledge sector. In its 11th five year plan (2007-08), the Planning Commission, Government of India highlighted that Information technology had made a revolutionary change in the history of global trade and services. Today, India has made its presence felt in the field of Information Technology and is considered as the premier destination for the global sourcing of IT and IT-enabled Services. The exceptional growth of the Indian IT Software and Services and IT-enabled Services-Business Process Outsourcing (ITES-BPO) sector has made a perceptible multiplier impact on the Indian economy as a whole. According to the estimates of Planning Commission, “India’s success in the export of IT Software and Related Services over the past decade remains unparalleled. Total export revenues earned by this sector have grown from US$ 7.7 billion in 2001–02 to US$ 47.0 billion in 2008-09. India now accounts for 65% of the global market in the offshore IT and 46% of the ITES market. A majority of the Fortune 500 and Global 2000 corporations are sourcing IT and ITES from India." The Indian software market generated total revenues of $10 billion in 2007, representing a Compound Annual Growth Rate (CAGR) of 25.5% for the period spanning 2003-2007. In comparison, the Chinese and the Japanese markets grew with CAGRs of 13.1% and 5.8%, respectively, over the same period, to reach respective values of $30 billion and $16.4 billion in 2007. The exports market constitutes the largest segment accounting for around 65.5% of the total revenue generated by the Indian IT industry, including hardware. It is more aggressive in tapping the global market. Thus, it is in the fitness of things to say that during the last few years, Indian economy has witnessed tremendous growth in the IT software and services sector (Narayanan & Bhat 2010). Indian IT companies have established themselves in the global market and the country is on the threshold of becoming a knowledge superpower because one of its strongest assets as a nation is the toiling nature and creativity of its people.

IT enabled services, such as Business Process Outsourcing, have grown rapidly in the recent past and will continue to rise. India's large English speaking skilled work force has made the nation a major exporter of software services and skilled manpower. According to a recent CRISIL study released, the IT and ITES services sector has a multiplier effect on the Indian economy with every input of a rupee resulting in a 100 per cent return. The study, conducted for NASSCOM, says, "Every rupee spent by the IT-ITES sector translates into a total output of 2 rupees in the economy." The software services in Indian economy along with the export of products is growing at a massive pace, thereby witnessing an impressive rise of 35.5 percent and reaching a lumpsome amount of USD 18 billion. The ITES and BPO sectors grew by 33.5 percent and earned a revenue of USD 8.4 billion. NASSCOM report says that the IT industry has been the trigger for many 'firsts' and has contributed not only to unleashing the hitherto untapped entrepreneurial potential of the middle class Indian but also taking Indian excellence to the global market. However, equally significant, though not always as tangible, has been the significant economic and social contribution of the 'for profit' activities of the industry. The Report states that the IT/ITES industry's contribution to the country's GDP has been steadily increasing from a share of 1.2% in Financial Year 98 to 5.8% in Financial Year 09; it has contributed to foreign exchange reserve of the country by increasing export by almost 36% and its direct employment has grown at a CAGR of 26% in the last decade, making it the largest employer in the organized private sector of the country. In addition, the research has highlighted the IT industry's significant contribution through socially relevant products/services and community initiatives in human resource development, education, employability, health, creating opportunities for the 'out-of-the-mainstream' candidates, encouraging women empowerment and employment of differently-abled persons.

2. Coverage of the Paper:

The paper concentrates mainly on three important parameters of economic growth, namely- revenue generation, export earnings and employment generation. In the paper, it studies in detail the total performance of the IT sector during the different financial years in relation to the above three parameters. Besides, the contribution of IT sector to GDP has also been highlighted to know its impact and contribution in the growth of the economy. The 20 top companies of the IT sector have been identified on the basis of NASSCOM list and have been studied individually for the FY 2009-10 in order to find out their contribution in comparisons to the performance of the whole IT sector in India.

3. Contribution of IT Sector in the Economic Growth of India:

Information Technology Sector has been the most flourishing sector of the Indian economy and expanding at a very fast speed, thus giving a amazing boost to the economic growth process of the country. The performance of the total IT sector can be analysed as under:

3.1. Revenue Generation:

The revenue generation from IT-BPO industry is continuously on the rise and the performance in the export area is indicative of the fact that the Indian IT skills have been recognized all over the globe and are contributing significantly to the economic development of the country. In a little over a decade, India has emerged as a major exporter of software in the international economy. This remarkable feat has been accomplished through the extraordinary growth of Indian software which, in the last 5 years, expanded at a compound annual rate of 56% (Arora & Athreye 2002). The following table highlights the sector-wise revenue break-up of Indian IT-BPO industry for different Financial Years:

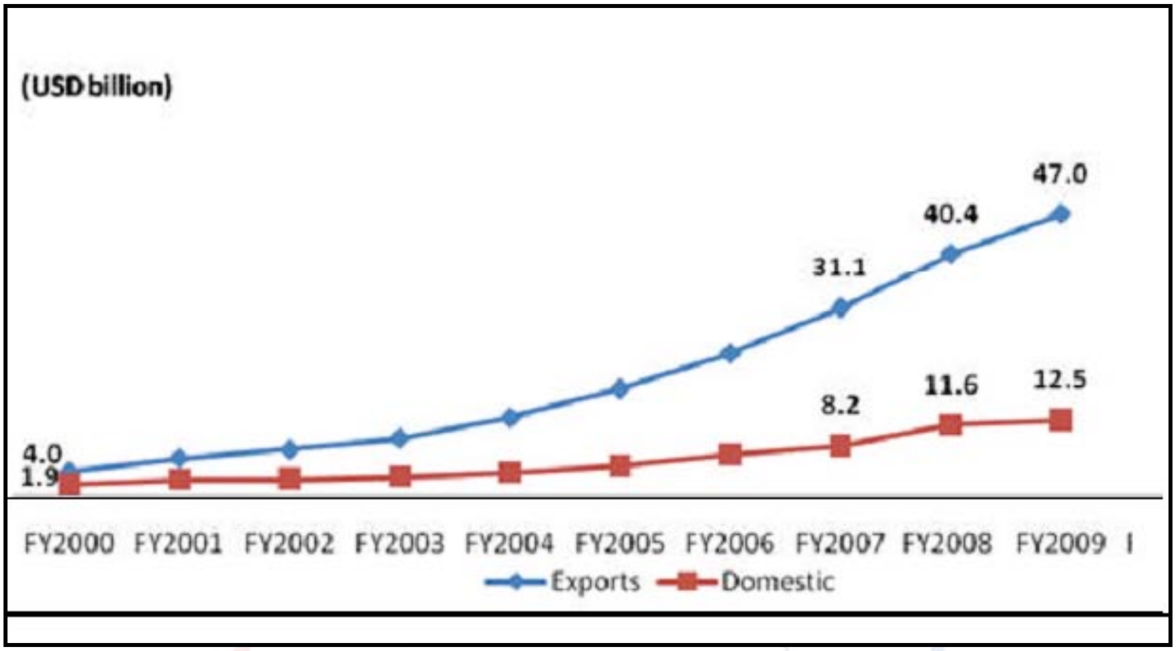
Indian IT-BPO Industry-Sector Wise Revenue Break-up

USD Billion	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
IT Services	**13.5**	**17.8**	**23.3**	**31.0**	**35.2**
-Exports	10.0	13.3	17.8	23.1	26.9
-Domestic	3.5	4.5	5.5	7.9	8.3
BPO	**5.2**	**7.2**	**9.5**	**12.5**	**14.8**
-Exports	4.6	6.3	8.4	10.9	12.8
-Domestic	0.6	0.9	1.1	1.6	1.9
Engineering Services and R&D, Software Products	**3.8**	**5.3**	**6.5**	**8.6**	**9.6**
-Exports	3.1	4.0	4.9	6.4	7.3
-Domestic	0.7	1.3	1.6	2.2	2.3
Total Software and Services Revenues	**22.5**	**30.3**	**39.3**	**52.0**	**59.6**
Of which, exports are	**17.7**	**23.6**	**31.1**	**40.4**	**47.0**
Hardware	**5.6**	**7.1**	**8.5**	**12.0**	**12.1**
-Exports	0.5	0.6	0.5	0.5	0.3
-Domestic	5.1	6.5	8.0	11.5	11.8
Total IT Industry (Including Hardware)	**28.1**	**37.4**	**47.8**	**64.0**	**71.7**

Source: NASSCOM

The table shows that Indian IT-BPO grew by 12 per cent in the Financial Year 2009 to reach USD 71.7 billion in aggregate revenue whereas Software and Services Exports (includes exports of IT services, BPO, Engineering Services and R&D and Software products) reached USD 47 billion, contributing nearly 66 per cent to the overall IT-BPO revenue aggregate. IT-BPO exports (including hardware exports) reached USD 47 billion in Financial Year 2009 as against USD 40.9 billion in Financial Year 2008, a growth of 16 per cent. Domestic IT market (including hardware) reached USD 24.3 billion in FY2009 as against USD 23.1 billion in

Financial Year 2008, a growth of 5.3 per cent. Hardware grew at 2.6 per cent; Software and Services spending supported by increasing adoption, grew by almost 8 per cent. The revenue generation can be represented graphically as under:



3.2. Contribution to GDP:

Gross Domestic Production is an important indicator of the growth of the country. The contribution of the information technology industry to GDP has been presented in the following table:

Contribution of IT sector to GDP in India

Year	Share in India's GDP (%)
1994-95	0.59
1997-98	1.20
1998-99	1.40
2000-01	2.60
2001-02	2.80
2002-03	3.20
2003-04	3.60
2004-05	4.10
2005-06	4.70
2006-07	5.40
2009-10	5.80

Source: NASSCOM

The table shows that the IT sector contributed only 0.59 percent per annum in 1994-95 which reached the level of 4.1 percent per annum in the year 2004-05, and to 5.4 percent per annum in 2006-07. In the financial year 2009, the contribution to GDP by IT sector was 5.80 percent per annum. It gives a clear picture of the fast growing information technology sector in terms of its contribution to GDP of the country.

3.3. Employment Generation:

Employment generation is one of the most important parameters of economic growth. The following table highlights the number of people employed in Information Technology Sector of the country:

Employment in IT Sector

	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
IT Exp. & Services Exports	170,000	205,000	296,000	390,000	513,000	690,000	860,000	946,809
BPO Exports	106,000	180,000	216,000	316,000	415,000	553,000	700,000	789,806
Domestic Market	246,250	285,000	318,000	352,000	365,000	378,000	450,000	500,000
Total	522,250	670,000	830,000	1,058,000	1,293,000	1,621,000	2,010,000	2,236,614

Source: NASSCOM

The table shows that direct employment in Indian IT-BPO crossed the 2.2 million mark, an increase of about 226,000 professionals over the financial year 2008 whereas indirect job creation is estimated at about 8 million. IT services (incl. engineering services, R&D, Software products) exports, BPO exports and Domestic IT industry provides direct employment to 947,000, 790,000 and 500,000 professionals respectively.

4. Contribution of Top 20 Indian IT Companies in the Economic Growth of India:

The top 20 IT companies of India had average revenues of $2 billion in 2009-10. These companies managed to match the Indian gross domestic product growth rate of 8.4 per cent in rupee terms to report a combined revenue of Rs180,193 crore ($39.52 billion) in the Financial Year 2009-10 compared to Rs 174,605 crore (Rs 1,746.05 billion) in the Financial Year 2008-09. Fourteen companies had a revenue of billion dollars and above during the period. The top 200 IT companies posted total revenues of Rs 307,126 crore (Rs 3,071.26 billion) in the year, or a growth of 6.2 per cent (from Rs 289,093 crore or Rs 2,890.93 billion in 2008-09). The number of companies registering zero or negative growth this year rose to 68, compared to 28 a year ago (Dataquest). The following table highlights the company-wise revenue generation and its growth rate for the Financial Year 2009-10:

Revenue Generation by Top 20 IT Companies

Rank	Company	Revenue (in Rs Crore)	Growth (%)
1	Hewlett-Packard India	14,992	16
2.	HCL Infosystems Ltd	11,836	-4
3	Ingram Micro India	8,824	-6
4	Redington	7,024	7
5	IBM India	5,888	2
6	Dell India	5,275	24
7	Wipro	5,268	9
8	Intel India	4,690	-
9	Microsoft India	3,575	14
10	SAP India	3,204	46
11	Acer India	2,749	38
12	Oracle India	2,700	11
13	APC-MGE	2,620	-1
14	Emerson Network Power India	2,500	NA
15	Tata Consultancy Services	2,392	-15
16	Lenovo India	2,396	-3
17	Cisco Systems India	2,324	0
18	Tulip Telecom	1,965	22
19	LG India	1,798	39
20	Samsung India	1,664	29

Source: Dataquest

The table highlights that 9 companies out of the top 20 companies registered a double digit growth with SAP India showing as high as 46% growth in its revenues. Hewlett-Packard India, an American multinational information technology corporation with an office in almost every country of the world, has generated the maximum revenue to the tune of Rs. 14,992 crores followed by HCL Infosystems Ltd and Ingram Micro India. These 20 top companies earned almost 58% of the total revenue earned by the 200 top IT companies of the country which reflects their remarkable contribution in the economic growth of the country.

The second important parameter is the export contribution for evaluating the performance of any sector. Though the export revenues generated by the IT sector in India has already been known, yet it is in the fitness of things to know the export revenues generated by top 20 IT sector companies of the country. The following table describes the export revenues generated by these companies at the end of the year 2010:

Export Earnings by TOP 20 IT Companies in India:

No.	Company name	Exports (n Rs crore)	Growth (%)
1	Tata Consultancy Services	24,289	2
2	Infosys Technologies	21,141	5
3	Wipro	16,681	3
4	Cognizant Technology Solutions	15,581	22
5	HCL Technologies	10,104	25
6	IBM India	6,500	3
7	Accenture India	4,464	9
8	Tech Mahindra	4,297	4
9	MphasiS	3,874	19
10	Oracle India	3621	3
11	Patni Computer Systems	2961	-1
12	Hewlett-Packard India	2839	0
13	Capgemini	2410	6
14	CSC India	1937	-5
15	L&T Infotech	1802	3
16	Syntel	1694	11
17	Aricent	1689	-9
18	Prithvi Solutions	1341	-24
19	Polaris Software Lab	1216	-1
20	Mindtree Consulting	1205	4

Source: Dataquest

The table shows that TCS is the most important IT Company as for as the export earnings are concerned. The growth rate in revenue is 2% more than the previous year. It is followed by Infosys Technologies and Wipro. The total export revenue by all the 20 companies comes out to be Rs. 129,646 crore or Rs. 1296.46 billion or USD 27.4 billion and this comes to be approximately 58% of the total export revenues generated by the IT sector in the country. It shows that the top 20 companies are playing a major role in the overall development of the country in terms of economic growth.

The third important parameter for gauging the impact of any business activity on economic growth is employment generation by that particular sector of the economy. IT services firms have emerged as India's biggest job generators and that too at a time when traditional manufacturing firms - historically big employers - have tended to cut down on numbers to control costs. Typically, this sector also generates high paying, high disposable income jobs, unlike manufacturing sector. The following table gives the data regarding the total number of employees working in the top 20 IT companies of the IT sector in India:

Number of Employees in Top 20 IT Companies in India

No.	Company name	No. of Employees
1	Tata Consultancy Services	163,700
2	Infosys Technologies	113,796
3	Wipro	108,071
4	Cognizant Technology Solutions	85,000
5	HCL Technologies	58,129
6	IBM India	130,000
7	Accenture India	35,000
8	Tech Mahindra	33,524
9	MphasiS	27,000
10	Oracle India	115,000
11	Patni Computer Systems	15,000
12	Hewlett-Packard India	30,000
13	Capgemini	26,000
14	CSC India	78,400
15	L&T Infotech	10,000
16	Syntel	14,900
17	Aricent	9,500
18	Prithvi Solutions	1,000
19	Polaris Software Lab	14,000
20	Mindtree Consulting	9,000

Source: Dataquest

As per the table, TCS is the major employer having 163,700 people working with it. It is followed by IBM, Oracle India and Infosys Technology. The total number of employees working in the top 20 companies comes out to be 1,077,020. The number is roughly 50% of the total work force employed in the whole IT sector of the economy.

5. Conclusion

To conclude, the IT sector is playing a major role in the economic growth of the country. Its contribution in GDP is near 6%. It also has a major share in the export revenues of the country. The IT sector also contributes major share in the field of employment generation. The top 20 IT companies of the country have been proving very vital for the overall development of the country. The IT industry in India has also witnessed a massive change, growth and development over the years. The future of this industry seems bright with more growth being predicted. The industry analysts are predicting rapid strides in software technology development in India in the very near future. As per The National Association of Software and Service Companies (NASSCOM), the Indian IT exports are anticipated to touch US$ 175 billion mark by 2020 out of which the domestic sector will account for US$ 50 billion in earnings. In total, the export and domestic IT sector are expected to attain profits amounting to US$ 225 billion along with new prospects from BRIC (Brazil, Russia, India and China) nations and Japan for its outsourcing operations. In addition, the growth of the IT sector may also bring about a corresponding growth in employment, exports, Foreign Direct Investments etc. IT sector is also intimately linked to other sectors like biomedical technology, defense and infrastructure. Thus, the IT sector has a strong bearing on the growth of the nation and there is every reason to hope that in times to come the role of this sector in the economic growth of India will be still more vital and visible.

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Explanation of S&P500, Indu, Euro Bund or EUR/USD returns probability distribution deviation from a Gaussian Curve (Dynamic Financial Market Model)

Prague, Czech Republic, March 2010

Author of the model: Ing. Bohumil Stádník (Czech Republic)
Author of the paper: Ing. Bohumil Stádník
Email: bohumil.stadnik@email.cz

Address:
The University of Economics (Faculty of Finance and Accounting)
W. Churchill Sq. 4
130 67 Prague 3
Czech Republic

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Abstract

The correct model of a liquid financial market is one of the most important matter for a management of all financial market activities including for example a stock or bond porfolio management or an asset pricing.

Clear random walk models, which consider a market price/yield development on liquid financial markets to be a random walk within the meaning of a symmetric normal (gaussian) distribution, is very useful to explain quite accurately many financial market effects.

If we study financial markets more closely, we recognize that such development can be partly causal and a clear random walk is only a special case of it.

Dynamic Financial Market Model considers feedback processes on financial markets which cause an dependence in a probability of next price/yield step direction and also expects mix of random processes as a final result. Both effects cause not gaussian (normal) observations in probability distributions of finacial instruments and this is why the model is also able to explain for example effects like thin or fat tails and other deformations in the probability distribution. S&P500 index or Euro Bund futures probability distribution on daily basis are good examples of the diversion from normality.

Basic principles of the Dynamic Financial Market Model and also its **explanation of S&P 500 index, Down Jones Industrial Average index, Euro Bund futures or EUR/USD currency development returns distribution departure from a Gaussian curve** is the core of the paper.

Keywords

Dynamic Financial Market Model, binomial random walk, normal (Gaussian)/ binomical distribution, feedback on financial market, dynamic system, fat/thin tails, deformations in a probability distribution, S&P 500 Index, Euro Bund futures, departure from a Gaussian Curve

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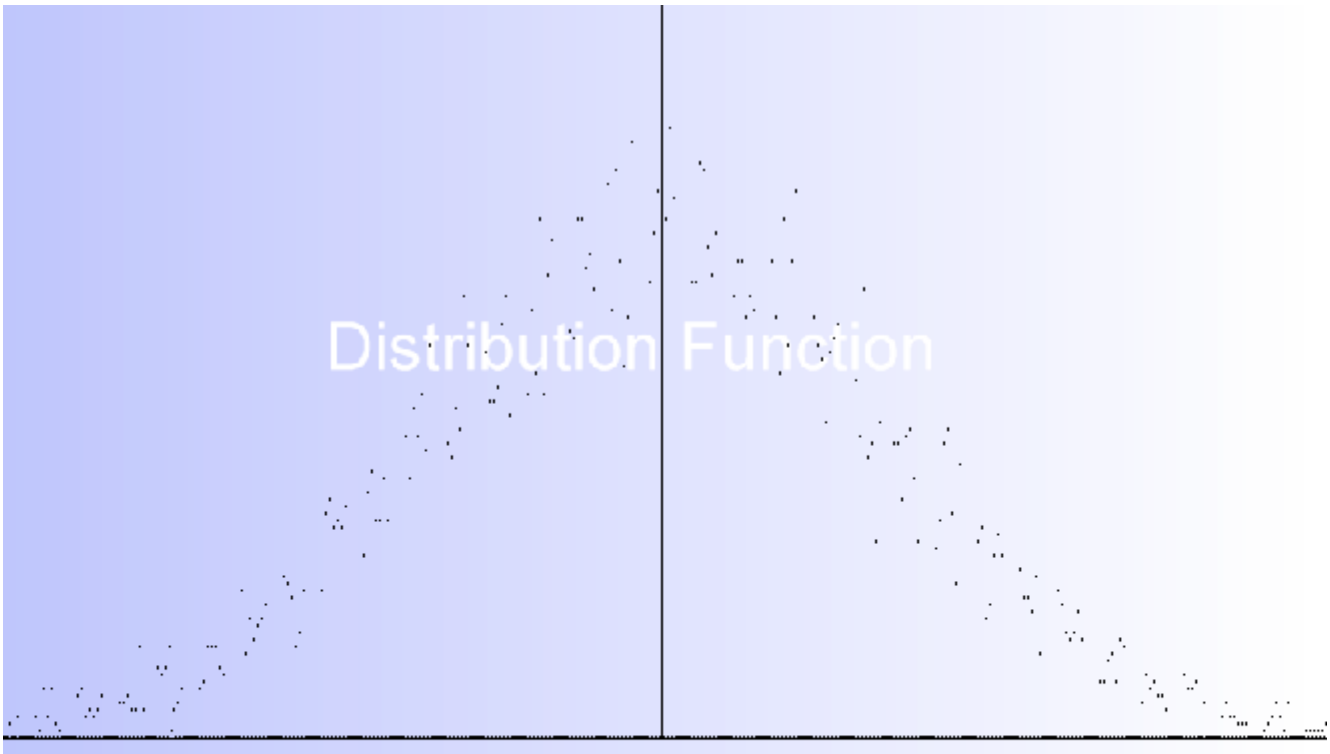
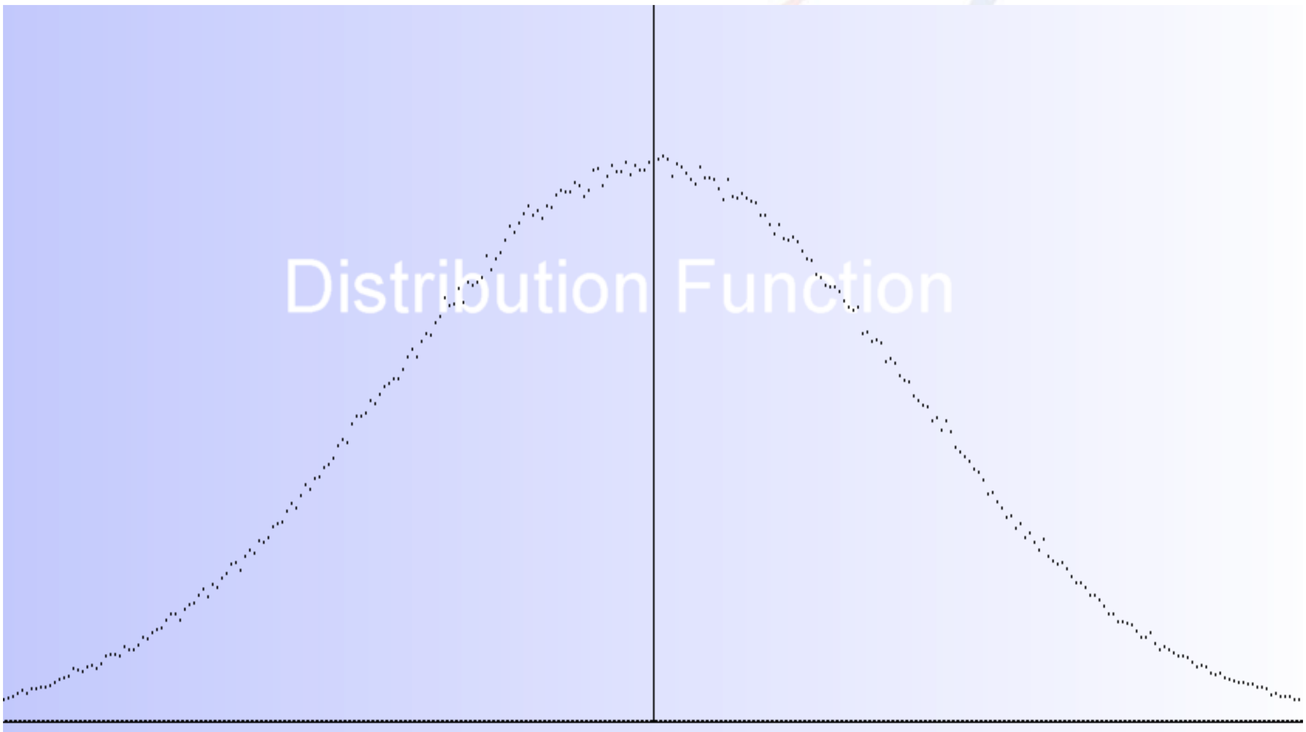
1. Problems of Economic Studies

In economic studies we have problem to collect enough data (we have no chance to study experiments in a laboratory) from a financial market. Picture [18],[19] illustrate the difference in constructing probability distribution from 10000 and 900000 random walks.



Binomial distribution from 10 000 random walks for 1000 steps, source: B.Stádník **[18]**



Binomial distribution from 900 000 random walks for 1000 steps, source: B.Stádník **[19]**

In case of a constructing some probability distribution of price/returns from empirical data we have chance to create a correct distribution only on hourly, daily basis. There is no chance to do it for example on yearly basis.

Other way is to construct such a distribution from a precise internal description of the system.

1.1 Causality and Repetition Problem

If we study for example market price reaction to some unexpected information after which the market price was falling down and the information is really negativ for the market development we can consider a few internal structures.

The first is: Financial market is highly efficient.

The second is: Financial market does not react on the information and its reaction is the result of some random process.

The third is: Financial market reacts positively on the information but if the information would not come, market would fall down even more due to some random process. So we have a case, when the final market reaction is the result of more effects.

The fourth is: Financial market reacts negatively but there is also another random processes inluence the movement.

The similar is a toss a coin. If we simulate a market price development and generate random walk using a toss a coin and the result is an upward trend we can consider more internar structures.

The first is: The coin is fair and the trend is the result of a symmetric random walk.

The second is: The coin is not fair (material of a coin is not homogenously distributed) but the result is the same and the trend is the result of a asymmetric random walk.

From these examples is clear that it is not easy to describe internal structure of the system only as the result of an observation of input and output of the system.

If we do such observation then we have to try to suspend structures which are not real or which are not suitable for repetitious observations. The repetitious observations are the problem in economy studies.

Other way to make a description of the system is to try understand precisely internal structure of the system (to study material of a coin). This way we have decided for developing Dynamic Financial Market Model.

1.2 Uncertain external description of systems

From cybernetis we now that if we study a system as a „black box“, which means we are trying to find the internal structure of the system only from the relation between its input and output (external description), we will never be sure of the correct internal structure because each external description can be the result of more internal structures of the system description.

Lets say that financial market is a system from cybernetics point of wiev. It has its input, which can be represent by an information that can infuence a price and output which can be for example a price or a yield chart.

2. Dynamic Financial Market Model

2.1 Basic Principle of Model Development

We have already discussed the problem of uncertainty of an internal structure sequent on studies of relation between input and output of the system. From this reason Dynamic Financial Market Model is not based on studies of relation between input and output of financial market but the method of construction of the model is reverse.

Dynamic Financial Market Model is a model of financial markets which is based mainly on the precise description of internal structure and internal mechanism on the lowest level.

Proofs of an internal structure result directly into a correct model.

From a correct description resulting predictions about functionality of outputs of the system.

Input is represented mainly by incoming informations and output is represent by price/yield charts and trading volumes.

2.2 Model Presumptions

2.2.1 Random Process of Incoming Orders Presumption

Random process of incoming market orders is one of the basic principles of all markets, also of our financial market. There are some differences between exchanges, OTC or Market Making but the principles and results from the point of view of Dynamic Financial Market Model are the same.

2.2.1.1 Book of Orders

The book of orders is the core of the situation on the exchanges (organized markets).

Orders comes in to the market and are placed in the book of orders.

We can recognize buy orders, sell orders, stop-loss buy orders, stop-loss sell orders.

A trade is done at certain price if an investor hit an order which is already placed. The sequence of trades generates a certain price development, which can be figure for example in a chart. An order can also be cancelled before its hit.

The sequence, frequency and the volume of orders is generally unpredictable for each investor.

The book of orders on liquid financial market works continuosly during trading hours, collects orders and generates a price development.

The work of book of orders is a stable process if there is still certain amount of orders coming to bid and offer sides. This situation is also on a real financial market. Stable situation is supported by the fact that investors are interested first of all in a future price development which is important for their profit or loss and they accepted very well current price in a wide price range. Acceptance of a current price in a wide price range is psychologic matter and it is typical for current financial markets. It also means that for each price we probably find many investors with an opposite opinion on a future price development.

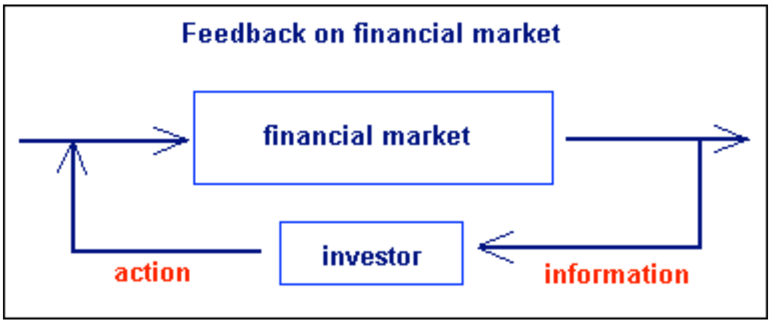
The difference between the best and offer price is usually one price tick.

2.2.1.2 Market Making, OTC and other markets

Market Making, OTC and other markets systems are based on a same principle as a book of orders where the same mechanism of placing and hitting of orders works. There are some differences but not important for our purposes.

2.2.2 Feedback Presumption

Investors watch present state of a financial market, watch history, watch charts and according to their shapes, trade volumes, price values and other indicators try to predict a future price/yield development. This process is an information part of a feedback which transfers informations from history to present. But there is also action part of a feedback - investors according their opinions of a future development place orders into the market and influence a future development. The process is illustrated in the picture [20]:



Feedback on financial markets, source: B.Stádník **[20]**

Due to a feedback process the frequency of incoming orders supported one direction of a price/yield step could change. If a frequency of incoming buy orders increases and sell orders decreases or remain the same, the probability direction of up movement is increasing while probability of down movement is decreasing.

We can say that there are processes on financial market (all of them will be discussed later) which realize a feedback between output and input of the system and such feedback can also influence a future development.

The tests if the market price or yield development is a gaussian clear random walk is in this case unnecessarily and with reason we can expect the the probability distribution differs from normal (gaussian)/binomial.

If there is a one investor who uses historical data to predict a future development, we have to say that there is a feedback on financial market. In this case we cannot consider market price development to be a clear random walk because there is a causality between following price steps in the development. The causality is caused by an investor who uses historical data.

Even if influence of such trader can be insignificant we must consider a feedback influence on the market and clear random walk development only as a special case of it.

2.2.2.1 Proof of a Feedback

From worldwide studies we can say that aproximately 75% (Arnold, Moizer, Noereen, studies in 1984) of investors use sometimes technical analysis, the same numbers for behavioural analysis and almost every investor is under an influence of a price/yield development in past.

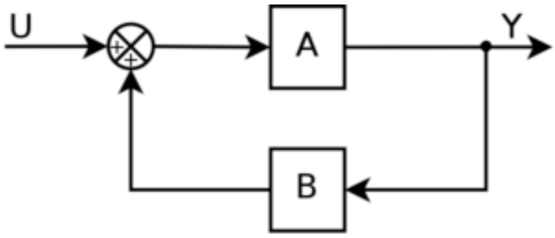
We can say if there is one investor who watches historical or present data in the financial market and under their influence puts orders to the market, there is a feedback which inflences a future development.

2.2.2.2 Types of a Feedback and its Functionality

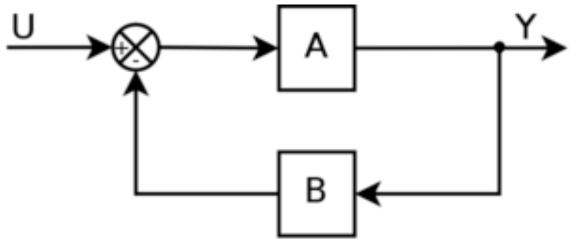
We consider two basic feedbacks. Positive and negative.

Positive feedback, which is in the picture [21], increases input value directly to increases of output and so causes further increases of output. Increasing of output values can continue till the limits of the system. In reality a positive feedback can cause damages. In case of financial markets we can expext positive feedback during for example crisis or panic situations.

Negative feedback (picture [22]) decreases inputs while output increases and so can decrease also output. Due to this character a negative feedback can be used for regulations. In case of financial market we can expect that negative feedback causes the fact that a price of financial instruments cannot go to infinity, bellow zero or cannot be too much out from levels give by economic situations.



Positive feedback [21]



Negative feedback [22]

Financial market as a dynamic system

The direction of each step of a clear random walk does not depend on the previous step direction, does not depend on a historical development or a present price value. In every time the probability of dawnward and upward movement is 50% (in case of symmetric clear random walk) and between steps there is no any relation. Clear random walk model is a model without a feedback to any historical development, the system has no memory. Typical example of such process is a brownian motion or a diffusion of particles of gases.

In cybernetics we also study systems with a memory-dynamic systems. Memory is realized by a feedback. Feedback allows transfer of data from history to present. In present they can be processed and used to influence the future system output. This process we assume for the financial market.

2.2.2.3 In Which Processes Do We Assume a Feedback

The list of financial market processes where we assume a feedback (+short description):

Price inertia feedback (negative feedback)

Keeps a price to be unchanged. Works in all periods of time as a minute, hour or day. If there is no any relevant economic information, basic random walk (from process of incoming orders) is trying to be kept by price inertia feedback between two norrow levels. („Thin Tales", „S&P" processes in software simulation application (chapter 3))

Trend Stabilizer (positive feedback)

We can assume that each trend is self supporting process. Many investors believe into a trend („the trend is my friend") and supporting it by placing orders. The situation is same in case of a trend on the lawest level of the fractal structure of a financial market and also in case of a trend on the higher levels with a trend channel. („Trend Stabilizer", "Panic" processes in software simulation application (chapter 3))

Levels, barriers (negative feedback) & Logarithmic Approach

Obviously a random walk on a financial market must be limited between minimally two levels. It´s not possible for the price of a common financial instrument to fall bellow zero and the price also cannot go to infinity.

The fact that price cannot fall bellow zero is solved by a presumtion that size of steps of a yield (return) is independent on its absolute value. The step size of a price is not independent on its absolute value and is decreasing if the price is approching to zero.

The relation between a price and a yield is expressed as yield is a logarithm of a price.

The problem is that financial market primarily generates steps in price (book of orders are for price orders) so its logarithmic approximation is not always retain.

We can also expect that an economic situation creates barriers which market price is not able to reach. This type of a feedback we expect most of all in a longer time period and be recognized in the probability distributions on monthly or year basis which is not possible to construct from a market data. („Low Price", "Limits" processes in software simulation application (chapter 3))

Market manipulation (positive feedback)

Market manipulations are unfortunately probably one of the most frequently present feedback process on financial markets. Especially with a connection with triggering of stop-loss orders manipulations cause very strong positive feedback.

Technical analysis

Each trader who is using technical analysis is watching the history of the development and due to this he is placing orders to the market. So we can say, that the future price steps depend on the development in past. („Technical Anylysis" process in software simulation application (chapter 3))

Round numbers

Price levels which are represented by round numbers (10,15,... 100, 200...) are used like decision levels to buy, sell, stop-loss or profit-taking levels more than other price levels. Traders control the present situation and react to the round numbers. Mostly the frequency of trades is higher. This is important for the Poisson process characteristics we expect on the market.

Trading Techniques

Almost all the trading techniques are besed on feedbacks. Traders watch present or historical data and due to them are placing or hit orders. Many techniques are besed on levels. It means if any level is broken, the movement will keep the direction. If level is not broken the market price will return back to an open price or keep the trend. Many levels are represented with round numbers.

Financial crisis (positive feedback)

Financial crisis is something very close to a trend stabilizer. Feedback is realized by traders reacting strongly on past negative movements. In this case we expect very strong positive feedback. („Panic" process in software simulation application (chapter 3))

Different dynamic of upward and downward movements

Empirical experiences indicate, that dynamic of market dawnward movements is different than in case of market upward movements. Dawnwards movements are more quick. This effect is probably caused by similar processes as during financial crisis-stronger positive feedback in case of downward movements. („Diff.up/down" process in software simulation application (chapter 3))

Other processes during which is used history to influence future

Market regulation (negative feedback), ifluence of other markets, influence of history.

2.2.2.4 Feedback Processes Triggering and Terminating

Feedback process can be triggered during a process without a feedback and is expect to be terminated when mechanism which cause feedback stops work. It can be also during a development which is already under influence of a feedback.

For example, when a formation which can be recognized as a trend appears in the development, Trend Stabilizer process is switching on. When Trend Stabilizer is switched on, it doesn´t mean that a trend will last forever and if trend disappears, feedback proces is cancelled.

2.2.3 Random Process of Unexpected Informations and Gaps Presumtion

Instead of book of a orders random process, there is a random process of unexpected informations. This process is also predicted by Efficient Market Theory.

2.2.4 Mix of Random Processes

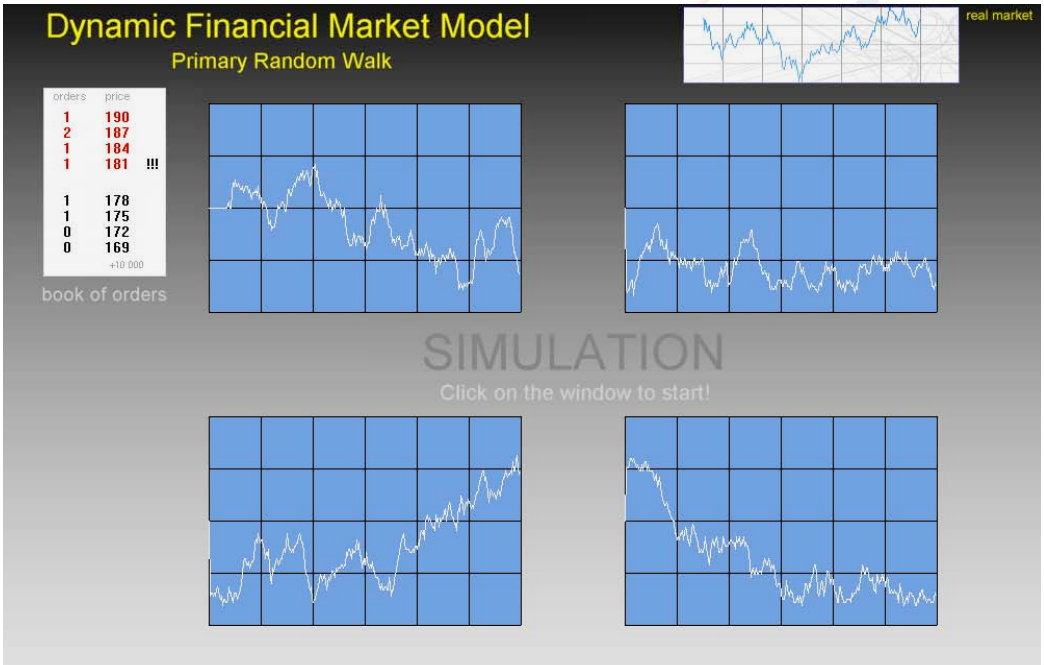
As we expect two independent random processes which generate random steps of a price/yield development we expect that the final process will be mix of these two processes.

2.3 Model Consequences

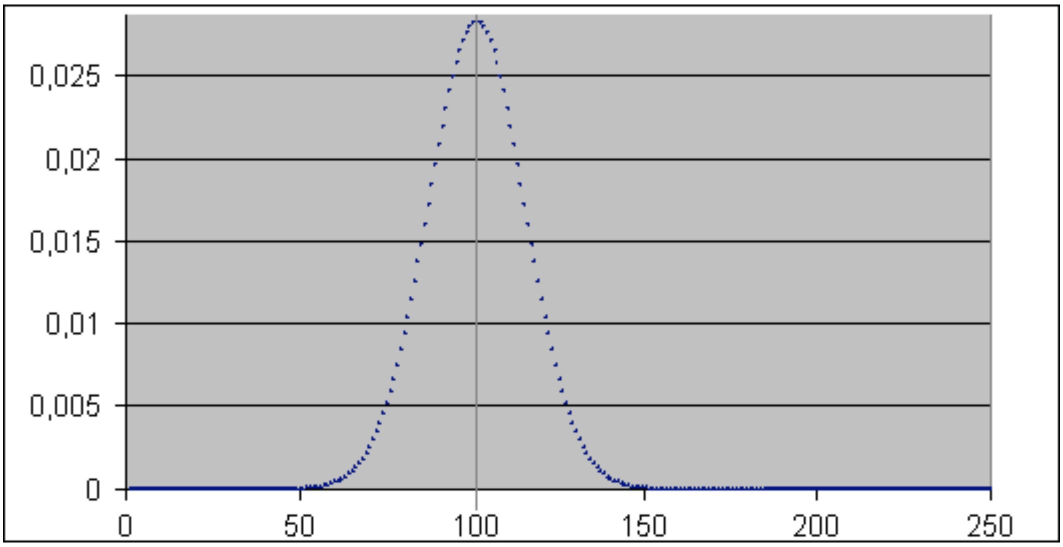
2.3.1 Random Process of Incoming Orders Consequences

Stable work of a „process of incoming orders“ means that the future situation, together with realized trades, is unpredictible for each investor and we can expect that process generates a symmetric binomial random walk (clear Wiener process) if frequency of coming buy/sell unit orders remain the same (one order may consists of many unit orders). **If a frequency of coming buy/sell orders differs, which can be caused by a feedback (chapter 2.2.2), probability distribution is deformated.**

In the Picture [23] is en example of basic binomial random walk, with no feedback processes. There are four different binomial random walks in the picture as a result of model situation where a group of buyers and sellers accept price range 10160-10340 price units. Each of investors comes in to the market with one order and places an order to the book of orders at random time. If we simulate this situation 4 times we get four different binomial random walks.



Outputs from book of orders simulation, source: B.Sádník **[23]**

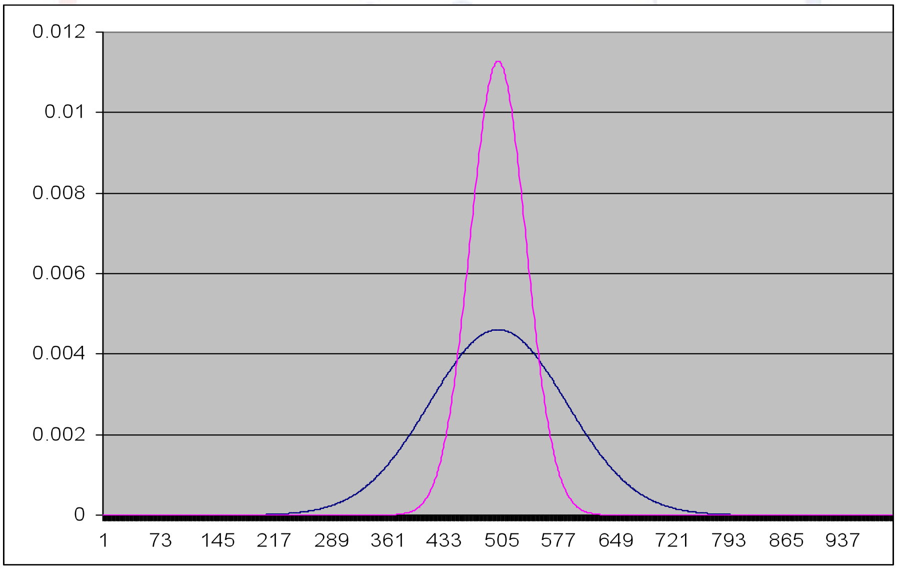


Binomial distribution curve, source: B.Stádník **[24]**

Distribution of random walk without a feedback and with symmetric random characteristic, where probability of step up and down is equal to 50% has a probability distribution for 200 steps displayed in the picture [24].

If the lenght of steps can continuosly change its value with a certain average value, we would speak about typical normal (Gaussian) distribution.

If the number of steps increases, the distribution line changes its chape as is displayed in the picture [25].



Blue-30000 steps, 50% probability, violet – 5000 steps 50% probability, source: B.Stádník **[25]**

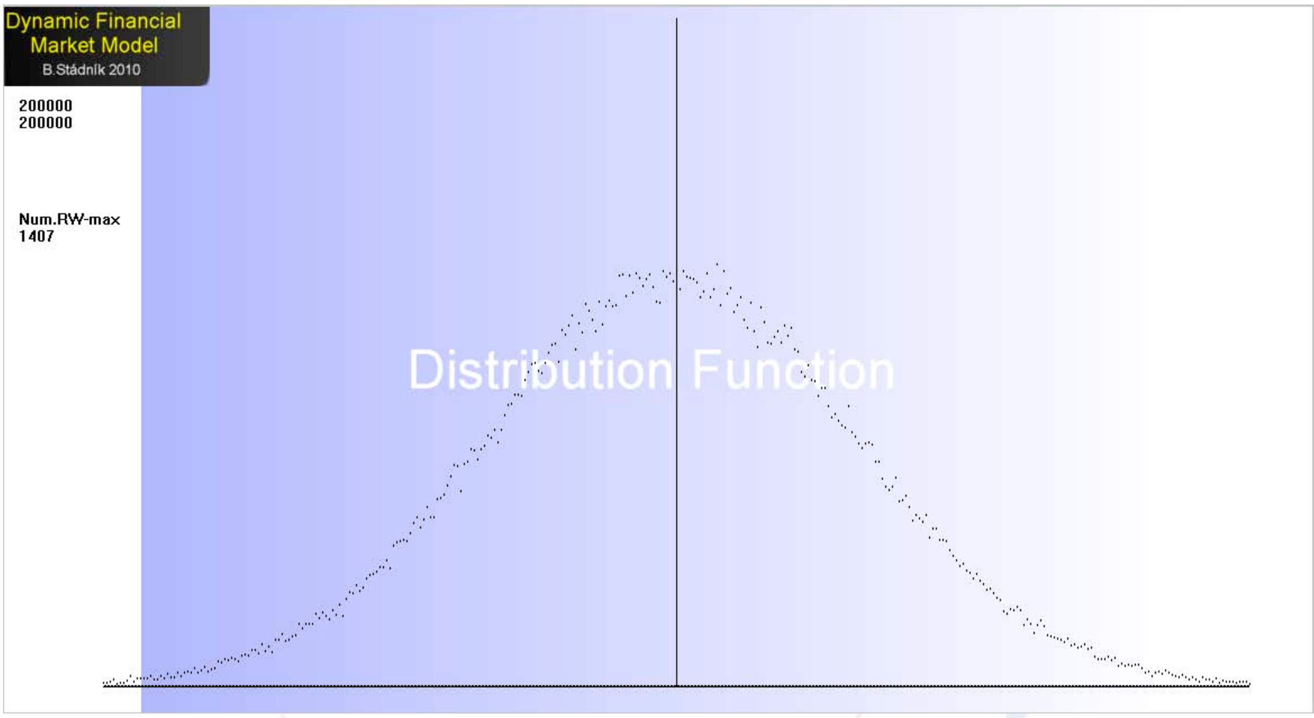
2.3.2 Feedback Consequences

2.3.2.1 Changes in a Probability of a Step Direction

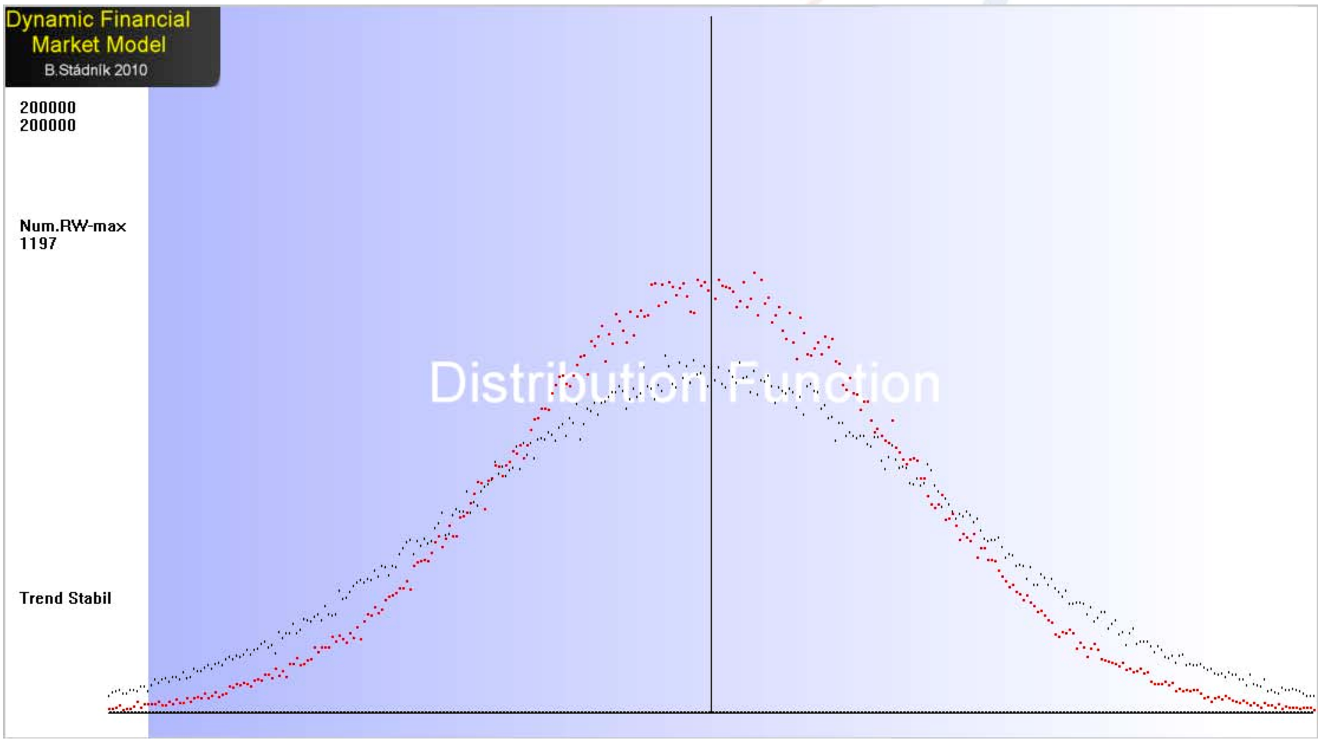
Due to a feedback process (according chapter 2.2.2.3) we expect, that feedback influences a future market price development. If a frequency of incoming buy and sell orders differs, for example more traders are supporting an upward trend, so the frequency of buy orders is higher and so the probability of future price step in one direction is also higher. This causes a probability distribution deformation.

When a probability of each step direction is dynamicly changing, we should recognize for example kurtosis (kurtosis is characterized by fat tails at the borders and sharpness in the mid area of probability distribution) or just fat tails.

In application for simulation we simulate one day of average liquid market and consider one trading day consists of 19000 coming orders. It causes approximately 12000 steps of up/down movements. From a simulation application (chapter 3) we get a picture [29]. In [29] there is an expected probability distribution for an average trading day without any feedback process.



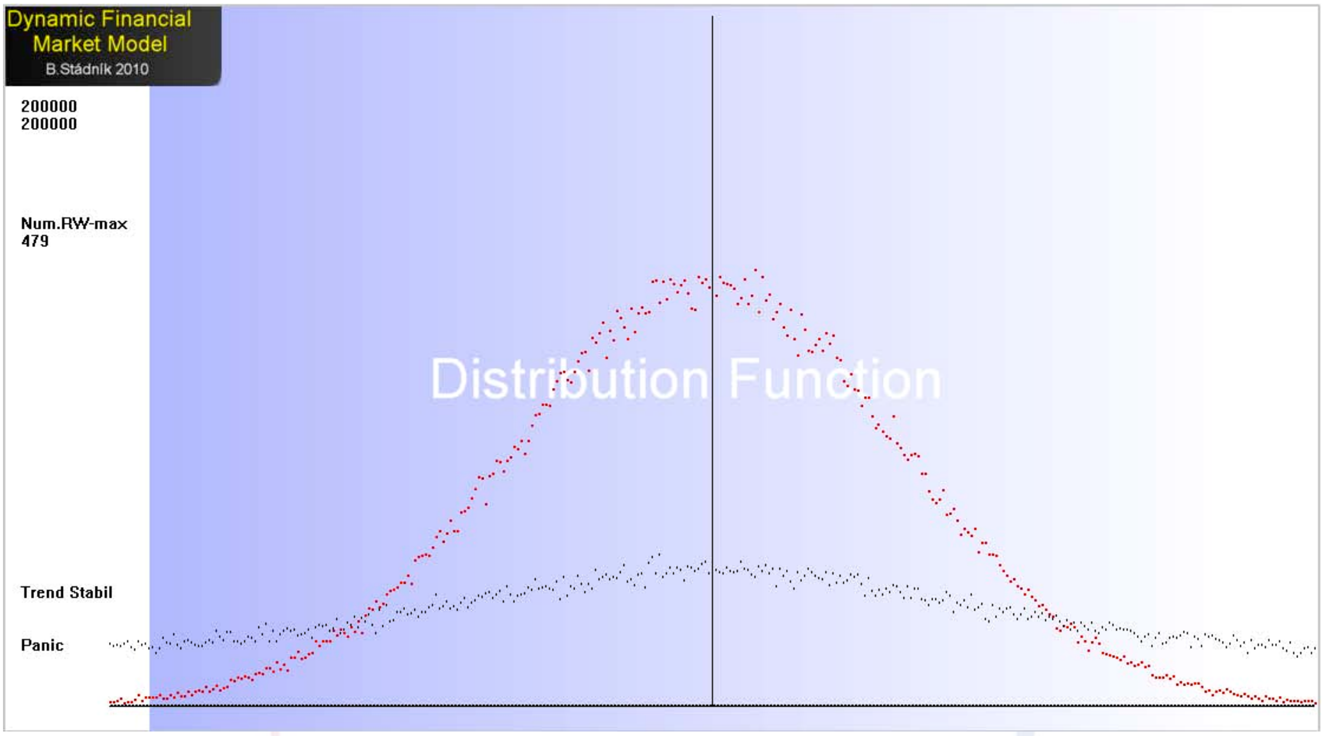
Binomial distribution, probability(μ)=0.007035, source: B.Stádník **[29]**



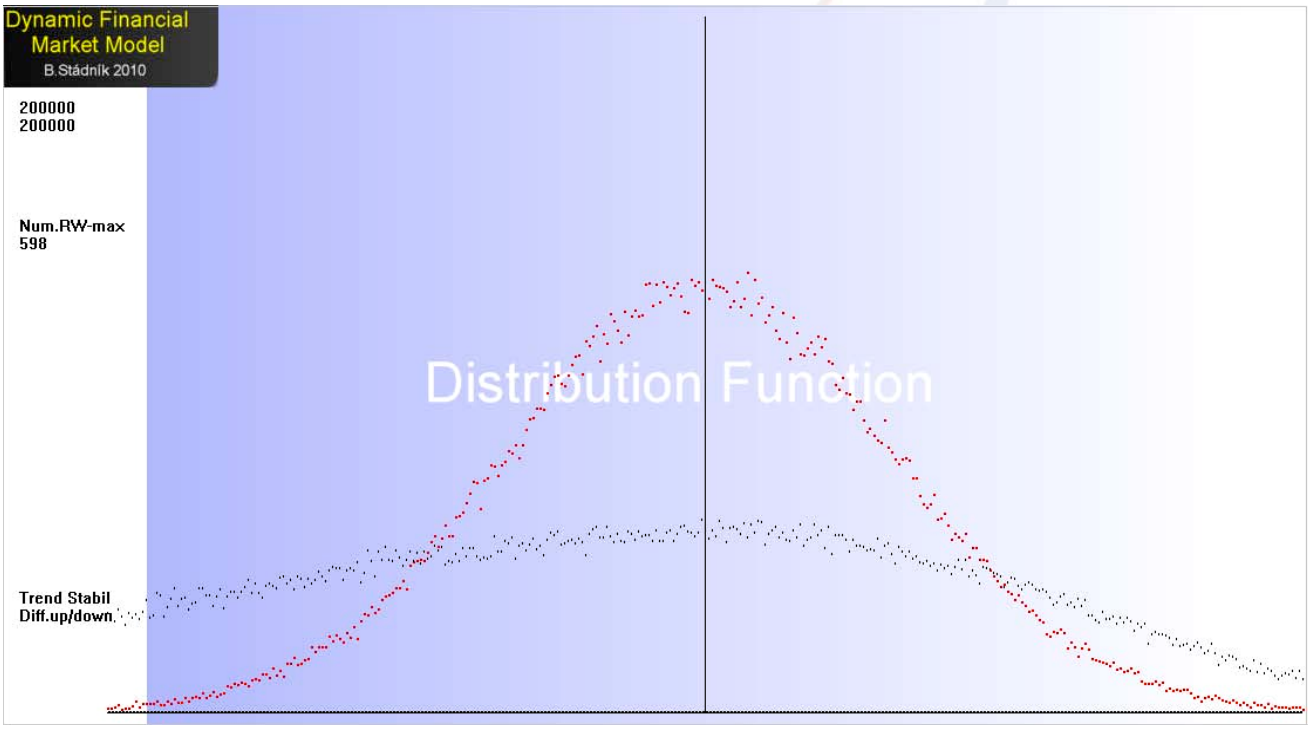
Blue points- feedback fat tailed distribution (not binomical), probability(mean)=0.005985, red-appropriate binomial distribution, source: B.Stádník **[32]**

2.3.2.2 Fat Tails in a Probability Distribution

With a feedback to support trends (chapter 2.2.2.3) „Trend Stabilizer“ (according simulation application) we expect a distributions according picture [32].
With a „Panic“ (chapter 2.2.2.3) we expect distribution according to pic. [33].

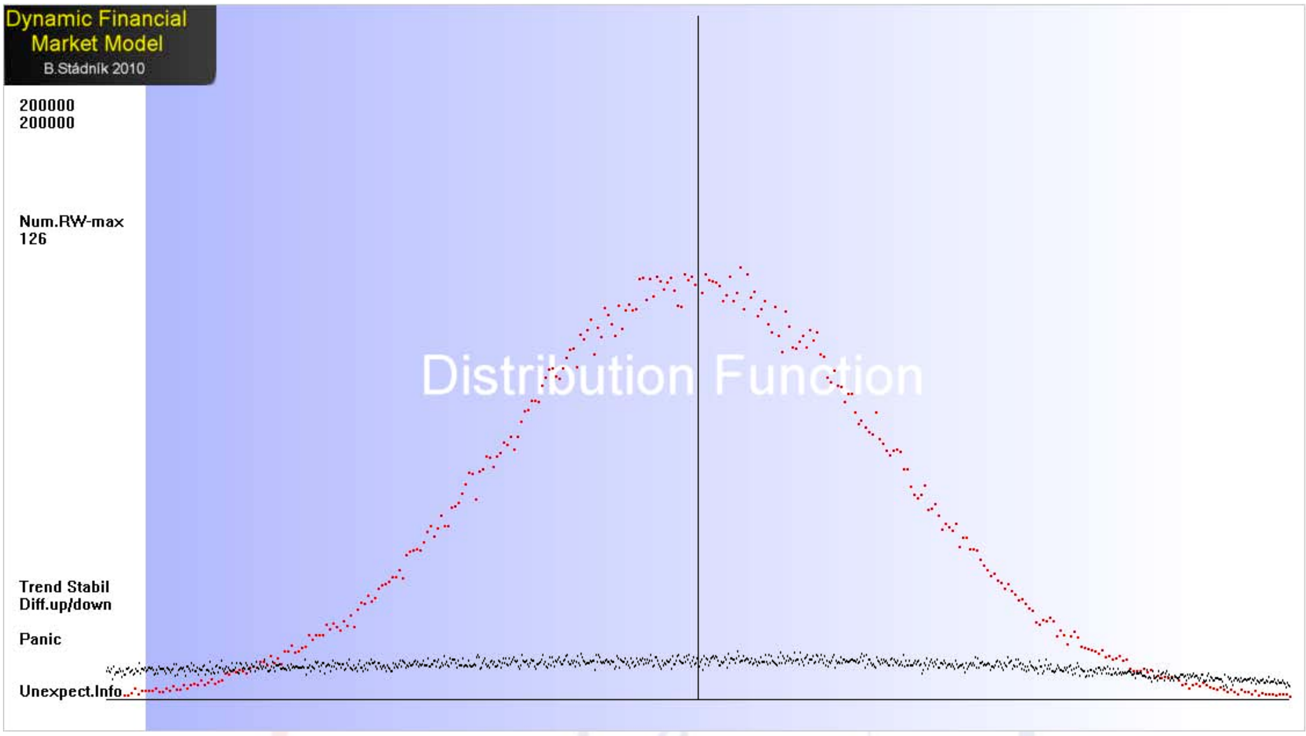


Blue points- feedback fat tailed -distribution(not binomial), probability(mean)=0.002395, red-appropriate binomial distribution, source: B.Stádník **[33]**

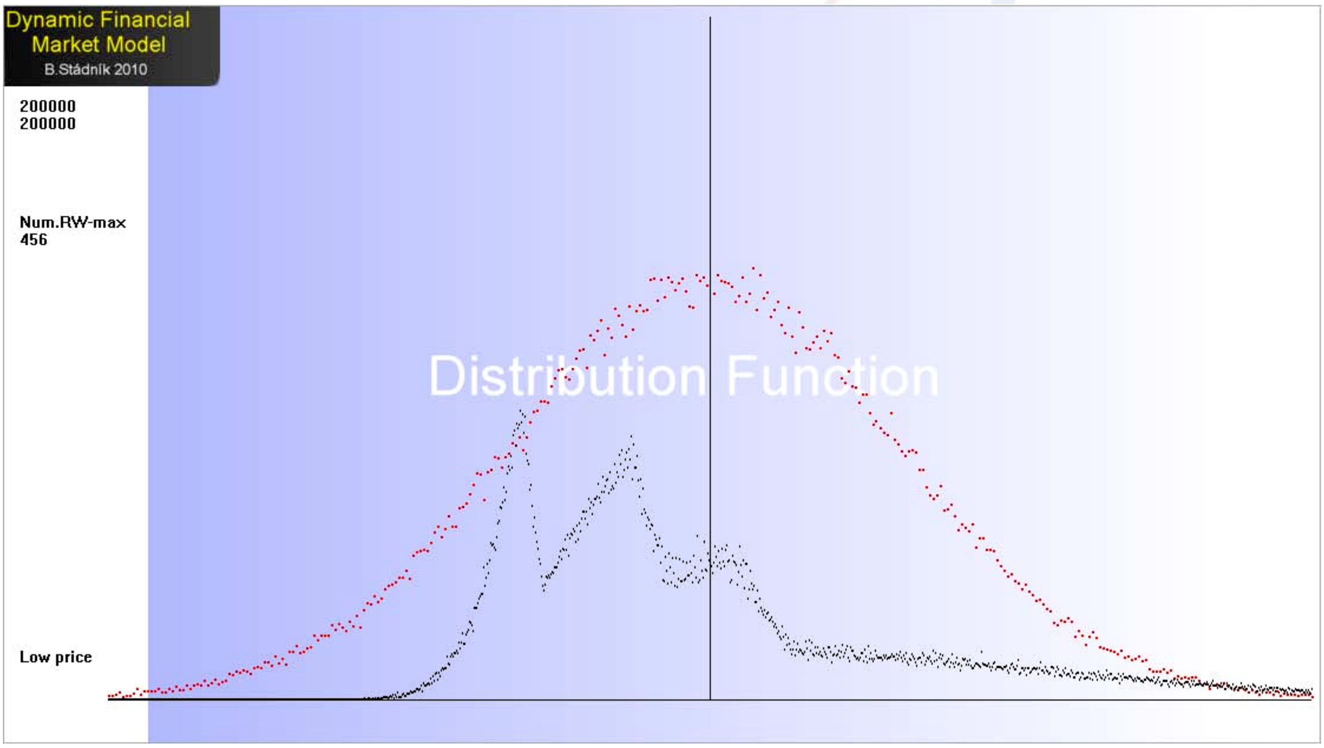


Blue points-feedback fat tailed distribution(not binomical), probability(mean)=0.00299, red-appropriate binomial distribution, source: B.Stádník **[34]**

With a different „Up/down" (2.2.2.3) price/yield dynamic we expect the distribution according [34].



Blue points-feedback fat tailed distribution(not binomical), probability(mean)=0.00149, red-appropriate binomial distribution, source: B.Stádník **[35]**



Blue points-low price effect distribution (not binomial), red-appropriate binomial distribution, source: B.Stádník **[36]**

Extreme case is in the pic. [35] where is "Panic" (2.2.2.3) situation together with "Unexpected Information" incoming (chapter 2.2.2.3).

Situation with a "Low Price" effect (chapter 2.2.2.3) is in the pic. [36].

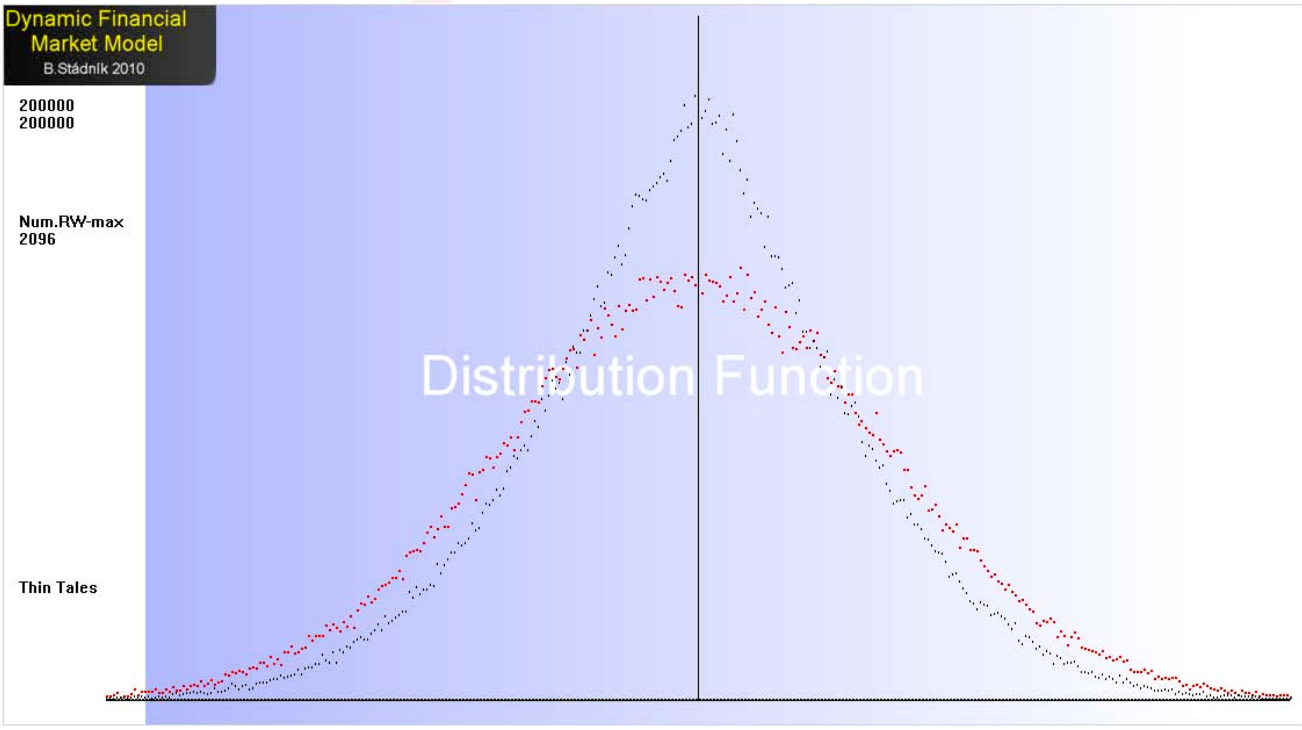
2.3.2.3 Thin Tails in Probability Distribution

„Thin Tales" process simulates a price inertia feedback (chapter 2.2.2.3), which tries to keep a price unchanged.

„Thin Tails" process distributes a price more to the center of the distribution or more to the previous price area from the development has begun.

Together with a „Trend Stabilizer" process they can create a positive kurtosis distribution as it is described in details in next chapters.

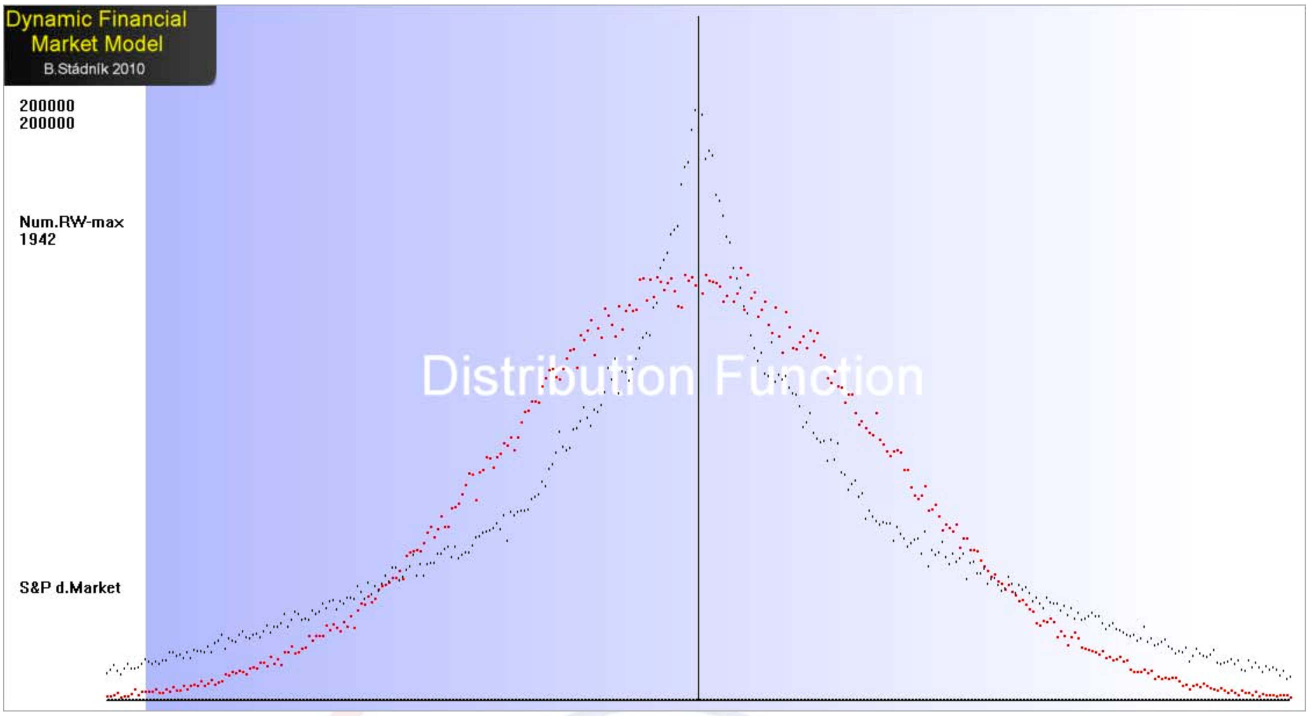
Simulation of thin tails is in the picture [42].



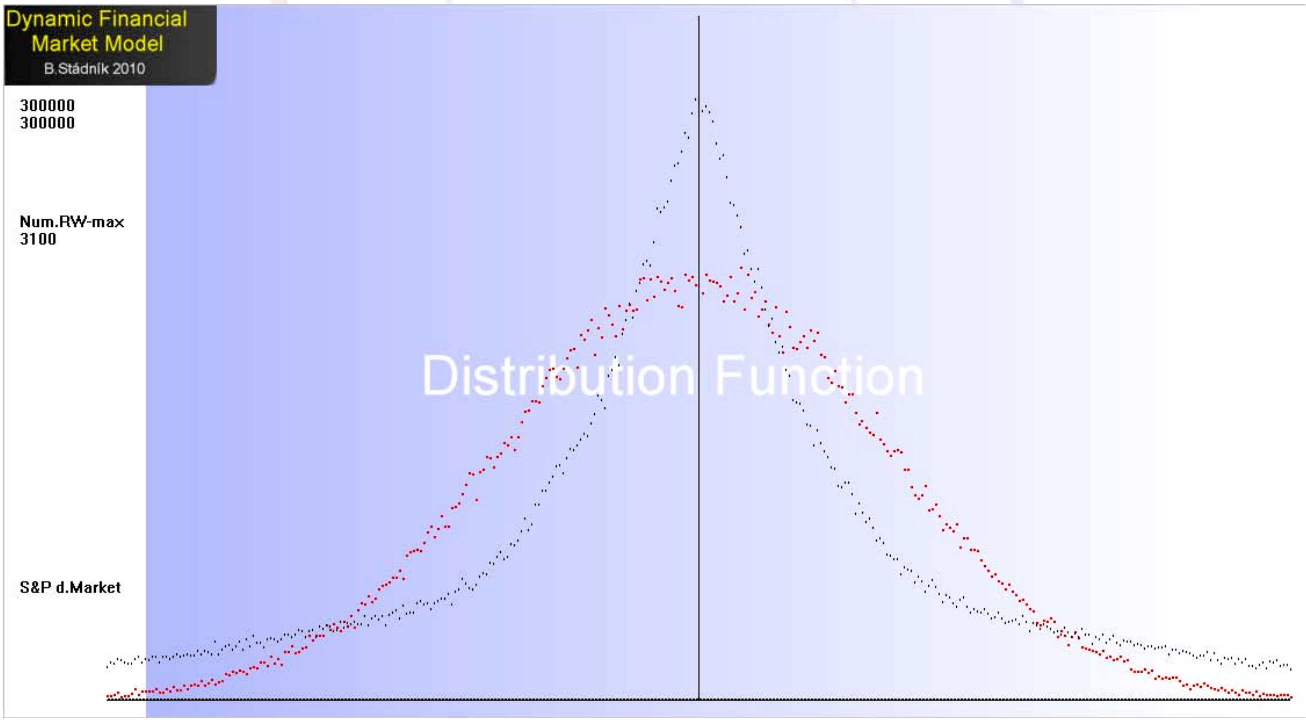
Blue points-thin taled distribuition simulation, red-appropriate binomial distribution, source: B.Stádník **[42]**

2.3.2.4 Other Probability Distribution Deformations

„S&P 500" (chapter 2.2.2.3) type simulation is in the pic. [42b], [42c]. About S&P type and other distribution deformations (with a positive kurtosis) which is typical for liquid financial market instruments we speak in details in chapter 2.3.6.



Blue points-S&P 500 type simulation, red-appropriate binomial distribution, source: B.Stádník **[42b]**



Blue points-S&P 500 type simulation, red-appropriate binomial distribution, source: B.Stádník **[42c]**

2.3.3 Mix of Several Random Processes Consequences-Changing volatility

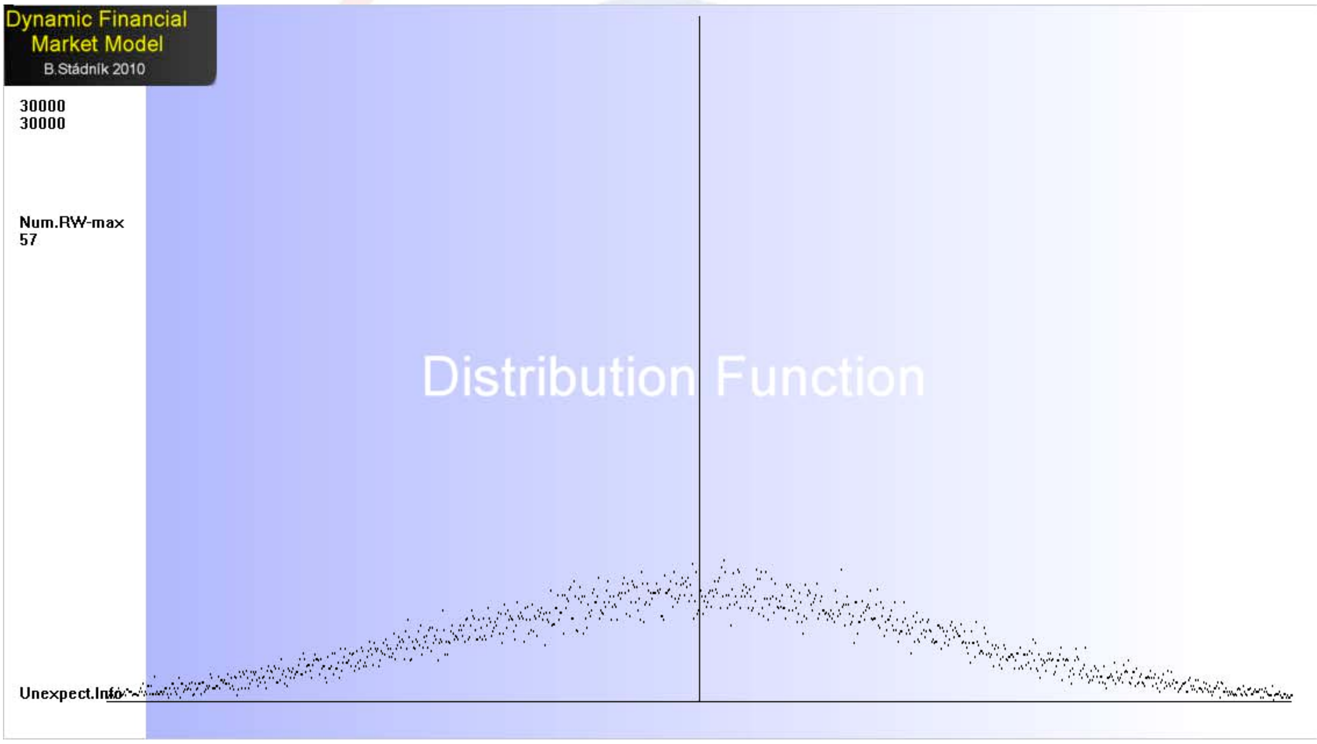
Unexpected informations is a sequence of steps where each step is a reaction to an unexpected and for market serious information. The direction, time and size of a step is random, because commonly unexpected information is unpredictable and due to this fact has random character. During such step we expect minimum volume of trades and this is why the step is steep. For this reason a sequence of such steps can be consider to be a random walk (Software application- „Unexpection Information“(chapter 2.2.3).

If we do a mix according presumptions of two random walks (Random walk from Book of Orders without a feedback process and random walk of unexpected information) we expect no gaussian process and we obtain an probability distribution according pic. [42d]. The mix means that we randomly order steps from random walk from book of orders and steps from unexpected information random walk. The process is not a gaussian one.

In case of not so important economic information we expect a process similar to a trend stabilizer.

2.3.4 Predictability Consequences

Predictability of a direction (up/down) of the future price development can be better than 50 % in the time period when a feedback process is in acton. The question is if it helps enough to generate a profit.



Mix of two binomial processes, probability (μ)=0.00173, source: B.Stádník **[42d]**

2.3.5 Different Probability Distribution in Different Time Period

We expect different types of probability distribution for each period of time because of different type of feedbacks works in each time period. We expect for example different probability distribution for daily and year time period. Unfortunately for a year time period we have no chance to cunstruct correct distribution.

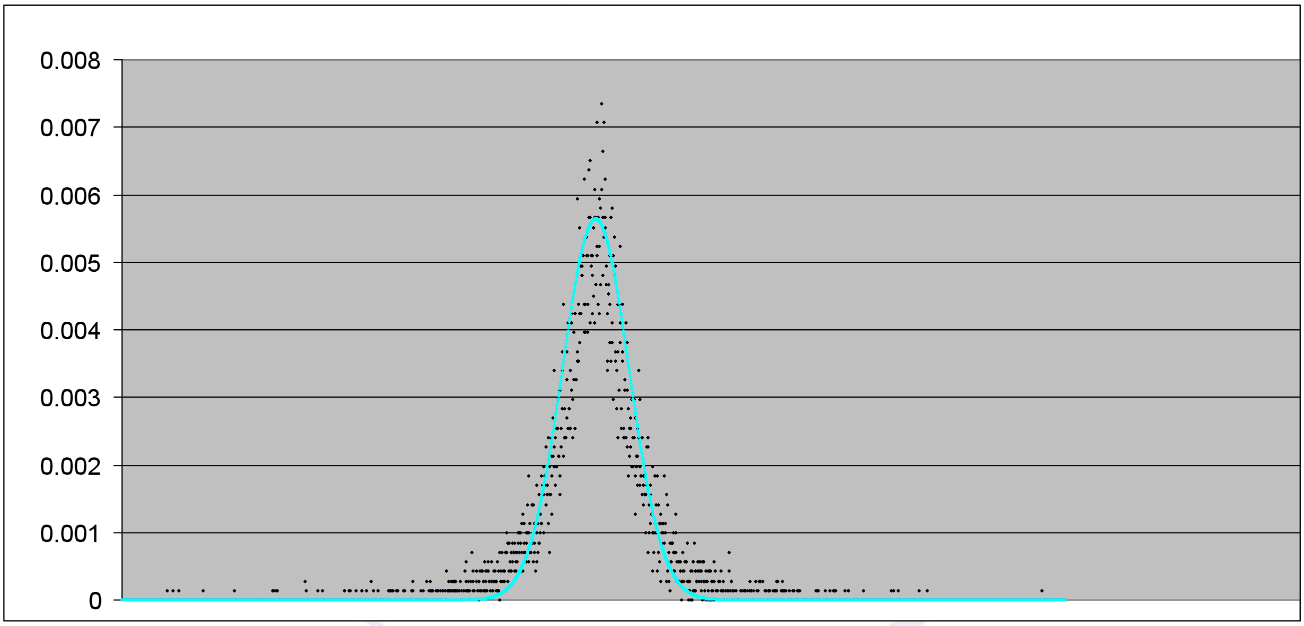
2.3.6 Explanation of S&P500, Indu, Euro Bund or EUR/USD Returns Distribution Departure from a Gaussian Curve

In case of many liquid financial instruments price/yield development we can observe a probability distribution with a positive kurtosis which is characterized by fat tails at the borders and sharpness in the mid area of the distribution.

For example in the daily returns S&P500 probability distribution, picture [43b], we observe a positive kurtosis distribution wit fat tails and sharpness.

What does it mean?

Financial market is not only a gaussian chaotic system but we have reason to expect some rule inside the system, for example in a choose of a price/yield development direction.



Daily returns S&P500 (dots), normal curve (line), source: B.Stádník **[43b]**

How to explain a departure from Gaussian curve according to Dynamic Financial Market Model?

Traders not only watch present or historical data but according to them they are placing or hit orders. There is a feedback in the financial markets which also influences a future price/yield development. Feedback can increase a frequency of incoming buy or sell orders and so change a probability of a next price step direction (explained in details in chapter 2.3.2.1).

According to Dynamic Financial Market Model presumtions we expect following feedbacks which can cause kurtosis and the departure from normality:

Price inertia feedback

keeps a price to be unchanged. Works in all periods of time as a minute, hour or day. If there is no any new unexpected and relevant economic information, basic random walk (from process of incoming orders) is kept by a feedback between two norrow levels as it is shown (green color) in the picture [43c]. Price inertia is basic feedback which helps to keep price levels.

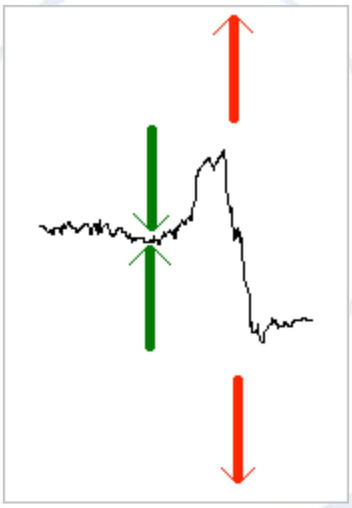
Trend stabilizer feedback

is stabilizing trends, keeps a price development in a trend direction. Works in all period of time. When a trend formation appears, trend stabilizing is triggered. Trend stabilizing (supporting) has an origin in psychology of investors or in pricing of not such important economic information incoming to the market. The principle is shown (red color) in the picture [43c]. Trend stabilizer feedback works against price inertia feedback and try to distribute price from the level.

Trading techniques

For example a daily gap trading, which is popular in case of many liquid financial instruments. Traders believe that opening gaps in the morning will be closed during a day trading. They place orders to support this idea. This feedback is very close to a price inertia feedback on daily basis. Many techniques are based on levels-level trading. It means if any level is broken, the movement will keep the direction. If level is not broken the market price will return back or keeps the trend. Many levels are represented with round numbers. Round numbers are price levels which are represented by round numbers (10,15,... 100, 200,...).

Trading techniques can be recognized not only on daily basis but also during other time periods (on daily basis are the most significant).



Price inertia (green) and trend stabilizer (red) feedbacks, source: B.Stádník **[43c]**

Impact on a probability distribution

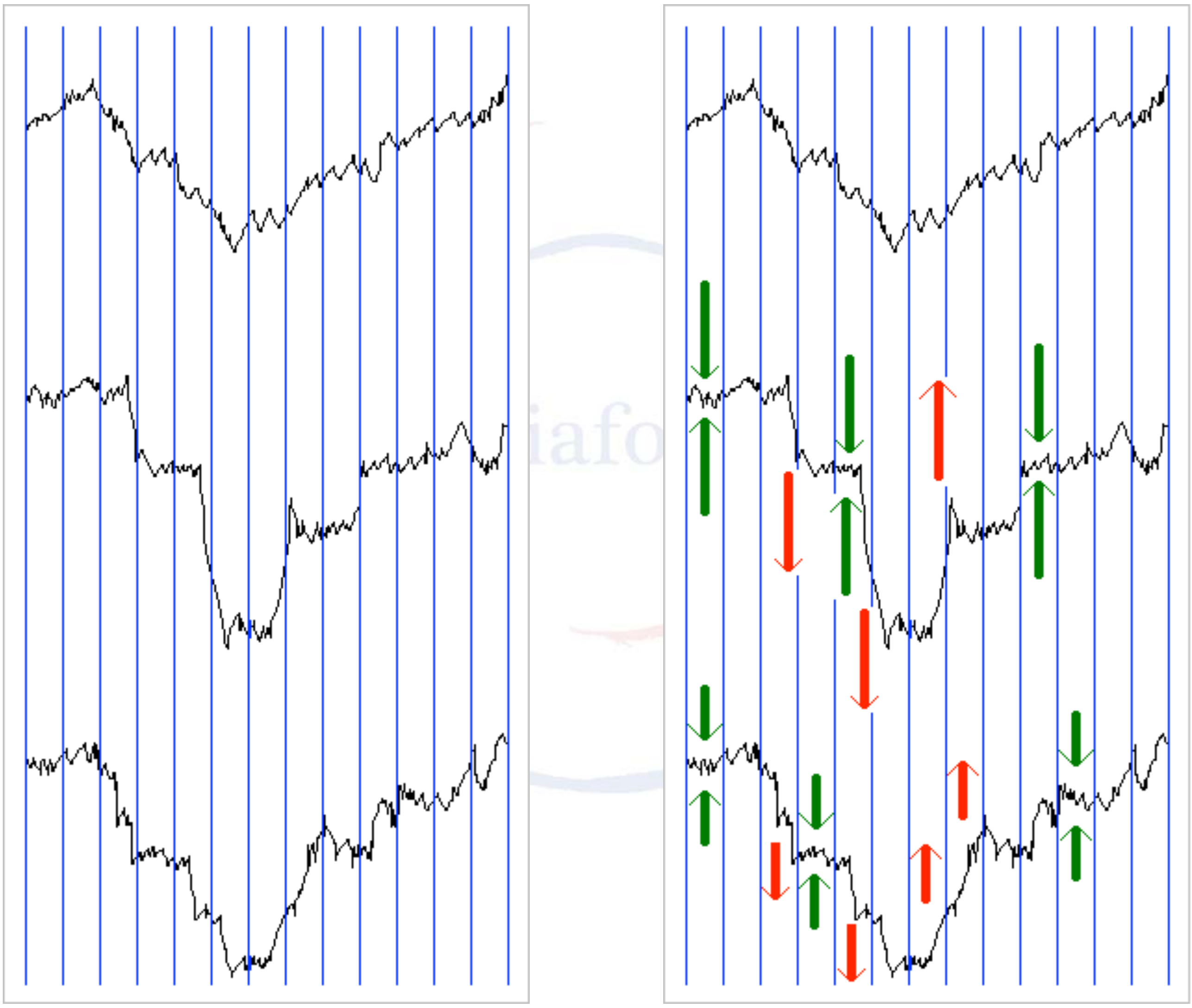
On real financial market we can observe these effects in the chart. There can be differences recognized among three charts in the picture [43d], which are explained using feedbacks [43e] (the most feedbacked price development is the second one in the picture). Charts under the influence of feedbacks are „more“ staircase [43g] (the most feedbacked development is the second one in the picture).

An impact on probability distribution is figured in the picture [43f]. Deformated distribution is blue or red colored (depends on an intensity of feedbacks). Price inertia feedback keeps price near center area of a distribution and trend stabilizer feedback distributes a price to the borders of a distribution. These processes are very similar for different time periods so we can observe described effect for example in one hour or one day distributions.

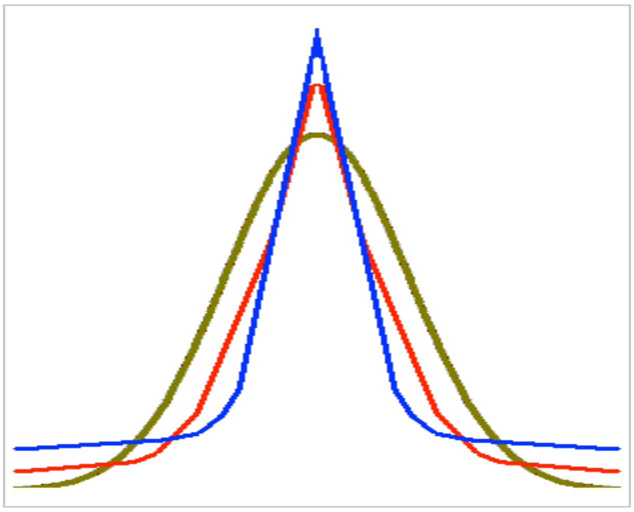
From a software application for a simulation we get probabilities for a price step direction which cause a deformation [43h, 43i]. Probability of a step direction changes from 50.00 to 50.76% in border area, from 50.00 to 50.24% in a mid area [43h]. Probability in border-area has changed from 50.00 to 50.60 %, probability in mid-area has changed from 50.00 to 50.30 % in case of [43i].

It means that only less than 1 order from 100 always supports a feedback. So the intensity of feedbacks is quite small and we cannot expect a strong help in predictability of a future price/yield development to make a speculative profit.

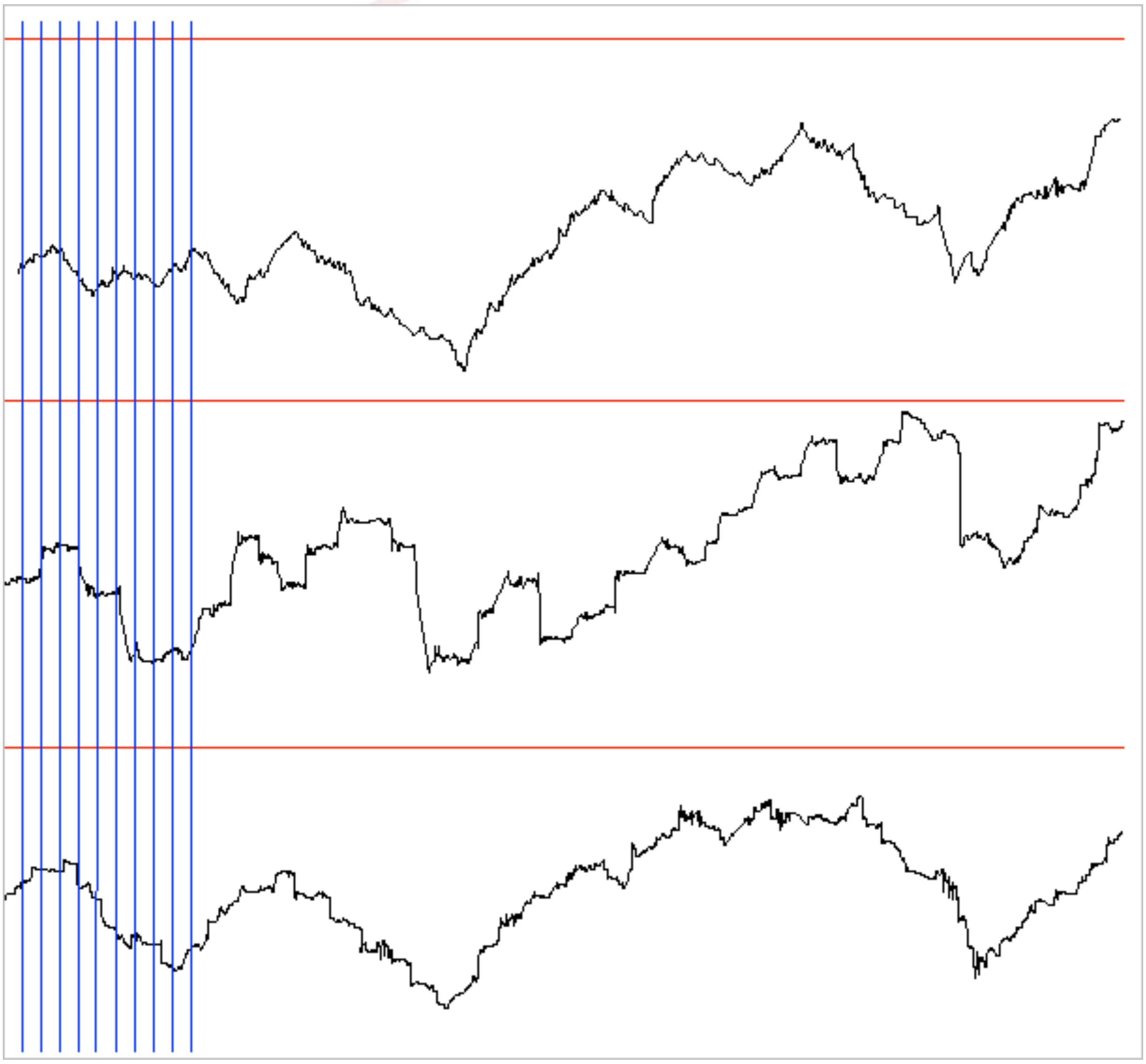
Instead of feedbacks we expect that final price development is influenced also by random incoming of economic informations, which support fat tails in the distribution.



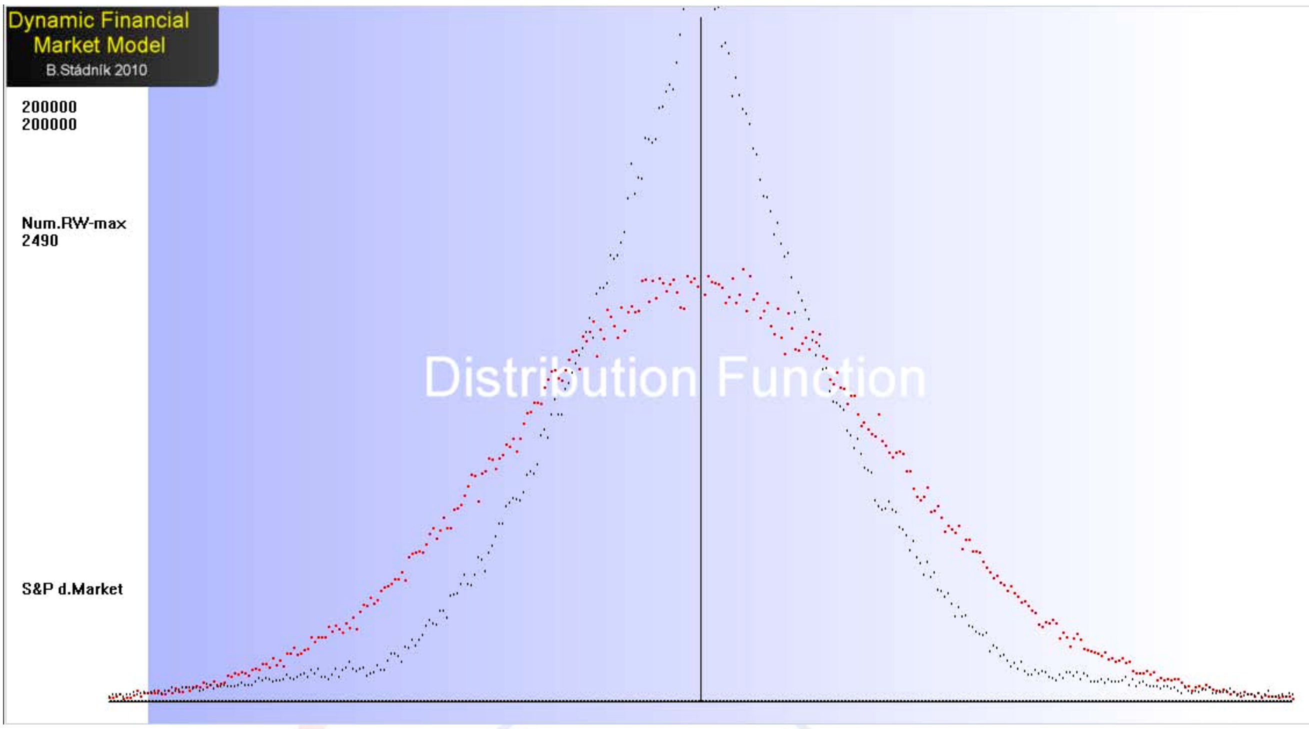
Developments with a different kurtosis, source: B.Stádník **[43d]**, **[43e]**



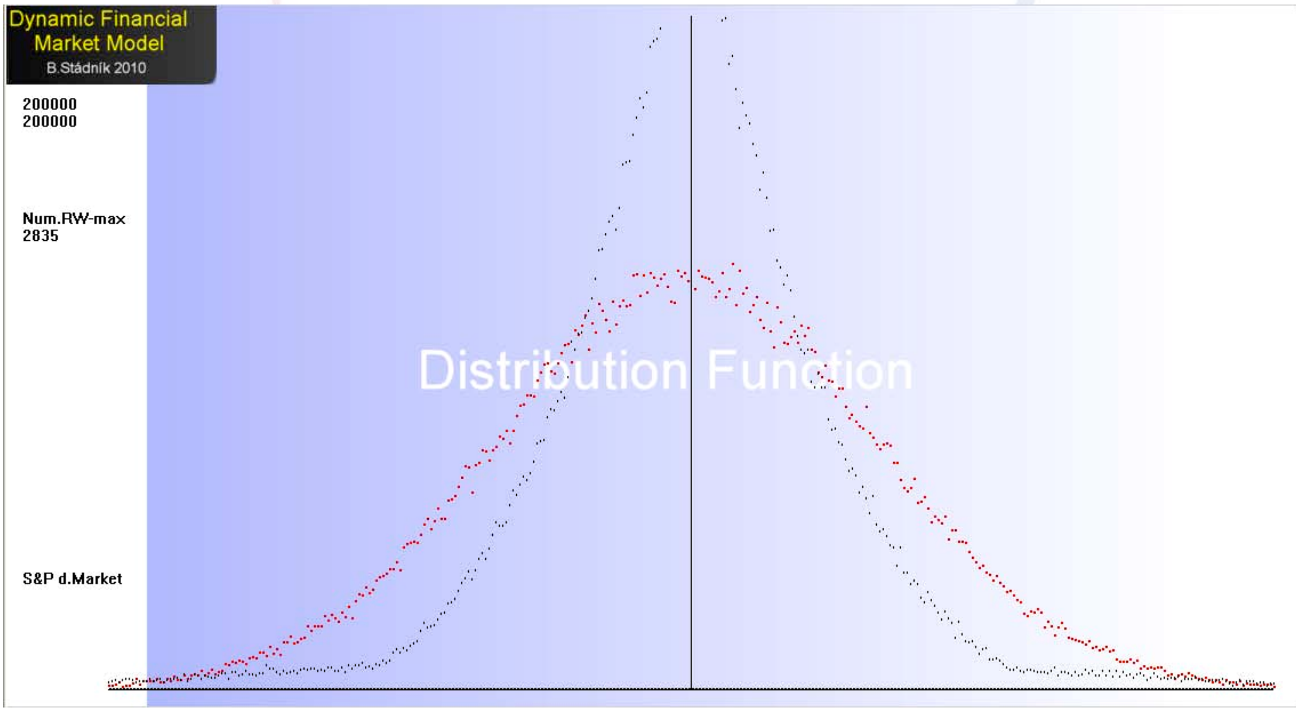
Different kurtosis (green-normal) , source: B.Stádník **[43f]**



Developments with a diffferent kurtosis, source: B.Stádník **[43g]**



S&P500 simulation (author of simulation application: B.Stadnik). Probability of a step direction changes from 50.00 to 50.76% in border area, from 50.00 to 50.24% in mid area,
source: B.Stádník **[43h]**



Probability in border-area has changed from 50.00 to 50.60 %, probability in mid-area has changed from 50.00 to 50.30 % (red-normal distribution, blue-simulated distribution),
source: B.Stádník **[43i]**

3. Software Simulation Application

For the demonstration of the Dynamic Financial Market Model principles has been developed 3 applications for MS Windows, which can be downloaded here:

http://www.delatweb.net/dynamic-model-dev-1.zip (simulates price/yield development)

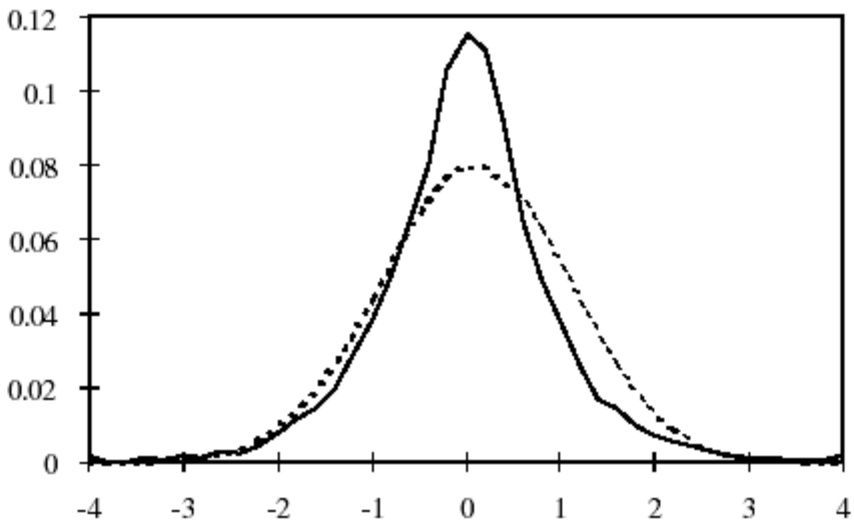
http://www.delatweb.net/dynamic-model-distrib-1.zip (generates a distribution of probabilities)

http://www.delatweb.net/dynamic-model-book-1.zip (simulates process of incoming orders)

4. Empirical Proofs (Conclusion)

The Dynamic Financial Market Model has been developed as an attempt at a precise internal description of financial market processes. The model is based mainly on a feedback presumption and from the internal description we presume external characteristics which are in consensus with empirical observations.

Many empirical studies of market efficiency results into not clear conclusions about internal structure. The problem of uncertain external description is significant.



Daily yield distribution of S&P in 1964-1992 **[58]**

Theory of fat tails in the distribution during a short trading period is supported by works of Hsieh [1991] who found out fat tails distribution instead of a normal distribution in daily movements of world stock indices.

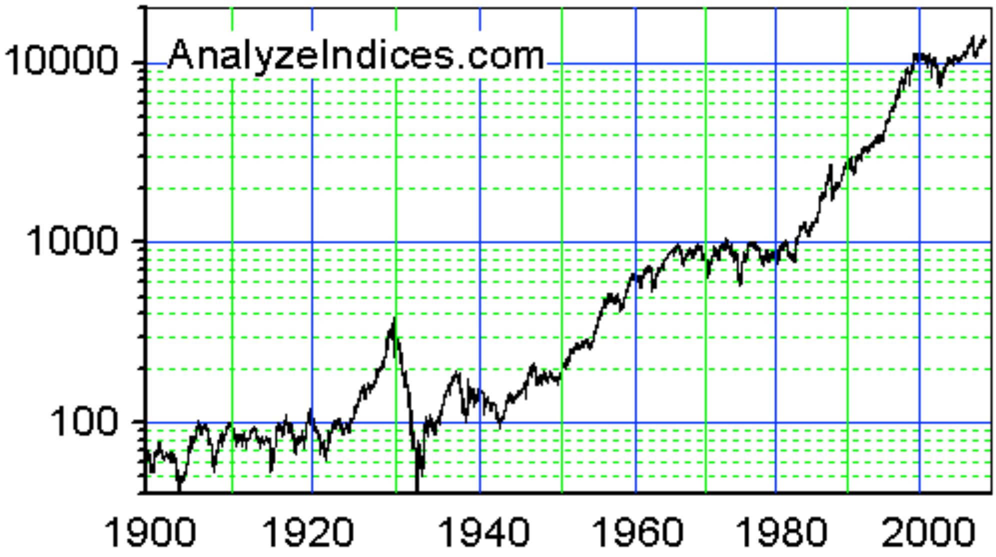
Mantagna-Stanley [1995] – found out fat tails in intraday movements distribution stock indices.

Theory of thin tails in the distribution during a long time period is supported by works of Peters [1994] who found out thin tails in Down Jones Industrial distribution in period 1888-1990. Peters expexts decreasing of risk in more than 4 years investment. He also considers that the market price development in longer time period is more connected with business cycle which is less volatile than short-term fluctuations. In the picture [58] there is daily yield distribution of S&P in 1964-1992 time period. Dashed line is normal (Gaussian) distribution.

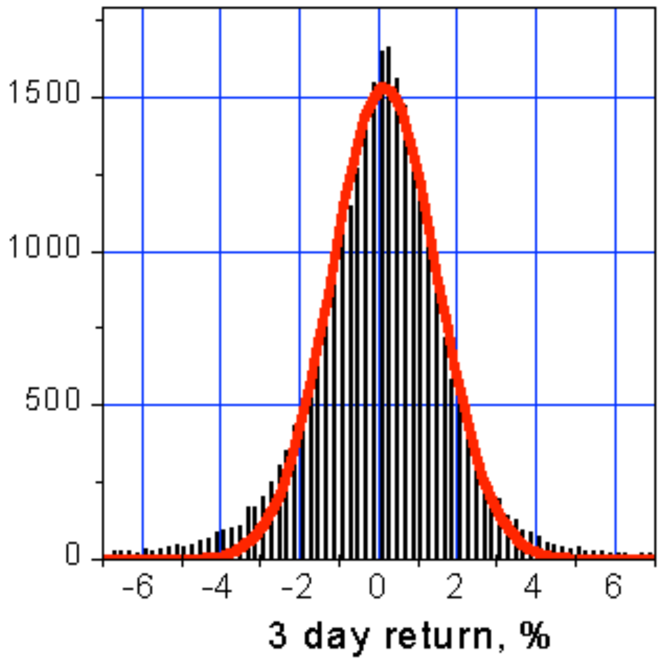
Helena Horská [2003] – the development of Index PX-50 which contains Czech Republic stocks is best explained using Feedback Theory – Behavioural Finance.

4.1 Thin, Fat Tails and Other Deformations Observations

<u>Dow Jones Industrial Average, pic[59],[60]</u>



History of the Dow Jones Industrial Average: 1900 – 2007,
source: Department of Statistics at Carnegie Mellon Univ **[59]**

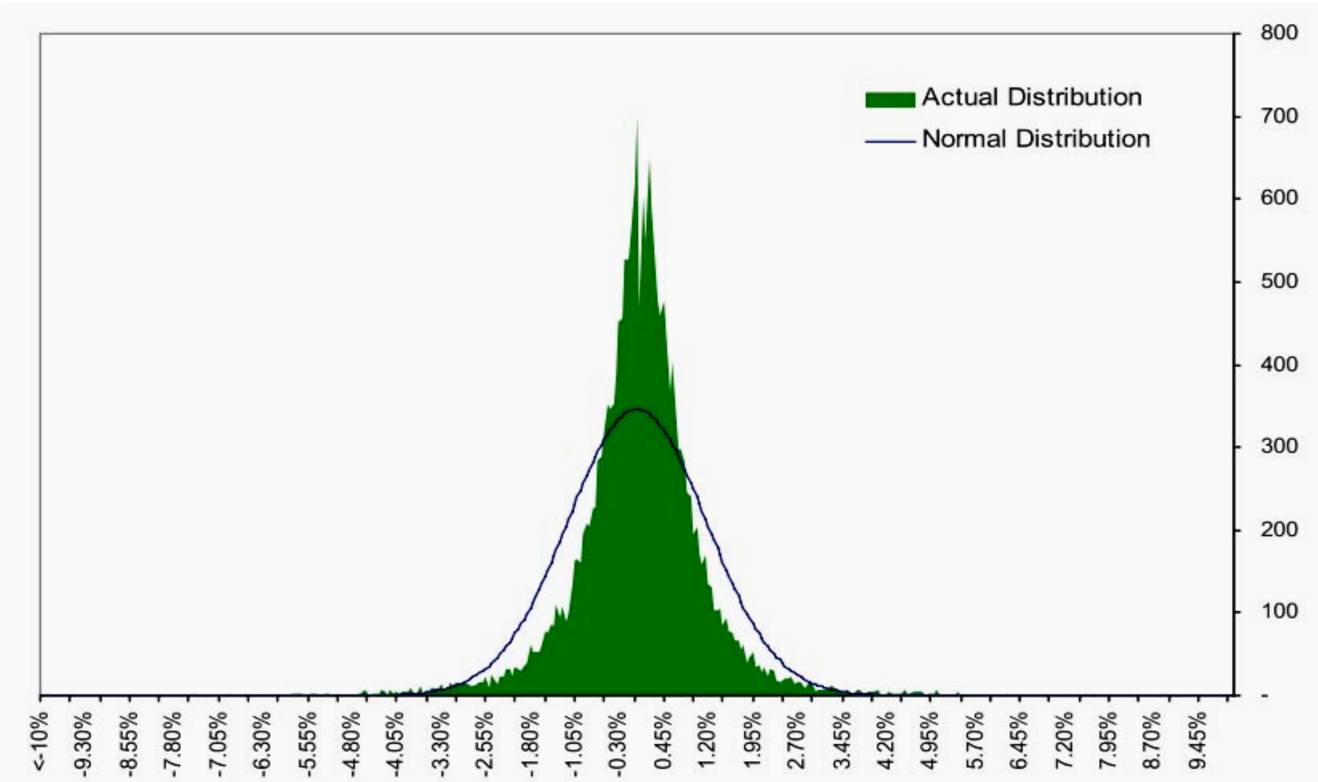


Dow Jones Industrial Average: 1900 – 2007, source: Department of Statistics at Carnegie Mellon Univ **[60]**

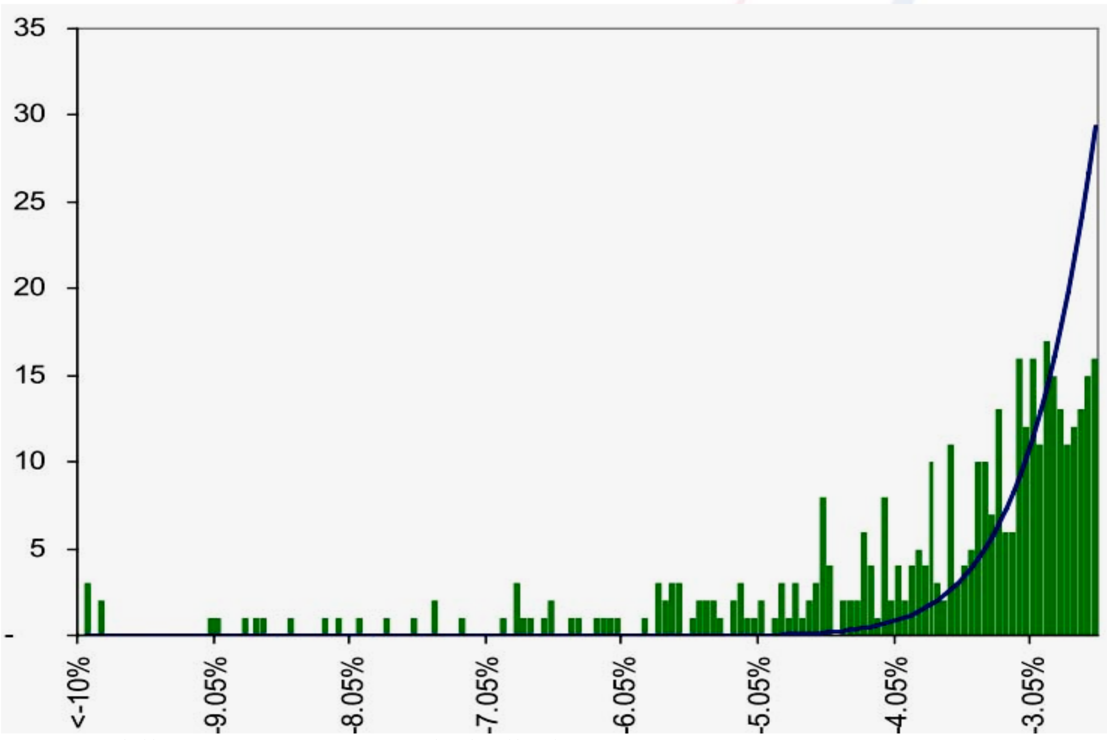
The average 3 day return = 0.17%. Closing prices starting January 3, 1900. Standard deviation = 1.3%. The red line is the normal distribution. One can see that the tails of return distribution can not be described by the normal curve.

S&P500 Index

We speek about Index S&P500 daily returns distribution in details in chapter 2.3.6. Some empirical studies are in the pictures [61], [64].

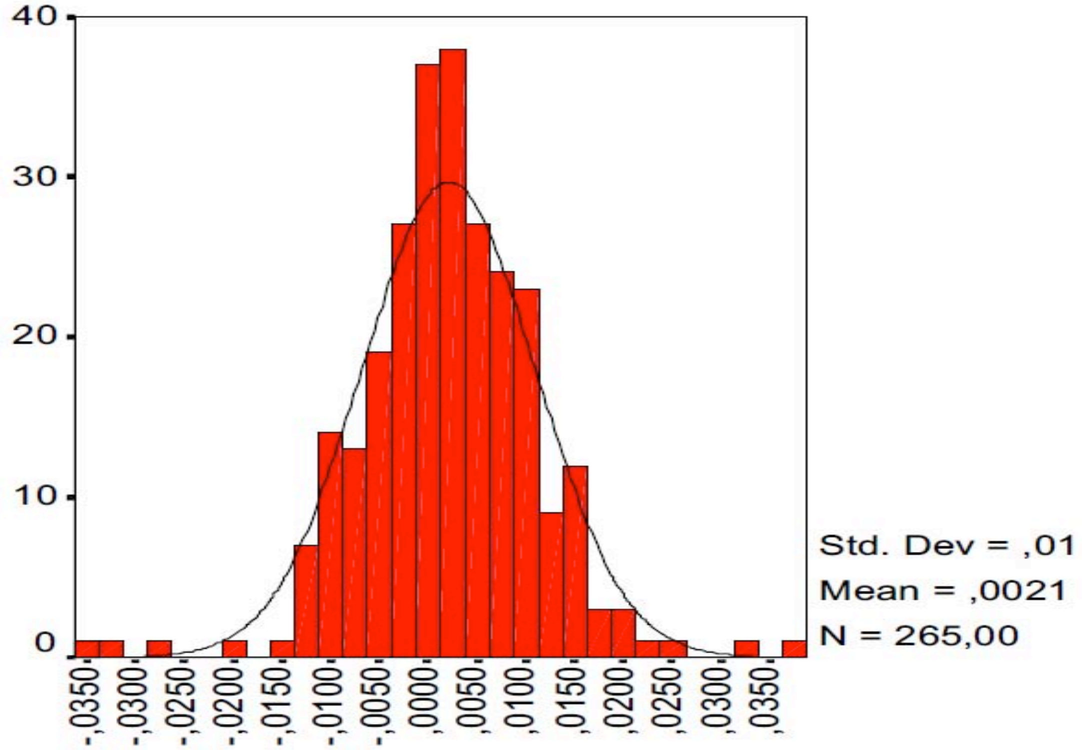


Actual S&P500 daily returns versus Normal Distribution., source: Cook Pine Capital LLC, Study of Fat Tail Risk **[61]**

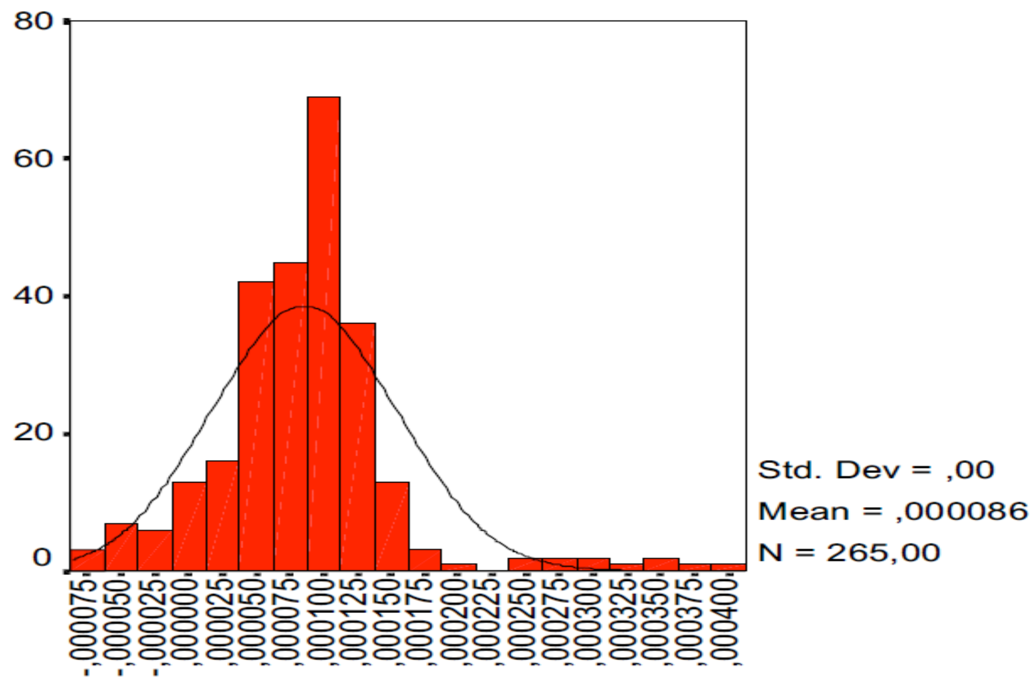


Actual S&P500 daily returns versus Normal Distribution, source :Cook Pine Capital LLC, Study of Fat Tail Risk **[64]**

Slovenian Financial Instruments



Distribution probability curve of KRKG (Slovenian blue chips) returns on daily basis, source: Srečko Devjak, Andraš Grum, Third Moment of Yield Probability Distributions on Slovenien Financial Markets **[65]**

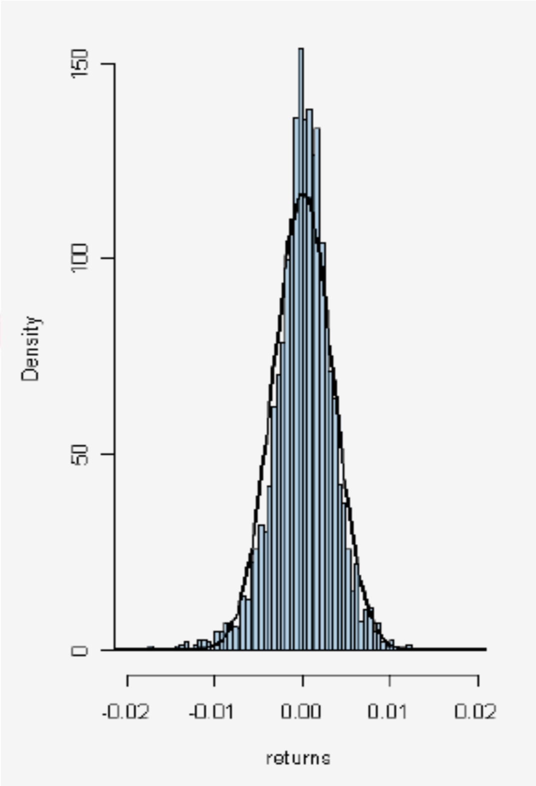


Distribution probability curve of EUR/SIT (Slovenian Tolars) returns on daily basis, source: Srečko Devjak, Andraš Grum, Third Moment of Yield Probability Distributions on Slovenien Financial Markets **[66]**

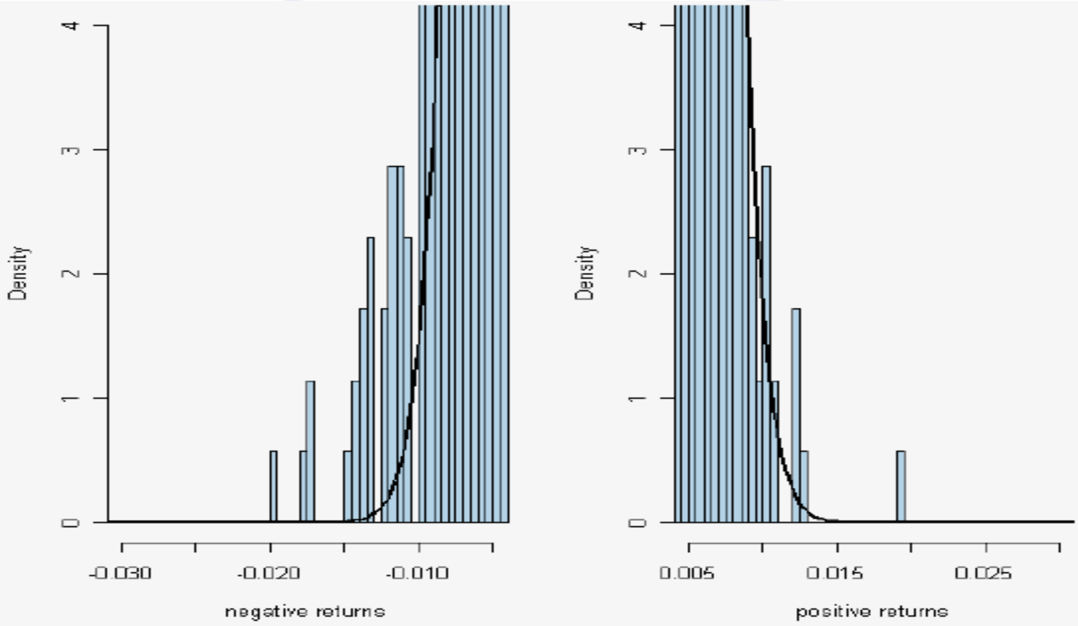
From studies of Srečko Devjak, Andraš Grum, Third Moment of Yield Probability Distributions on Slovenien Financial Markets we obtain distribution of probabilities according to pic. [65],[66].

Euro Bund Future

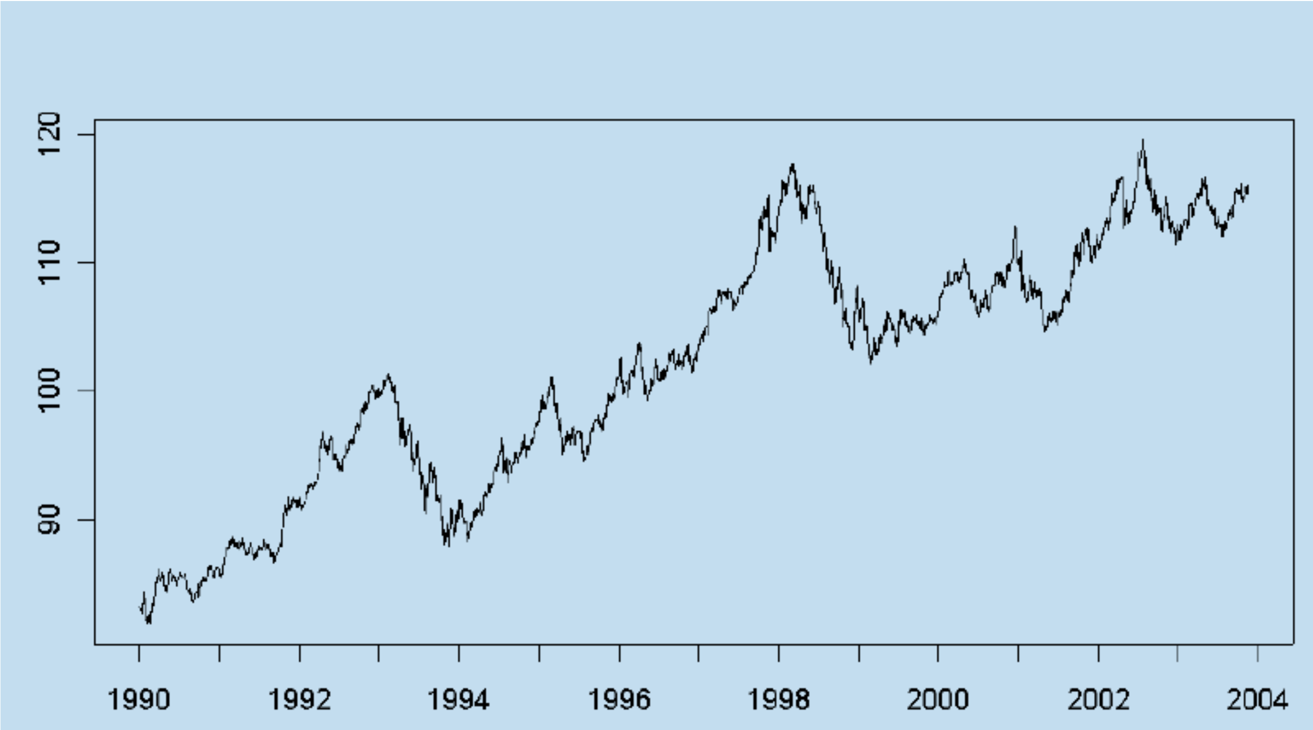
We can observe positive kurtosis and different up/down dynamic in the picture [67], [68].
In simple price chart [69] we can recognize that downward movements are more steep than upward movements which is one of Dynamic Financial Market Model feedback presumption.



Euro Bund Daily Future Returns, source: Daniel Herlemont 2004, Risk Management Study of Managed Futures **[67]**



Euro Bund Daily Future Returns, source: Daniel Herlemont , Risk Management Study of Managed Futures **[68]**



Euro Bund Prices, source: Daniel Herlemont, Risk Management Study of Managed Futures **[69]**

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Does transfer payment policy reduce income inequity in urban China?

Lulu Zhu (Peking University, China)

Hua Li(Shandong University, China)

Abstract:
The income inequity in urban China is increasing dramatically as the deepening of Chinese economy reform proceeds. This paper focuses on the income gap of urban residents from the point of view of the transfer payment policy. The author examines the relationship between the total income of urban residents and transfer payment expenditure by using the UHIES grouped data of urban residents during the period of 1988 to 2008. We calculate and compare the Gini coefficient of the total income and the total excluded transfer income. We find that the current transfer payment system in China does not reduce the income inequity in urban China. Quite the contrary it widens the income gap.

Keywords: Income Inequity, Gini Coefficient, Transfer Payments, Urban China.

1. Introduction

China has experienced impressive growth over the past 30 years since the introduction of the market economy, and there has been a substantial increase in average living standards. However, in recent years there has been growing concern about the large increase in income inequality during the same period. The rising inequality has had and will have important impacts on various aspects of social life, resulting, for example, in frequent social conflicts (Alesina and Perotti, 1996), higher levels of violent crime (Hsieh and Pugh, 1993), and ultimately in a slowing down of economic growth (Aghion et al., 1999).

The majority of studies on China income inequality may focus on rural-urban inequality (World Bank, 1997), rural poverty (Jalan and Ravallion, 2002; Brown and Park, 2002) and cross-province comparisons (Li et al., 2000; Zhang, 2003). For a long time, urban poverty was neglected by policy-makers and researchers. Due to the radical urban reform in the 1990s, urban income gap has been enlarged rapidly and begins to attract more attention from both policy makers and researchers (Meng et al, 2005; Ravallion and Chen, 2007; Appleton et al, 2009).

During the same period, China's transfer payment system has been set up piecemeal and eventually covered most urban citizen. As we known, transfer payments (or government transfers), referring to payments by the government sector to the household sector, are a redistribution of income in the market system, including social security, unemployment compensation, and welfare. The intent of these transfer payments is to redistribute income, to make it more balanced and fair in wealth allocation. Theoretically, China transfer payment system should also have a positive effect in reducing income inequality.

In fact our paper finds that the transfer payment system does not effectively reduce income inequality in urban China, to the contrary, it widens the income gap in certain years. We present evidence based on the grouped data from the National Statistical Bureau Urban Household Income and Expenditure Survey (UHIES) for the whole country spanning the period from 1988 to 2008. So far we did not find any other papers which focus on China income inequality from the point of view of the transfer payments.

This paper is set up as follows. The next section discusses the data and the measurement of income inequality. Section 3 describes our empirical analysis and discusses available inequality measures. Section 4 concludes with a summary of the findings and some policy implications.

2. Data and inequity measurement

The paper uses the grouped data conducted by UHIES during the period of 1988 to 2008. The UHIES began its survey in 1956 but was suspended during the Chinese Cultural Revolution from 1966 to 1978; it was resumed in 1980 (Fang et al., 2002).

The survey samples households with Urban Household Registration for every province. The sample is based on several stratifications at the regional, provincial, county, city, town, and neighborhood community levels.

Households are selected randomly within each chosen neighborhood community and are expected to keep a diary of all revenue and expenditure, disaggregated for hundreds of categories, for each day during a full year. Enumerators visit sample households once or twice each month to review the records, assist the household with questions, and to collect household records for data entry in the local Statistical Bureau office. All the households sampled are divided into 7 groups by their total income, the lowest 10%, the lower 10%, the low 20%, the middle 20%, the high 20%, the higher 10%, and the highest 10%.

We use transfer income in each group as the measurement of government transfer payment policy, as well as total income as the measurement of inequality. There is no record on transfer income before 1987. Hence our study only spans the period from 1988 to 2008. It should be pointed out that there are two missed years' data, 1992 and 1994. The author processes the missing year data by filling with the means of the former year and the latter year.

Many scholars do a lot of research on income inequality based on the individual level data such as CHIP and CHNS (such as Appleton et al, 2009; Zhang and Wan, 2006). Nonetheless, we need to notice that CHIP and CHNS were only conducted in certain years and can not offer us time series data which can be very useful to measure government policies. It is indeed much better to use the individual level data than the grouped level data. However, the UHIES does not provide the full data, only tabulated data. Fortunately, grouped data is sufficient for our study.

3. Empirical analysis

In this section, we discuss the inequality of urban household income using comparative analysis and Gini coefficient. We then describe the shifts of transfer income distributions and the relationship between income inequality and transfer payments policy.

3.1 Gini coefficient and Lorenz Curve

Gini coefficient (Gini, 1912), a measure of distribution inequality, is defined as the ratio of the area between the line of equal distribution and the observed Lorenz curve to the area under the uniform distribution, and has values within the range 0 (perfectly uniform distribution) to 1 (complete inequality). The Gini Index, in an equivalent representation, is the Gini coefficient expressed as a percentage, and is equal to the Gini coefficient multiplied by 100. Gini coefficient not only can be used for measuring total income inequality but can also be used for transfer income inequality.

Lorenz curve (Lorenz, 1905), used by economists to assess income/wealth distribution and by demographers to quantify population distributions, is a visual representation of the cumulative proportion of population, ranked from the lowest income/wealth, against the cumulative proportion of income/wealth. Fig. 1 shows the principal features, representing a situation from economics.

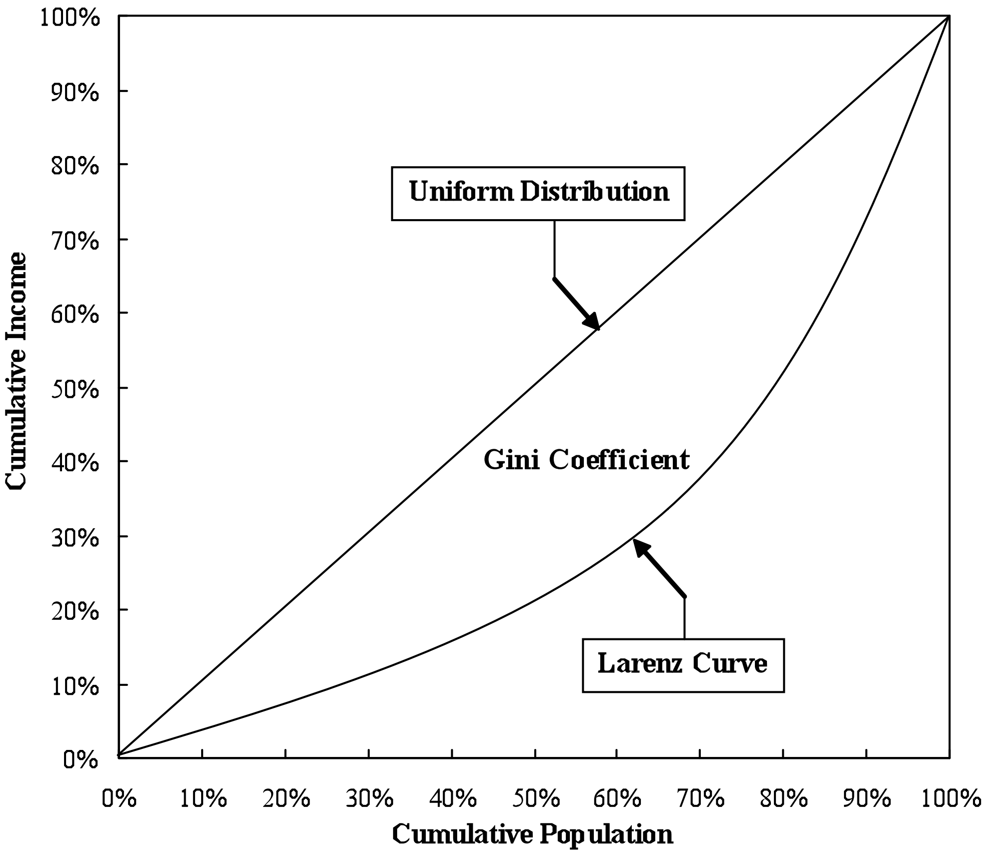

Fig.1 Definition of the Lorenz Curve and Gini Coefficient

As shown in Fig. 1, we can calculate much more accurate Gini coefficient if we use a large sample. Since that we only have grouped data, we could only calculate approximate Gini coefficient by approximate Lorenz curve, which is not a smoothed curve but a dot line (see Fig. 2). Using the grouped data, the approximate Gini coefficient, G, can be calculated by using the geometry.

$$G = \left(1/2 - \sum_{i=1}^{n} S_i\right) / (1/2) = 1 - 2\sum_{i=1}^{n} S_i \quad (1)$$

where n is the total number of groups, n = 7, in this case; S_i, as showed in fig.2, is the area of the trapezoid under the Approximate Larenz curve between P_{i-1} and P_{i}.

$$S_i = \frac{1}{2}(Y_i + Y_{i-1})(P_i - P_{i-1}) \quad (2)$$

where Y_i is the cumulative proportion of total income ratio of group 1, 2, …, and i; P_i is the cumulative proportion of population.

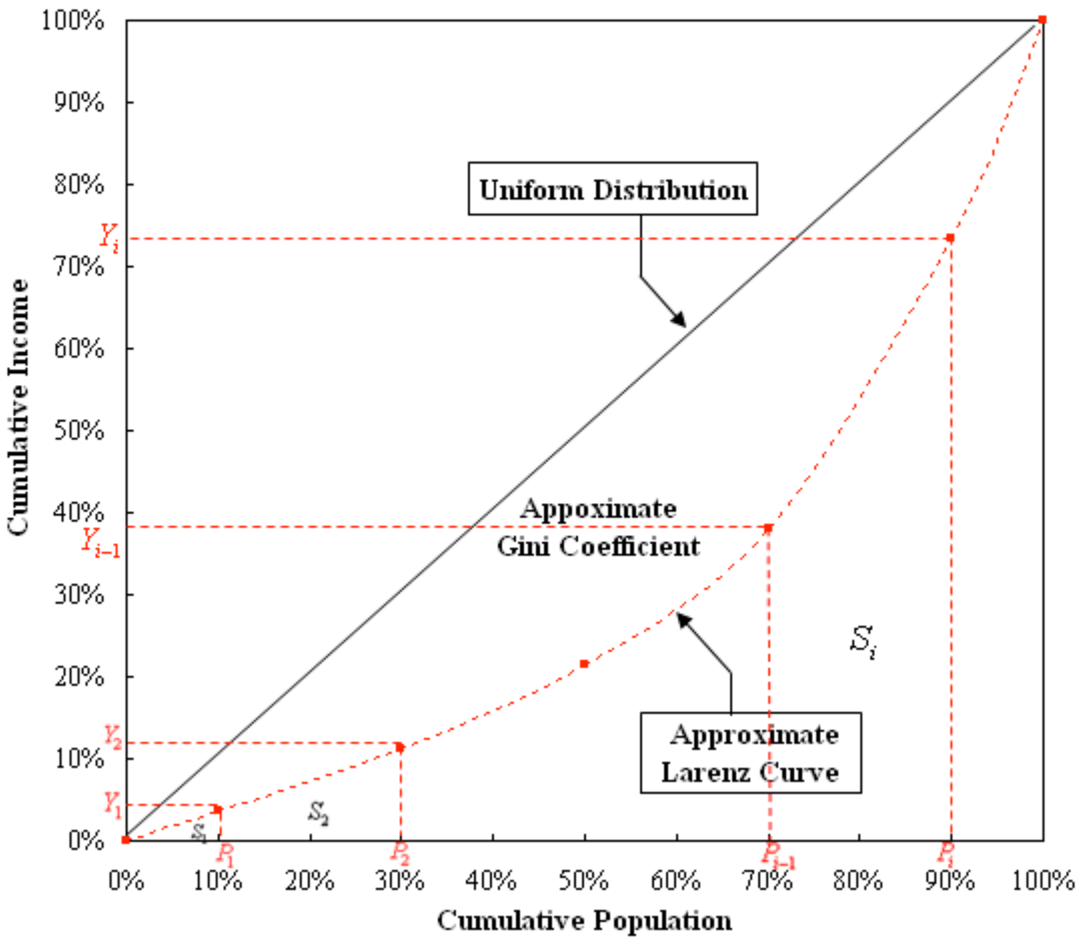

Fig.2 Definition of the Approximate Lorenz Curve and the Approximate Gini Coefficient

$$Y_i = \sum_{j=1}^{i} y_j \quad , \quad P_i = \sum_{j=1}^{i} p_j \tag{3}$$

where y_j and p_j are the proportion of total income and population of group j.

Substituting (2) and (3) into (1) and rearranging terms yields:

$$G = 1 - \sum_{i=1}^{n} p_i \left(2 \sum_{k=1}^{i-1} y_k + y_i \right) \tag{4}$$

It should be pointed out that the appropriate Gini coefficient will be less than the real because of the limited group data. However, we use the coefficient to illuminate the trend of inequality mainly. There will be no essential effect on our conclusion.

3.2 Income inequality of urban China in 1988 to 2008

The average total income of urban China citizen is 17067.78 yuan in 2008. The average of the lowest 10% group is 5203.83 yuan, and yet 47422.4 yuan for the highest 10%, almost 10 times as much as the lowest 10%. In 1988 this ratio is only 3.37, 796.32 yuan for the lowest and 2680.06 for the highest. Fig. 3 indicates the trend of the highest/lowest ratio between 1988 and 2008.

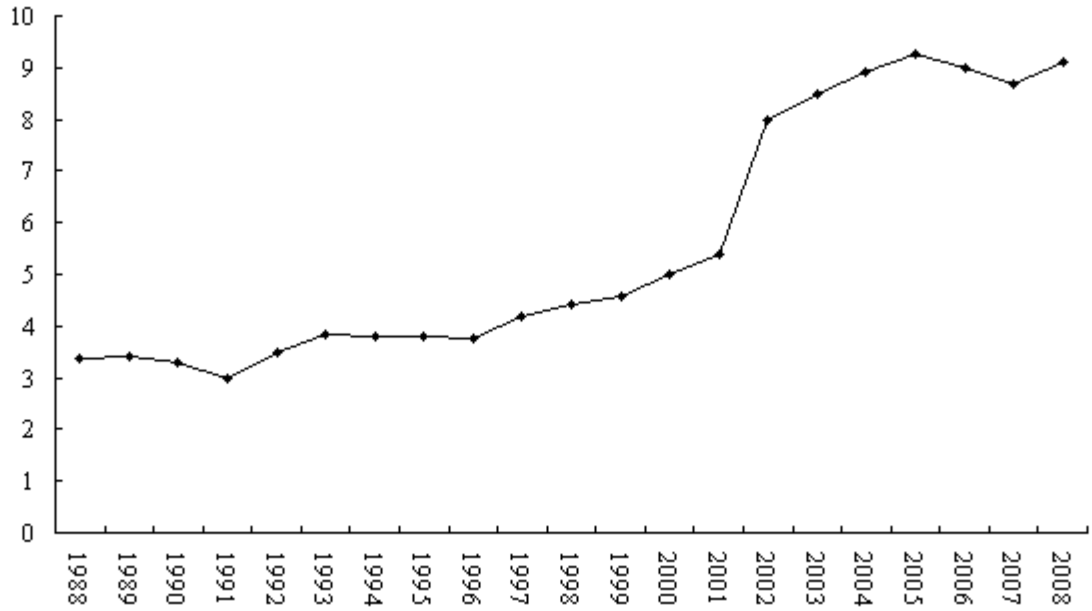

Fig.3 The highest/lowest ratio of the total income

It is shown by fig.3 that the ratio has been at a relatively low level before 2001, and then goes up to an extremely high level at 2002, reaching the peak at 2005. Why did the ratio jump in 2002, as indicated in fig.3? It is because that the income of the lowest group decreased 11% compared to 2001, but that of the highest increased 33% during the same period. Though the ratio decreased a little after 2005, it then climbed up to a very high level, almost 10. More clearly, fig. 4 illustrates the comparison of the absolute income amount of the highest and the lowest.

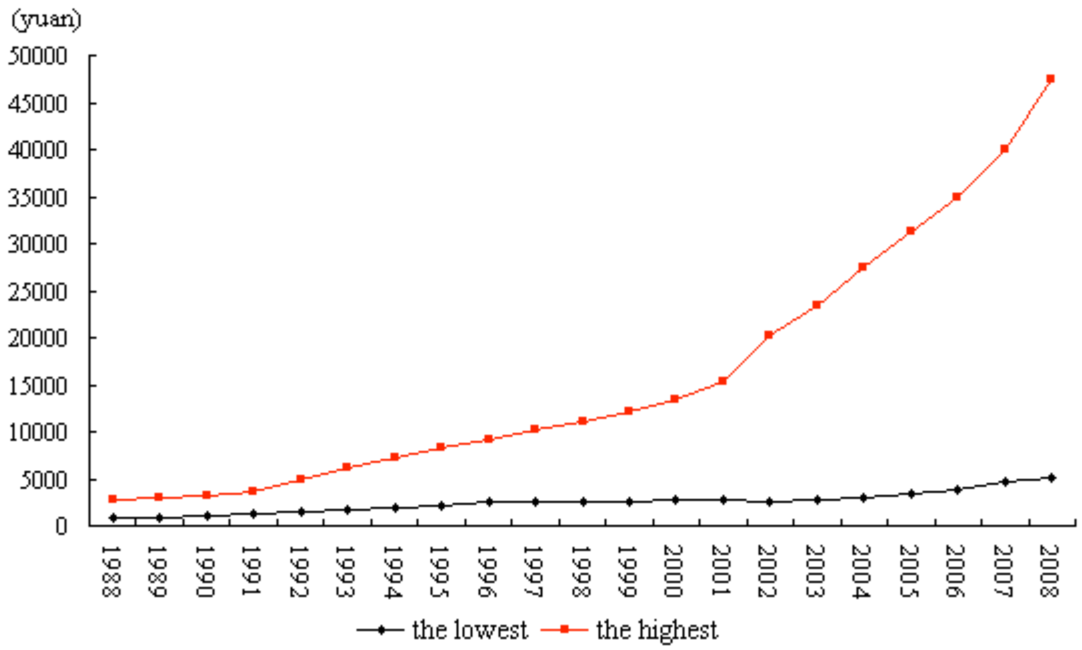

Fig. 4 The total income of the highest and the lowest

The income gap, as indicated by fig. 4, between the rich (the highest) and the poor (the lowest) is becoming wider and wider. The growth rate of the rich is 14.66%, much more than the poor (only 9.35%) in the past 21 years. The rich people always have opportunity to earn more money, even the transfer income, compared to the poor who can only earn wages.

Since the income inequality grows so fast, how does the transfer payments policy work during these years? Does it reduce the inequity? Next section will give us a answer.

3.3 The relationship between income inequality and transfer payments policy

Transfer payments policy represents a redistribution of income, taking money away from some individuals (taxpayers) and giving it to others who are eligible for the various programs intended to eliminate poverty, as for social security, welfare, Medicare, unemployment compensation, and so on. Reasonable transfer payments policy is helpful to redistribute income, to make it more balanced and fair in wealth allocation. However, we find that the current transfer payment system in China does not reduce the income inequality in urban China. Quite the contrary it widens the income gap.

In 2002, the average transfer income of urban citizen is 2003.16 yuan in. The average of the lowest 10% group is 597.73 yuan, 5448.37 yuan for the highest 10%, 9.12 times as much as the lowest 10%. However, the highest/lowest ratio of the total income is only 7.99, far less than the transfer income. We can deduce that the transfer payments policy in 2002 does not succeed in reducing inequality. Fig. 5 shows the comparison of the transfer income of the highest and the lowest during the period of 1988 to 2008.

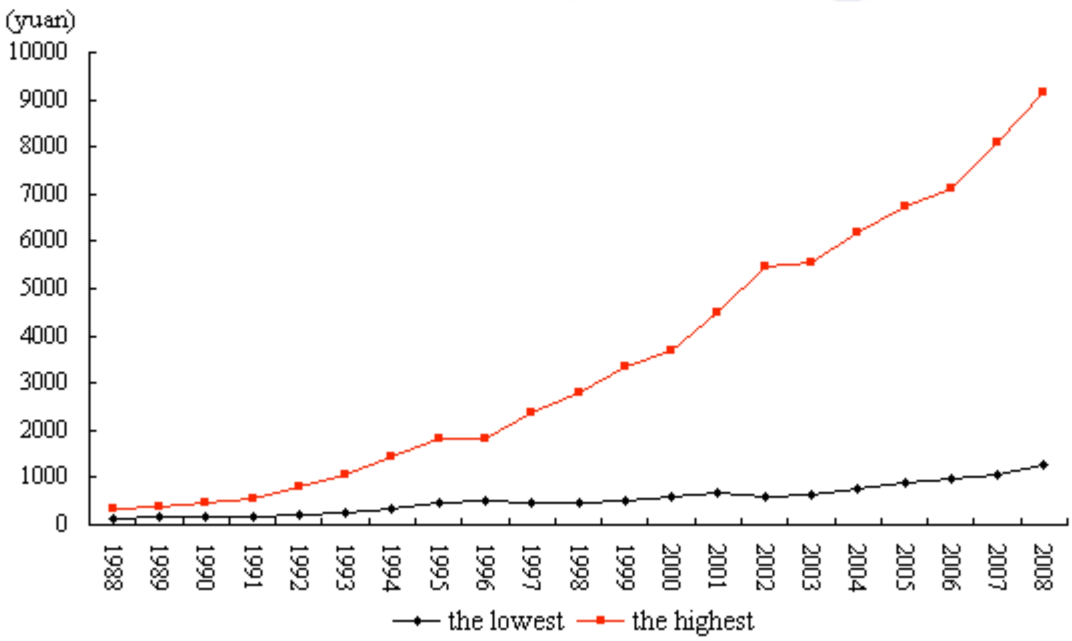

Fig. 5 The transfer income of the highest and lowest

Apparently, the gap between the rich and the poor is enlarged by transfer income. Absolutely, it is harmful to eliminate poverty and inequality. Though for the purpose of efficiency there should be a proper gap between the two group, the amount of transfer income going to the poor, aiming at decreasing gap, is really too small compared to the rich.. The transfer income, the rich people received, is twice as much as the total income of the poor. The policy may deviate from its intention in recent years.

Some people may be doubtful about the analysis above. They may think the inequality may decrease because of the equity in other groups even though the gap between the lowest and the highest is enlarged. The author presents more convincing evidences based on the Gini coefficient as mentioned above.

We first define G as the Gini coefficient of the total income, and $G1$ as the coefficient based on the total excluding transfer income. According to the definition of Gini coefficient, if $G1<G$, the income distribution is more inequitable on condition G than $G1$. It also means that the wealth allocation will be more equal if there are no transfer payments. There will be no difference whether the policy exists or not if $G1=G$. The best situation is if $G1>G$, which means that the policy has a positive effect on reducing inequality.

Tab.1 presents G and $G1$ from 1988 to 2008 calculated by equation (4) as mentioned above. Also, we define: $\infty G = G1 - G$.

Tab.1 G, $G1$, and ∞G calculated by UHIES grouped data.

Year	G	$G1$	∞G
1988	0.1865	0.1904	0.0040
1989	0.1861	0.1916	0.0055
1990	0.1826	0.1844	0.0018
1991	0.1699	0.1693	-0.0006
1992	0.1963	0.1922	-0.0041
1993	0.2129	0.2066	-0.0063
1994	0.2081	0.2026	-0.0055
1995	0.2046	0.1995	-0.0051
1996	0.2046	0.2027	-0.0019
1997	0.2188	0.2081	-0.0108
1998	0.2261	0.2105	-0.0155
1999	0.2338	0.2176	-0.0162
2000	0.2448	0.2343	-0.0105
2001	0.2559	0.2439	-0.0120
2002	0.3077	0.2945	-0.0133
2003	0.3179	0.3125	-0.0054
2004	0.3256	0.3238	-0.0018
2005	0.3309	0.3303	-0.0006
2006	0.3272	0.3307	0.0035
2007	0.3224	0.3257	0.0033
2008	0.3299	0.3385	0.0086

The income inequality in urban China, measured by *G*, as indicated in Tab.1, goes up gradually in the past 20 years. We may consider that the inequality is pretty mild only from the point of view of the calculated Gini coefficient. However, as we pointed out before, the real Gini coefficient is larger than our calculated one due to the limited grouped data.

Although we can not get the real coefficient, we can also deduce that China transfer payments policy has almost no positive effect on the Gini coefficient of the total income. Table 1 can also be plotted as Fig.6 that illustrates the trend of the *G*, *G1*, and ∞*G* clearly.

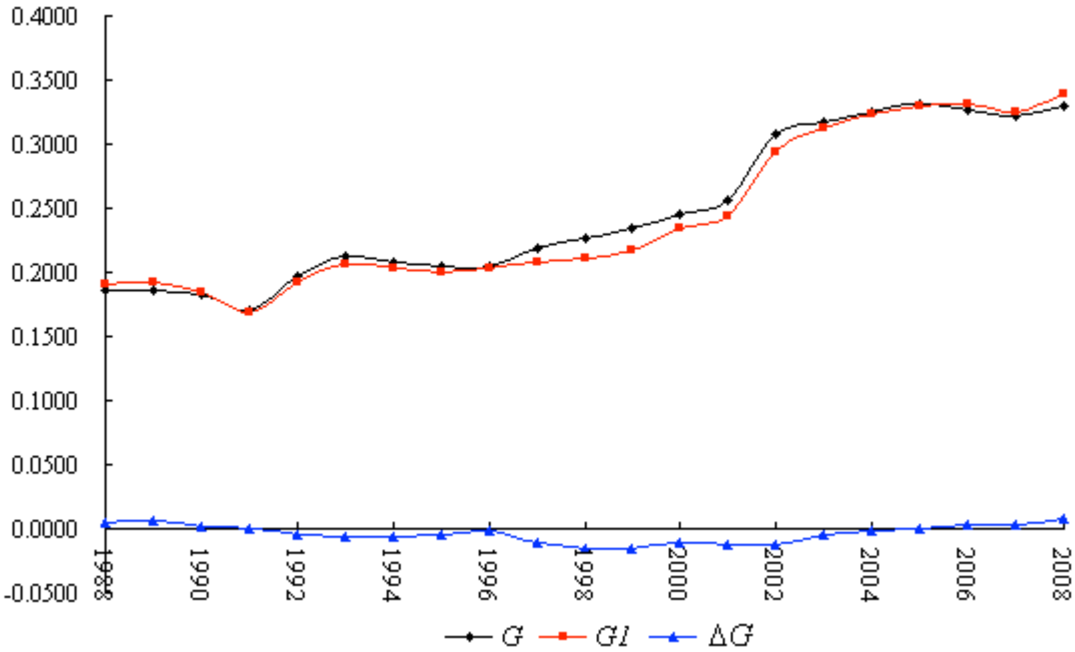

Fig.6 The Gini coefficient of the total income and
the total exclude the transfer income

As indicated in Fig.6, ∞*G* Curve is under the horizon axis during the period of 1991-2005, when China experienced the most rapid economic growth. It means that the transfer income inequality grows as the total income inequality grows in these 16 years; it means that the income gap is further enlarged in these 16 years because of the existence of the transfer payments policy; it also means that the wealth allocation will be more equal if the policy did not exist in these 16 years. What a depressing finding. Let us look at the rest of the years. ∞*G* is only a little bit more than zero. It can be deduced that there should be no difference on the income inequality whether the transfer payments policy exists or not.

4. Conclusion

In this paper, we have focused on the income inequity of urban China residents from the point of view of the transfer payment policy. According to the definition of Gini coefficient, we have shown how to calculate an approximate value. Using the

UHIES grouped data of urban residents, we did find evidence that the transfer income gap, as well as the total income gap, is enlarged during the period of 1988 to 2008.

Perhaps most surprisingly, we find that the Gini coefficient based on the total income is less than that based on the total exclude transfer income spanning the years from 1990 to 2005. Also there is almost no difference between these two values in the rest of the years. This implies that the income distribution would be more equal if the transfer payments policy does not exist in these 16 years. In the other years it does not matter to the income inequality whether the transfer payments policy exists or not.

From our analysis, we can conclude that the transfer payments policy is not reasonable. There is no positive effect on increasing the equity of income distribution. The current policy is too much inclined to the rich whereas the poor are the ones who really need help. The authority in China should review the current transfer payments policy and design a more reasonable transfer program to reduce urban inequity.

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Appendix

Tab.1 The average total income of the seven divided groups from 1988 to 2008.

Year	Lowest	Lower	Low	Middle	High	Higher	Highest
1988	796.32	1009.38	1177.55	1411.80	1697.38	2006.36	2680.06
1989	895.98	1151.98	1340.88	1579.00	1896.17	2271.62	3045.28
1990	965.72	1214.95	1427.99	1700.58	2025.44	2420.11	3164.81
1991	1176.00	1424.00	1657.92	1924.68	2262.65	2693.04	3522.98
1992	1402.74	1720.65	2037.22	2423.46	2949.45	3616.68	4883.83
1993	1629.48	2017.29	2416.51	2922.23	3636.24	4540.32	6244.68
1994	1903.60	2397.89	2890.09	3498.06	4297.33	5288.36	7238.00
1995	2177.72	2778.49	3363.67	4073.88	4958.42	6036.40	8231.31
1996	2453.62	3148.62	3779.82	4579.98	5599.28	6826.80	9250.44
1997	2456.10	3246.20	3988.00	4922.30	6074.20	7495.30	10297.50
1998	2505.00	3329.10	4134.90	5148.80	6404.90	7918.50	11021.50
1999	2646.70	3518.40	4391.60	5543.20	6942.00	8674.90	12147.80
2000	2678.30	3658.50	4651.70	5930.80	7525.00	9484.70	13390.50
2001	2834.70	3888.13	4983.50	6406.16	8213.66	10442.00	15219.98
2002	2527.68	3833.01	5209.18	7061.37	9437.99	12555.00	20208.43
2003	2762.43	4209.16	5705.67	7753.86	10463.66	14076.00	23483.95
2004	3084.83	4697.62	6423.89	8746.65	11870.79	16156.00	27506.23
2005	3377.68	5202.12	7177.05	9886.96	13596.66	18688.00	31237.52
2006	3871.37	5946.10	8103.73	11052.05	15199.70	20699.63	34834.39
2007	4604.09	6992.55	9568.02	12978.61	17684.55	24106.62	40019.22
2008	5203.83	7916.53	10974.63	15054.73	20784.19	28518.85	47422.40

Source: the National Statistical Bureau Urban Household Income and Expenditure Survey from the period of 1988 to 2008.

Tab.2 The average transfer income of the seven divided groups from 1988 to 2008.

Year	Lowest	Lower	Low	Middle	High	Higher	Highest
1988	124.06	137.28	151.67	167.17	198.32	236.18	334.15
1989	152.66	174.33	187.82	208.72	242.68	286.96	400.49
1990	161.02	187.92	208.14	225.11	276.78	341.58	473.53
1991	189.62	202.24	220.71	249.00	293.71	373.85	536.92
1992	227.22	234.60	256.00	300.19	380.75	507.30	802.77
1993	264.81	266.96	291.28	351.37	467.79	640.75	1068.62
1994	355.62	392.81	420.62	474.83	616.91	824.27	1438.32
1995	446.43	518.66	549.96	598.28	766.02	1007.78	1808.01
1996	503.02	559.18	629.29	701.44	902.98	1173.09	1804.34
1997	460.93	578.41	657.15	793.31	1087.45	1381.12	2378.27
1998	473.08	605.52	743.26	890.51	1203.89	1719.98	2805.11
1999	523.83	723.82	853.73	1041.81	1372.32	1988.59	3340.63
2000	601.05	784.39	1058.85	1277.12	1647.07	2223.14	3700.73
2001	674.96	905.61	1136.56	1453.55	1843.64	2511.04	4476.51
2002	597.73	854.91	1131.78	1550.68	2311.58	3344.82	5448.37
2003	650.50	934.93	1276.94	1672.94	2447.30	3618.08	5560.93
2004	754.13	1052.26	1417.99	1905.48	2816.40	3922.36	6193.80
2005	873.70	1236.53	1656.96	2273.27	3327.41	4669.20	6724.11
2006	960.59	1301.35	1812.12	2574.42	3666.86	5026.73	7104.57
2007	1057.73	1521.91	2179.86	3002.49	4302.02	5772.65	8107.62
2008	1263.66	1899.26	2526.63	3671.02	5197.87	6680.93	9136.87

Source: the National Statistical Bureau Urban Household Income and Expenditure Survey from the period of 1988 to 2008.

How Do In-Store Environmental Cues Influence Malaysian Shoppers? A Study of Hypermarket Customers in Malaysia

By
Wee Yu Ghee
yughee@umk.edu.my
University Malaysia Kelantan

Kamarul Zaman Ahmad
drkamphd@yahoo.com
University of Malaya

ABSTRACT

The importance of retail store design and merchandising policies rests in the ability of the physical retail environment to alter shopping reactions and behaviour. Specifically, this research paper examines relationship between physical hypermarket environments, Malaysian shoppers' emotions and their subsequent shopping behaviour besides considering the role of self regulation as moderator of relationships between consumers' shopping emotions and their post shopping evaluations. Overall, the findings of this study refute the general postulation that shopping emotions directly influence resource expenditure and shopping values. Results also contradict with previous research which indicates that action oriented shoppers are less responsive to environmental stimuli and subsequently spend less on resource expenditure because puzzled findings from this study reflects that Malaysian shoppers spend more money than they expect despite having high self degree of control. Significantly, findings show that feelings of dominance, previously dismissed as unimportant, significantly alter the shopping behavior of Malaysian shoppers. Therefore, this study proves the relevancy of measuring 'dominance' in the shopping emotions analysis. And finally, the last test result of this study postulates the rise of hedonic values experienced by Malaysian shoppers resulted from increased resource expenditures.

INTRODUCTION

This research paper examines how the physical setting of hypermarket or better known as the in-store environmental cues, influences human behaviour. So far there is no clear evidence that proves any direct causality between the environment and the overt human behaviour. Nevertheless, it has been established and observed that the physical environment can, to some extent, be supportive or act as catalyst to certain behaviour, i.e. influence resource expenditure and shopping values of shoppers, in particular the hypermarket shoppers.

Kotler first introduced concepts relating to store environments more than two decades ago (Kotler, 1973). In advocating the significance of the store environment in stimulating a customer's desire to purchase, Kotler maintained the importance of store atmospherics, which he defined as the conscious design of a shopping environment to produce specific emotional effects that would enhance purchase probability. Since then, many researchers have studied the ways in which various in-store environmental cues might influence the behaviour of shoppers. With the subsequent introduction of Mehrabian and Russell's (1974) in-store emotions model, investigation into the relationship between consumer responses and environmental cues further mushroomed. This stream of investigation shows positive relationship between intensified shopping emotions and resource expenditure (Dawson et al., 1990; Donovan and Rossiter, 1982; Hui and Bateson, 1991). Borrowing heavily from Mehrabian and Russell's work, Babin and Darden (1995) have further proposed an integrative framework (B-D) model to explain the relationships between environmentally aroused shopping emotions, resource expenditure and shopping values. They have also introduced an additional personality variable, self-regulation into their framework to examine how it might moderate the relationships.

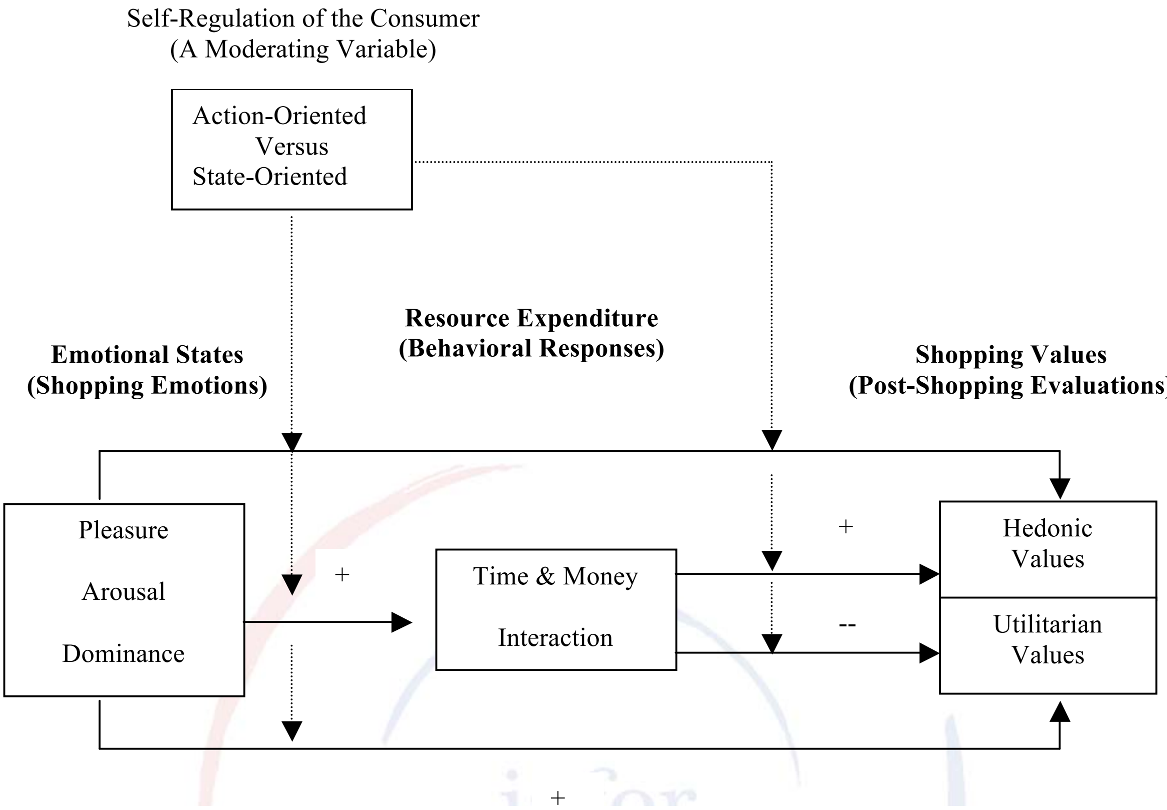
Following the framework of Babin and Darden (1995), this research paper aims to study the applicability of B-D model (Figure 1) to Malaysian shoppers. This paper also seeks to examine consumer self-regulation as a partial explanation for this variance in consumer behaviour. Further, it looks beyond differences in shopping intentions and examines variation in the store environment's effect on post shopping evaluations. The study results will have potential theoretical and practical implications. Theoretically, the results extend knowledge concerning the effects of the retail environment on behaviour by empirically including the role of consumer individual differences. In addition, it adds to the body of consumer behaviour theory concerning consumers' self-regulatory abilities (Bagozzi, Baumgartner and Yi, 1992). Practically, retailers can consider the effectiveness of store design and merchandising policies on their particular clientele in light of the findings presented here

LITERATURE REVIEW

The effective management of person-environment interactions is increasingly becoming a viable retail management tactic. Specialty chains like the Knot Shop and Victoria's Secret consider management of the physical environment an important element in both their financial success and in providing customers with a valuable shopping experience (Eroglu and Machleit, 1993). A key assumption justifying management's reliance on tactical atmospherics is that consumer actions can be influenced precisely at the critical "moment of truth" where direct interaction with the service providing environment takes place (Bitner, 1992; Bitner, Booms and Mohr, 1994, p. 95).

Basic marketing research supports the assumption that the physical service providing environment influences customer behaviour through studies documenting systematic variation in consumer cognitions and behaviour attributed to physical consumption environment characteristics (Bitner, Booms and Tetreault, 1990; Cole and Gaeth, 1990; Eroglu and Machleit, 1990; Iyer, 1989). Specifically, research on store atmospherics documents the retail environment's capacity for altering consumer emotions (Donovan and Rossiter, 1982; Kotler, 1974). In promoting the significance of the store's environment in stimulating a customer's desire to purchase, Kotler maintained the importance of store atmospherics, which he defined as the conscious design of a shopping environment to produce specific emotional effects that would enhance purchase probability.

Figure 1 A Graphic Representation of the B-D Model



Note:
+ and – refers to positive and negative influences respectively
--------- refers to possible moderating effects from self regulation

Since then, many other scholars have studied the relationship between in-store shopping behaviour and such cues as background music (Milliman, 1982), store space (Markin at al., 1976), crowding (Hui and Bateson, 1991; Eroglu and Harrell, 1986), music and lighting, and social interaction (Baker et al., 1992). The change in emotions alters a consumer's mood affecting both shopping behaviour and consumers' post-shopping evaluations (Babin, Darden and Griffin, 1994; Dawson, Bloch and Ridgway, 1990; Gardner, 1985). Emotions evoked by a retail environment also may affect shopping task performance (Bitner, 1990; Eroglu and Harrell, 1986) and can contribute to impulsive and compulsive purchase decisions (O'Guinn and Faber, 1989; Rook, 1987). Thus, there is strong empirical, conceptual, and anecdotal evidence for propositions suggesting a consumer emotion-patronage behaviour relationship.

However, potential variation in the strength and/or nature of these effects across consumers has not been investigated substantially (Dawson et al., 1990). The 'servicescape' model posits the issue conceptually suggesting that personal characteristics, labelled 'response moderators,' may alter the strength and direction of relationships among environmental response variables (Bitner, 1992). This study's main research question addresses this proposition empirically. Do some consumers possess traits that diminish or change the effects of environmentally induced shopping emotions on behaviour and/or on the value received from a retail shopping experience? Specifically, consumer self-regulation is examined as a potential response moderator of relationships between in-store emotions and subsequent consumer reactions.

Environmental Cues and Shopping Emotions

Based on the classical premises of environmental psychology, studies on shopping emotions often take the view that a retail environment arouses emotions among shoppers. Mehrabian and Russell (1974) proposed a model to explain the relationship between shoppers and the environment, which advocates that there are three basic emotional bipolar dimensions: (1) pleasure-displeasure; (2) arousal-unarousal; and (3) dominance-submissiveness (Baker et al, 1992; Bateson and Hui, 1987; Donovan and Rossitter, 1982). Pleasure-displeasure refers to the degree to which a person feels good, joyful, happy or satisfied in a particular setting; arousal-unarousal refers to the degree to which a person feels excited, stimulated, alert, or active in a given situation; and dominance-submissiveness refers to the extent to which an individual feels in control of the environment.

More solid explanations were provided in studies combining environmental psychology with a growing interest in consumer emotions (Holbrook, 1986; Russell and Pratt, 1980). Shoppers experiencing relatively high pleasure and arousal generally spend more time in a store and are more willing to make a purchase than are displeased or unaroused counterparts. Empirically, the emotional states of shoppers, especially pleasure and arousal, are found to be significant determinants of their approach-avoidance behaviour (Babin and Darden, 1995; Donovan and Rossiter, 1982; Mehrabian and Russell, 1974). A higher arousal will induce such behaviour as spending more time and money in the store; and interacting more frequently with sales personnel (Baker et al., 1992; Donovan et al., 1994).

Although dominance is also expected to exert considerable bearing on approach-avoidance behaviour by making shoppers feel free to act in various ways (Mehrabian and Russell, 1974), the findings with respect to dominance are less clear. In view of this, some researchers have proposed the deletion of dominance from the analysis of shopping emotions (Donovan and Rossiter, 1982), whereas others have respecified it as an antecedent of pleasure and arousal (Bateson and Hui, 1985). Nevertheless, in developing their B-D model, Babin and Darden (1995) argue that lack of an overall relationship between shopping emotions and post-shopping evaluations is due to the presence of a moderator, namely self-regulation. Using structural equation modelling technique, they have shown that dominance exerts more positive influences on subjects with low self-regulation than on those high self-regulation.

Shopping Values as Post-Shopping Evaluation

Growing research interest in consumer experiences has revealed that shopping involves experiential as well as instrumental outcomes (Babin et al., 1994). Alongside this, Hirshman and Holbrook (1982) have conceptualised post-shopping experiences as comprising both utilitarian and hedonic shopping values.

In short, utilitarian shopping values refer to instrumental benefits that result from the successful completion of the shopping chore, whereas hedonic shopping values largely concern experiential benefits (e.g. fun and novelty) that are derived directly from the shopping process itself (Babin and Darden, 1995).

In addition to advancing the understanding of various kinds of consumption behaviour, such as impulsive buying and browsing, these shopping values are regarded as consequences of emotional states (Babin et al., 1994). As generally advocated, a change in shoppers' emotional state alters their shopping mood and ultimately their shopping behaviour and post-shopping evaluations (Allen et al., 1992; Babin et al., 1994; Dawson et al., 1990; Gardner, 1985; Holbrook, 1986). Among the three emotional dimensions, pleasure and arousal seem to exert more readily observable influences on shopping values. For instance, previous studies have demonstrated that these two dimensions are positively correlated with hedonic values (Babin et al., 1994; Mano and Oliver, 1993; Unger and Kernan, 1983). Although the degree of association is not as strong as in the case of hedonic values, pleasure and arousal have also been found to relate positively to utilitarian shopping values (Eroglu and Harrell, 1986; Isen, 1987; Kroeber-Riel, 1979). However, the findings of these studies cast doubt on the role of dominance in inducing desired post-shopping responses.

Although B-D model hypothesizes that resource expenditure, due to the impact of shopping emotions, will influence both types of shopping values, the influence in different in sign. While resource expenditure is postulated to positively affect hedonic shopping values, it is advocated to have a negative impact on utilitarian values. This negative impact could be attributed to the unexpected increase in resource expenditure, which undermines the successful completion of the shopping chore. In other words, under the influence of emotion-provoked environmental cues, increases in resource expenditure often imply a shopper's use of more time and money than originally expected in accomplishing the shopping task. The failure to comply with an original budget would thus have an adverse effect on the shopper's utilitarian shopping values.

Consumer Self-Regulation

Compared to the considerable work addressing store-based consumer emotions' consequences, relatively little attention has been given to the effect of personal characteristics on these relationships. The servicescape model (Bitner, 1992), which offers an explanation of behavioural responses to a retail environment, suggests that personality variables may represent response moderators explaining differing consumer reactions to the same physical environment. This is consistent with personality's definition as the individual difference characteristic determining one's reactions to environments (Kassarjin, 1971).

The basic issue becomes locating consumer characteristics that make them more or less prone to these store-based emotions or that lead to a catastatic mode of behaviour. One such trait is a consumer's self-regulatory tendency (Kuhl, 1992 for a review). Kuhl's (1986) action-control theory addresses this person characteristic. Action-control theory's basic premise is that current action depends upon establishing a single dominant action tendency from among many competing action tendencies. The basic dichotomy drawn by Kuhl (1985, 1986, and 1992) is between people who are "action" oriented versus people who are "state" oriented.

Action oriented individuals generally form relatively firm intentions prior to starting an activity and are less susceptible to competing contextually derived action tendencies that interfere with original intentions. These intentions are supported by action oriented individuals' tendency to develop emotional and environmental control mechanisms that suppress inherently occurring competing action tendencies presenting themselves during some activity (Kuhl, 1986). The key mechanism operationalising this tendency is the fully developed cognitive structure of action-oriented individuals resulting in greater justification of an action prior to its performance. Architecturally, rules (propositions) guiding behaviour are more detailed and have greater strength.

Conversely, state oriented individuals possess a cognitive structure guided more by social and emotional elements of some internal or external state (Kuhl, 1986). The result is degenerated intentions and a greater susceptibility to perform behaviour without prior justification. Their cognitive structure is characterized by rules with low strength and greater susceptibility to interference. Thus, state oriented individuals are characterized by a relatively low ability to self regulate behaviour.

Substantial empirical evidence describes differences in behaviour attributable to self-regulatory tendency (Kuhl, 1992). Task performance, for example, can be affected by an action or state orientation. One experiment showed that state oriented individuals display relatively poor performance on a difficult task compared to action oriented counterparts (Kuhl, 1981). Differences in performance were attributed to state oriented subjects' tendency to concentrate more on their inevitable failure and its related emotional consequences, while action oriented individuals concentrate more on task performance itself (Harackiewicz and Elliot, 1993). Other evidence shows action oriented individuals to be more likely to perform recreational activities as planned (Kuhl, 1982), have lower test anxiety (Kuhl, 1985), and to be affected less by heightened emotional intensity (Kuhl, 1983).

The same self-regulatory tendencies that affect behaviour elsewhere may influence consumer behaviours as well. Bagozzi et al. (1992) in commenting on variation in the consumer attitudes-intentions-behaviour link note, " . . . one theme that cuts across most explanations is the role of self-regulation in decision making." Their study suggests self regulation as a moderator of the consumer attitudes-intentions relationship. Specifically, a significantly higher correlation between attitudes toward coupon usage and intentions to use coupons was observed among action-oriented consumers (high in self-regulation) than was observed among state oriented consumers (low in self-regulation). Similar effects were hypothesized for both the attitude-behaviour and intentions-behaviour relationships, but neither was supported. The authors conclude by calling for additional research into the effects of consumer self-regulation.

Given that consumer behaviour is commonly perceived as goal-oriented, consumers' self-regulatory abilities may affect decision making by determining the dominant goals in a given situation. Further, a shopper's evaluation of a shopping trip where he/she is unable or fails to complete a specific shopping task because of distractions caused by an exciting store environment may vary with self-regulatory tendency. Thus, the pervasive role of self-regulation seems relevant as a potential moderator of environmentally induced effects on shopping behaviour and outcomes.

Possible Moderating Effects of Self-Regulation In Retail Environment

Self-regulation refers to the personality trait that establishes a single dominant action tendency among many competing action tendencies. This trait is considered to have significant bearing on shoppers' emotional response to the in-store environment. Depending on their degree of self-regulation, people can be classified as either action or state oriented (Kuhl, 1981). Action-oriented individuals or people with high self-regulation are those who emphasize on task performance, whereas state-oriented individuals or people with low self-regulation are those who focus on emotional consequences (Kuhl, 1981; 1984; Bagozzi et al. 1992). As evidences in previous studies (e.g. Kuhl, 1992; Babin and Darden, 1995), state oriented individuals are less likely to regulate their behaviour, and more susceptible to influences of environmental stimuli. In the context of shopping, this differentiation implies that, given the same set of in-store environmental cues, state-oriented shoppers are more likely to be emotionally induced to spend larger amounts of resources and derive higher shopping values than their action oriented counterparts.

With reference to Kuhl's (1986) action-control orientation instrument, eight measurement items were adopted in the present study to capture hypermarket shoppers' degrees of self-regulation.

OBJECTIVES

Although considerable research efforts have been devoted to developing theories to explain the interactions between retail environments and consumer responses, most have only been verified in Western countries. As such, whether they are applicable in other cultural settings has yet to be tested. However, such cross-cultural testing is considered necessary as most of these theories are concerned with the consumer's psychological states, which, in turn, are heavily bound by culture (Triandis, 1982).

The present study aims to examine the applicability of the B-D model to Malaysian shoppers. With reference to the basic premises of the B-D model, this study specifically involves examination on the exact inter-relationships among shopping emotions, resource expenditure and shopping values of the Malaysian. Following Babin and Darden's approach, this study also explores the possible moderating role of self-regulation on consumers' emotional responses. Undoubtedly, the findings of this study can help assess the external validity of the B-D model and advance retail practitioners' understandings of the mindset of Malaysian shoppers. While previous studies only applied B-D model in a Western cultural setting, the present study differentiates from them by externally validating this popular American-based shopping behaviour model in Malaysian multi-cultural context. Specifically, below are the research objectives of this study:

1. To investigate and understand the unique mindset and emotional responses of Malaysian shoppers towards hypermarket environment.
2. To investigate the relationship between shopping emotions and consumer resource expenditures among state oriented customers and action-oriented customers.
3. To assess the net impact of environmental cues on customers short-term and long-term perceptions towards hypermarket in Malaysia.

HYPOTHESES

The B-D model postulates a direct influence of environmentally provoked emotions (shopping emotions) on evaluations of shopping expenditures (shopping values). It further postulates an indirect impact of shopping emotions on shopping values, through the mediator of resource expenditure. The relationships between these three variables are, in turn, hypothesized to be moderated by shopper's self-regulation, a personality trait that determines an individual's susceptibility to environmental cues (Gardner, 1985). Therefore, with the given model, we propose to analyze the same situation in Malaysian society context. Firstly, to examine if Malaysian shopping emotions influence their resource expenditure, we propose the following hypothesis:

H1: Malaysian shoppers' shopping emotions will exert insignificant influence on their resource expenditure.

Self-Regulation in the Retail Environment

Drawing on previous empirical and theoretical research, we suggest that the effects of the retail environment on shopping behavior and post shopping evaluations are moderated by consumer self-regulation (action/state orientation). Two general patterns of relationships are expected.

First, state-oriented consumers' increased susceptibility to context effects (competing action tendencies) suggests that in-store emotions are likely to impact them significantly more than action oriented shoppers. If so, positive relationships between shopping emotions and resource expenditures demonstrated in previous studies should be greater among state oriented than they are among action-oriented shoppers. Impulsive consumer acts provide a specific example.

A key factor explaining impulsive consumer behavior is heightened emotional arousal (Rook, 1987). Consistent with evidence in non-consumption contexts discussed, action-oriented shoppers may possess control mechanisms making them less affected by these emotions. Hypothetically, an action oriented shopper might intentionally leave a credit card at home in an effort to control overspending in a highly arousing shopping environment. Likewise, other controlling propositions may become part of the action-oriented consumers' shopping schema and be conspicuously absent from the cognitive structure of state oriented shoppers (Kuhl, 1986; Bitner et al., 1994). Thus, the action-oriented shopper is more likely to focus their efforts on acquiring only planned purchases rather than reacting to stone-based emotions in the form of impulsive acts.

Similar inferences can be drawn with respect to non-monetary resource expenditure. Previous studies support positive relationships between both pleasure and arousal and the economic and time resources expended in a retail environment (Dawson et al., 1990; Donovan and Rossiter, 1982; Hui and Bateson, 1991). However, an action-oriented shopper may overcome strong negative emotions, evoking an avoidance response among some consumers. Conversely, a state oriented shopper may succumb to the competing action tendency of leaving a store rather than following through with their original shopping plans. The weight of evidence suggests self-regulation as a moderator, leading to the construct of second hypothesis:

H2: The relationship between shopping emotions and consumer resource expenditures is greater among state oriented consumers than it is among action-oriented consumers.

Relationship Between Resource Expenditure and Utilitarian Shopping Values

The B-D model postulated that resource expenditure would have a negative impact on utilitarian shopping values. This negative impact could be attributed to the unexpected increase in resource expenditure, which undermines the successful completion of the shopping chore. In other words, as the shopper is unable to accomplish his shopping task within planned monetary budget and time frame, the increase in resource expenditure would have a negative impact on his utilitarian shopping values.

Therefore, with the given model, we propose to analyze same situation but in a multi-cultural context in Malaysia. Our study proposes this last hypothesis:

H3: Increased resource expenditure will have insignificant adverse impact on the utilitarian shopping values of Malaysian shoppers.

METHODOLOGY

To accomplish the aforementioned research objectives, a survey approach was adopted. A modified shopper-intercept format was used to obtain a sample and collect the necessary data. The data collection followed procedures used to assess the retail environment's impact on shopping behavior (Babin et al., 1994; Dawson et al., 1990; Donovan and Rossiter, 1982; Ward, Bitner and Barnes, 1992).

The Research Model

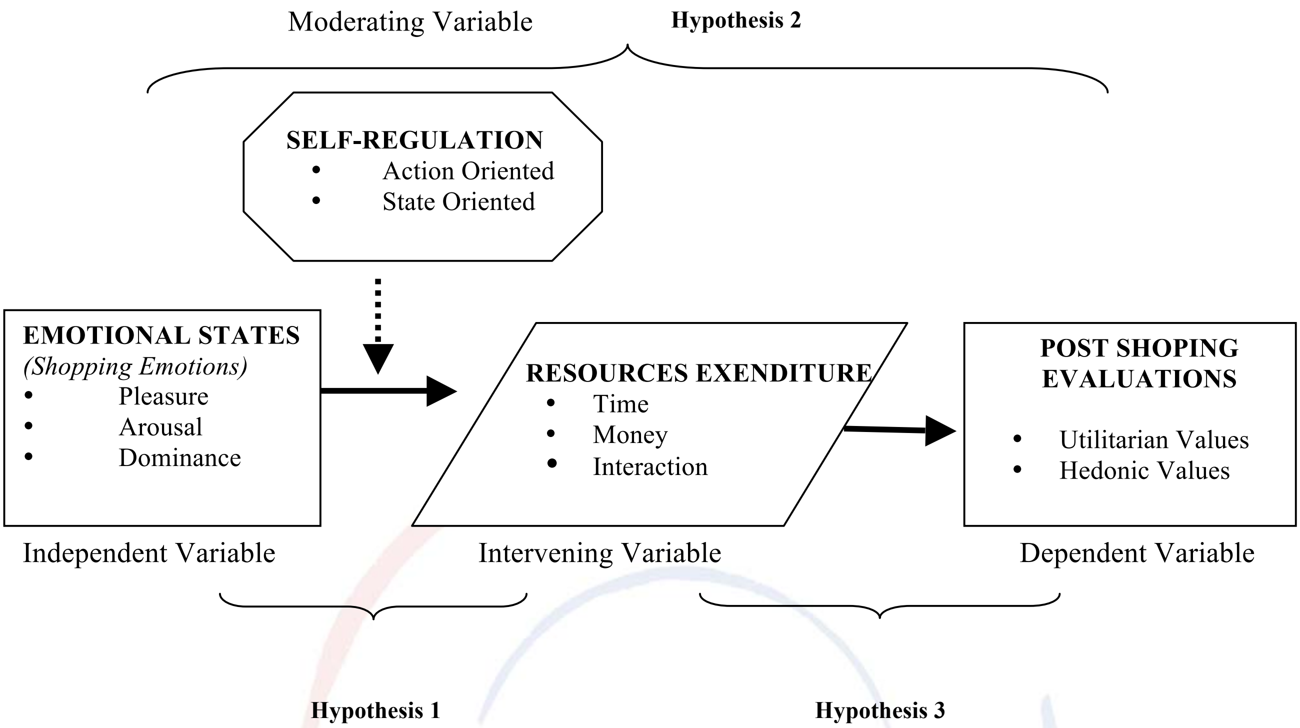
This study is based on the shopping emotions model of Babin and Darden (1995), which evaluates the effect of the retail environment on shopping behavior with the shopper self-regulation as a moderator.

Briefly, the B-D model postulates a direct influence of environmentally provoked emotions (shopping emotions) on evaluations of shopping experiences (shopping values). The model further postulates an indirect impact of shopping emotions on shopping values, through the mediator of resources expenditure. The relationships between these three variables are hypothesized to be moderated by shoppers' self-regulation, a personality trait that determines an individual's susceptibility to environmental cues (Gardner, 1985). This last postulation draws heavily on Kuhl's (1981) self regulation theory, which suggests that personality variables often play a significant role in explaining idiosyncratic consumer reactions to the same environmental cues. For reference, the framework of this study examines the applicability of B-D model in Malaysia, as simplified in Figure 2 below.

The Measures

A total of 150 hypermarket patrons were successfully interviewed. Shoppers were intercepted while shopping at two out of the five major hypermarkets in the country. The researchers identified themselves as associated with a local university and asked every fifth adult exiting the hypermarket to complete the survey. Respondents were intercepted near the exits within each store and provided with necessary materials to complete the questionnaires comfortably. Only one respondent was approached at a time in the given store and interviewers were instructed to answer any questions that might arise. The questionnaire used in this study is similar to Babin and Darden's, (1995) with slight modifications done. The questionnaire is divided into four parts. Each of the parts targets to test on particular variable of the respondent namely shopping emotions, resources expenditure, post shopping evaluations and self-regulation.

Figure 2 A Graphic Representation of the B-D Model



Part A of the questionnaire consists of items concerning the respondent's personal and job demographic details. The items included in Section A are:

Personal and Job Demographics

Gender
Age
Race
Marital Status
Educational Level
Employment Status
Monthly Income

This is followed by Part B, which aimed at measuring respondents' shopping emotions. All the items to measure pleasure, arousal and dominance are coded on a 5-point scale ranging from "1 = strongly disagree" to "5 = strongly agree". 'R' scores are reversed prior to statistical analysis.

Pleasure
I feel happy in this hypermarket.
I feel satisfied in this hypermarket.
I feel disgusted in this hypermarket. (R)

I feel annoyed in this hypermarket. (R)

Arousal
I feel aroused in this hypermarket.
I feel stimulated in this hypermarket.
I feel excited in this hypermarket.
I feel sleepy in this hypermarket. (R)

Dominance
I feel in-control in this hypermarket.
I feel powerful in this hypermarket.
I feel bold in this hypermarket.
I feel free in this hypermarket.

Part C of the questionnaire continues to measure how much resource expenditure shoppers are spent at the hypermarket, in terms of time, money and interaction with sales personnel. These questions examine how Malaysians' shopping emotions influence their resource expenditure:

How many sales staff did you talk to while shopping?
I spent more time than expected in this hypermarket.
While shopping, I spent more money than I expected.
I spent ___________ minutes in this hypermarket.
I spent RM________ in this hypermarket.
Part D of the questionnaire requires respondents to reflect on their post-shopping evaluation. All the items to measure shopping values are coded on a 5-point scale ranging from "1 = strongly disagree" to "5 = strongly agree". The first six statements concern utilitarian values whereas the other four statements measure hedonic values:

Utilitarian Values
I continued to shop here, not because I had to, because I wanted to.
I enjoyed being immersed in exciting new products at this hypermarket.
I enjoyed this shopping trip for its own sake.
When shopping in this hypermarket, I feel excitement of the hunt.
While shopping here, I was able to forget my problems.
Compared to other things, I could have done, the time spent here was truly enjoyable.

Hedonic Values
I accomplished just what I wanted to while in this hypermarket.
I could not buy the things that I really needed.
While shopping, I found just the item(s) I was looking for.
I feel disappointed because I'll have to go another store to complete my shopping.

The final part, Part E of the questionnaire consists of statements assessing self-regulation of respondents. Eight statements are established to ascertain Malaysian shoppers' degree of self-control (action-oriented as opposed to state-oriented). Shoppers with high scores will be classified as 'action-oriented' and shoppers with low scores will be classified as 'state-oriented'. All these items are coded on a 5-point scale ranging from "1 = strongly disagree" to 5 = strongly agree".

When I have a lot of important things to take care of, it is easy for me to make a plan and stick to it.
When I have two things that I would like to do and can only do one, I decide between them pretty quickly.
When I have to complete a difficult assignment, I can concentrate on the individual parts of the assignment.
When I have planned to do something unfamiliar in the following week, I stick with what I've planned.
When I know that something has to be done soon, I just think about how I can finish it the fastest.
When I have to solve a difficult problem, I think about which way would be the best to try first.
When I'm trying to solve a difficult problem and there are two solutions that seem equally good to me, I make a spontaneous decision for one of the two without thinking much about it.
When I've planned to buy just one piece of clothing but then see several things that I like, I usually don't think about it very long and decide relatively soon.

RESULTS

Although all the constructs under investigation of this study were drawn from existing literature and purified by the opinions of experts and focus groups, a statistical procedure was adopted to ensure their validity. Overall, the reliability coefficient of the 42 items undertaken in the study was tested and found at alpha of 0.7991. This implies that all constructs in the questionnaire are highly reliable and it further assures the degree to which these measures are free from error, yielding consistent results.

For the first hypothesis, the relationship between the shopping emotions and resource expenditure spent by shoppers is ascertained. To begin with, the sum of total shopping emotions and total resource expenditure were computed. These two sums, namely total shopping emotions and total resource expenditure were then correlated using statistical tool to examine if any significant relationship existed. It was found that there was no significant relationship between these two variables -- shopping emotions and resource expenditure. Therefore, we did not reject this first hypothesis. This is in contrary with previous studies, which dictated that, the emotional state of shoppers, specifically pleasure, arousal and dominance were significant determinants of shopper's subsequent behavior such as spending more time and money in the store. This puzzled findings reflected that, Malaysian shoppers tend to be less susceptible to environmental cues than the Westerner shoppers. Even when emotionally provoked, Malaysian shoppers would be less inclined to spend additional resources than what has been suggested in Western literature.

In relation to this hypothesis statement, we further analyzed the relationship between each subcomponent of shopping emotions and that of resource expenditure. Specifically, four items measuring pleasure were totaled and correlated individually with total money spent, total time spent and total interaction undertaken; this procedure was repeated for arousal and dominance variables. Surprisingly, out of these subcomponents analysis, one significant relationship was found. Pleasure was found to have significantly influenced the amount of time spent by Malaysian shoppers at the store, with the correlation coefficient of 0.189.

The last section of the questionnaire -- Part E, assessed shoppers' self-regulation abilities (action-oriented as opposed to state-oriented). Eight statements were established to ascertain Malaysian shoppers' degree of self-control. Responses to these eight statements were summed. Shoppers with high scores were classified as 'action-oriented' and shoppers with low scores were classified as 'state-oriented'. As recommended by Kuhl (1985), a median split should be benchmarked against the scores so as to classify respondents.

Therefore, the mean and median for total scores of all respondents were computed through frequency. The average score was found to be 27.5667 and median 28. This enables us to conclude that respondents who scored 28 and above are regarded as action oriented, and those below 28 are considered as state oriented shoppers. Upon such computation, more than 50% of the population, i.e. 80 respondents out of the 150 total samples were found to be highly self-regulated person (action oriented).

To test on the second hypothesis, two main analyses were conducted. Firstly, we analyzed the relationship between total self-regulation and total shopping emotions. Secondly, the relationship between total self-regulation and total resource expenditure was examined. Since the items in the study measured the degree of action orientation among Malaysian shoppers, the rational behind this analysis is that, should the relationship between total self regulation and total shopping emotions be significant, it indicates that action-oriented persons tend to be more responsive to environmental cues. At the same time, it also implies that state oriented persons, as opposed to action-oriented, tend to be less susceptible to shopping environment.

Statistical findings indicated that overall, no significant relationship was found between self-regulation and shopping emotions. Similarly, there was no significant relationship between self-regulation and resource expenditure. In relation to this, we further analyzed the relationship between self regulation and the subcomponent of shopping emotions namely pleasure, arousal and dominance, followed by the subcomponent of resource expenditures including time, money and interaction. As a result, self regulation was found to have significant relationship with dominance state of shopping emotion, with correlation coefficient reported at –0.209. This implies that Malaysian action oriented shoppers tend to feel dominant in shopping environment where they feel in-control, powerful and free in the hypermarket.

Besides, findings also indicated that there was significant relationship between self-regulation and total money spent at the hypermarket, with correlation coefficient reported at 0.188. This result contradicts previous literature which suggested that action oriented people, having high degree of self control tend to be less responsive to environmental cue and consequently spent less resource expenditure. When emotionally revoked, action oriented shoppers in Malaysia still spent more money than they expected. Here, the relationship between resource expenditure and the respective post-shopping evaluations -- utilitarian and hedonic values is determined. Since there was no significant relationship between resource expenditure and utilitarian values, we did not reject this final hypothesis. This certified that increased resource expenditure had no impact on utilitarian values of Malaysian shoppers.

However, significant relationship was found between resource expenditure and hedonic values, with overall correlation coefficient found at 0.413. Specifically, two subcomponents of resource expenditure, namely time and money had significant relationship with hedonic values, with correlation coefficient reported at 0.397 and 0.332 respectively.

In addition to the above hypothetical analysis, the demographic details of the total sample were analyzed and could be summarized as follows. Overall, 61 male shoppers and 89 female shoppers made up the total sample. Most shoppers participated in the study were either in the range of under 25 years old (39.3%) or between 25 to 35 years old (35.3%), and only 2 shoppers were in the age of above 55 years old. In terms of race, Chinese made up the most population (47.3%), followed closely by Malay shoppers (36%), Indian (12.7%) and others (4%). More than half of these shoppers (54.7%) reported to be single. Besides, in terms of educational level, most shoppers (44%) held bachelor degree and 16% of the total sample obtained master degree as their qualifications. However, out of the total sample of 150 shoppers, only 91 were employed or self-employed. The remaining ones reported as not working. Since one third of the total population in the study reported as not having any occupation, 29.3% respondents had monthly income less than RM1000 whereas 36% respondents earned an income of between RM1000 to RM3000 every month. Only 7.3% respondents had monthly income reported at RM5000 and above.

DISCUSSION & PRACTICAL IMPLICATIONS

This section is devoted to discussing implications derived from the aforementioned empirical findings. Firstly, implications relating specifically to hypothesis testing will be examined and this is subsequently followed by demographic analysis and other implications in practical terms as regards to in-store environmental cues.

Regarding the testing of first hypothesis, we failed to reject this hypothesis, which stipulated that, “Malaysian shoppers’ shopping emotions will exert insignificant influence on their resource expenditure.” Specifically, the test result of the first hypothesis indicates that overall, the shopping emotions of Malaysian shoppers do not influence their resource expenditure significantly. This puzzled findings is contrary to previous studies which suggested that emotional state of shoppers, especially pleasure and arousal will induce such behavior as spending more time and money in the store and interacting more frequently with sales personnel.

These findings may be attributed to the different temperamental characteristics between Malaysians and Westerners. Malaysians which are composed by multi-cultural races, tend to make up their unique “personal activity orientation”. The nature of Malaysian multi-cultural norms and socialization practices which emphasizes on obedience, conformity, self-abasement and harmonious relationships lead us to believe that most Malaysians have high self-degree of control. Therefore, given Malaysian’s general tendency to control their impulses and refrain from expressive spontaneity, it is likely that they would be less responsive to in-store environmental cues. And even when they are emotionally provoked, it is very unlikely that they will spend additional resource as what has been suggested for Westerners.

In practical terms, the above result helps remind retailers of the minor effects or minimal impact that in-store environmental cues have on Malaysian shoppers. Although results of previous study have proven how effective emotion-provoked environmental cues in generating in-store resource expenditure, this has not been the case in Malaysia. In view of this, there may be a need for retailing practitioners operating in Malaysia to further improve on their in-store environmental cues and see if there is any impact on Malaysian shoppers’ behavior. Upon improving on the current in-store environmental settings, should findings reflect positive relationship between Malaysian shopping emotions and their resource expenditure, it indicates that the current in-store environmental cues have been poorly designed that it fails to provoke shopping emotions and hence improvement needed to be done. Or, alternatively, the retailers can look for other ways besides in-store environmental cues to induce Malaysian shoppers to stay longer and spend more in the store.

While the test results of the first hypothesis tend to contradict the findings of previous study, the second hypothesis hints at potential effects of shopping emotions and resource expenditure on action-oriented shoppers. Overall, there was no significant relationship between self regulation and shopping emotions, and neither was there significant relationship between self regulation and resource expenditure. However, new finding was discovered when analyzed subcategorically, dominance was found to have significant relationship with self regulation. This implies that action-oriented shoppers in Malaysian, despite having high-degree of self control, tend to feel powerful, in control and free in the hypermarket. Although previous literature dictates that action oriented shopper would be less susceptible to environmental stimuli, Malaysian action oriented shoppers, in contrast, appeared responsive to in-store environmental cues to the extent where they feel dominant.

This findings should be practically precious to retail practitioners operating in Malaysia. Although first hypothesis proves that Malaysian are less inclined to spend additional resources even when emotionally provoked due to their high degree of self-control, second hypothesis hints that Malaysians' emotional state does get affected despite being action-oriented shoppers. Hence, retail practitioners operating in the country should realize the importance of in-store environmental cues in inducing not only state-oriented but also action-oriented shoppers.

Furthermore, previous findings with respect to dominance are less clear and some researchers have proposed the deletion of dominance from the analysis of shopping emotions. However, our finding has clearly proven that dominance has exerted considerable effects in making shoppers feel free to act in various ways. Hence, dominance should not be eliminated in this shopping emotions analysis. Instead, it should be the key interest for retail practitioners because of the close link between store layout and control of shopper movement through a store.

Besides, the second hypothesis illustrated another puzzled findings where analyzed subcategorically, total money spent was found to have significant relationship with self regulation. This again refuted previous findings, which state that action-oriented shopper, are less responsive to environmental cues and hence they do not spend additional resource expenditure in the store. Surprisingly, Malaysian shoppers, having high degree of self control, still spent more money than they expected in the hypermarket. This finding proves that in-store environmental cues provoke not only the state-oriented shoppers, but also action-oriented shoppers to spend more. No matter how impulsive or high well the shopper regulates his behavior, he tends to be emotionally induced to spend larger amounts of resources and derive higher shopping values. This phenomena can be explained by the third hypothesis which test results provide evidences that, the more time and money spent by Malaysian, the happier and more fun they feel, indicating a rise in hedonic values.

This last finding from third hypothesis contradicts with previous findings, which stipulates that increased resource expenditure resulted from intensified shopping emotions, exerts highly adverse impact on the utilitarian values of shoppers. Given such stipulation, previous researcher theorized that these negative values may dampen repatronage intention, and ultimately store's profitability. In other words, the previous results suggested that environmental designs that aimed at encouraging shoppers to spend more time and money in a store may be harmful in building customer loyalty.

Fortunately, this is not the case for Malaysian shoppers who enjoy shopping for the sake of experiencing fun, happiness and novelty shopping, regardless of how much time and money they spend in the store. Since the test results indicated no significant relationship between Malaysians' resource expenditure and utilitarian values, retail practitioners operating in Malaysia need not worry about the adverse impact of these values, as illustrated by previous researcher. The environmental designs aimed at inducing Malaysian shoppers to spend more time and money will not pose any negative effects nor will it affect the hypermarket's profitability because no significant relationship found between resource expenditure and utilitarian values among Malaysian shoppers. And true enough, test results further indicated significant relationship between Malaysians' resource expenditure and their hedonic values.

Taken together, the above findings highlight both the potential advantages and disadvantages associated with the use of environmental cues. While previous findings suggested how cues may induce more on-the-spot resource expenditure among Westerner shoppers, the theories may not work well on Malaysian shoppers who have different temperamental characteristics. Therefore, retail practitioners operating in Malaysia should carefully assess the use and net impact of these environmental cues on both short and long term corporate performance before applying them.

LIMITATIONS AND FUTURE RESEARCH

The results of this study provide an encouraging start to understanding of how shopping emotions work among Malaysian consumers at hypermarket. Like most others, this study is not free from limitations.

Firstly, due to the absence of an appropriate sampling frame, a truly random sampling method was prohibited in this study. To overcome this limitation, the survey was administered at a regular interview rate (i.e. to every fifth shopper) across all the opening hours of the hypermarket over the whole week. Having done so, hopefully this procedure can help retain a reasonable degree of representativeness. Secondly, some respondents in this study found it hard to understand and answer questions posed in the questionnaire. Several respondents commented that questions asked in the survey were too difficult to be understood. This may be due to the nature of survey, where only English was used as the medium of instructions. Hence, given such a problem, chances are that these respondents may have given inaccurate ratings. To avoid such limitation, future research done should have its survey translated into Malay, Chinese and Indian so as to facilitate multi-race respondents' understanding.

Lastly, although the use of a single retail setting can help enhance the internal validity of this study, it is important to note the possible drawbacks inherent therein. The research findings derived from hypermarket settings may not be generalizable to other types of retail environment such as supermarket or shopping mall etc. To leverage and further verify the present findings, future retail research investigating environmental cues under Malaysian cultural setting should therefore be extended to other shopping environments to assess the moderating effect of store type.

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Title:	Optimal Shelf Space Allocation Using System Dynamics Approach: A Case Study in Shoe Retailing Industry
Topic of Submission:	Operations Management (System Dynamics)
Author:	First Name: MUHAMMAD SHAKEEL SADIQ
	Last Name: JAJJA
Affiliation:	Ph.D. Management Candidate
	Suleman Dawood School of Business, Lahore University of Management Sciences.
Contact Information:	Postal Address: D.H.A., Lahore Cantt, Lahore, Pakistan.
	E-mail: 08080002@lums.edu.pk
	Phone: Mobile +92 300 4722 048 Office +92 42 111 11 5867
Co-Author:	First Name: KAMRAN ALI
	Last Name: CHATHA
Affiliation:	Assistant Professor
	Suleman Dawood School of Business, Lahore University of Management Sciences.
Contact Information:	Postal Address: D.H.A., Lahore Cantt, Lahore, Pakistan.
	E-mail: kamranali@lums.edu.pk
	Phone (Office): +92 (0)42 3560 8094, (Mobile): +92 (0)300 849 1854

Title:	Optimal Shelf Space Allocation Using System Dynamics Approach: A Case Study in Shoe Retailing Industry
Author:	First Name: MUHAMMAD SHAKEEL SADIQ
	Last Name: JAJJA
Affiliation:	Ph.D. Management Candidate
	Suleman Dawood School of Business, Lahore University of Management Sciences.
Co-Author:	First Name: KAMRAN ALI
	Last Name: CHATHA
Affiliation:	Assistant Professor
	Suleman Dawood School of Business, Lahore University of Management Sciences.

ABSTRACT

Shelf space is a limited resource in a retailing store and multiple brands compete to get the maximum of this resource for their exposure to customer. However, a retailer's objective usually is to allocate space to each brand in such a way that yields maximum cumulative profit from the shelf space available. A retailer would make space allocation decisions based on various attributes possessed by the brands to be displayed. Such attributes may include: relative demand, price, profit margin, price elasticity, demand-space elasticity, cross-space elasticity, weather and temporal effects on demand of brands, demographic characteristics of visiting customers, and substitution relationships of a brand with competing brands to name a few. Hence an analysis of these variables together to find out an optimal brand space allocation decision that maximizes total profit of the shelf-space is a fairly complex and dynamic problem.

This paper explores the use of system dynamics approach for studying shelf space allocation decisions in the context of shoe retailing stores. Based on data which is part collected, part hypothetical (but with reasonable assumptions) a system dynamics model is developed for finding a solution of the aforementioned problem. The objective of the model is to determine optimal shelf space allocation that maximizes net profit of the store at given set of retailing store's constraints. Further implications of the model results are discussed and future research directions are proposed.

1. INTRODUCTION

Retailing industry is becoming very competitive with time and one of the key factors in improving sales of a retail store is the shelf space management. ‘Shelf space’ is a scarce resource in a retail store which in many cases is also a very expensive resource. In order to better manage this resource, one strategy which most retailers adopt is of optimally allocating shelf space to each brand in such a way that maximizes total profit from the sales of the retail store. A number of studies emphasize that well-managed shelf space of a store has positive impact on the sales and net profit of the store (Urban, 1998; Desmet and Renaudin, 1998).

Shelf space management is a source of competitiveness. These days, the number of competing brands to be displayed at a store is becoming abound thus reducing display space per brand at the store. A number of other factors make shelf space management decisions much more complex such as advertising policy of manufacturer affecting demand, which in return impacts the space allocation policy of the retailer (Dreze et al., 1994; Amrouchea and Zaccour, 2007), profit margin of a brand for a retailer (Martín-Herrán et al., 2006), demographic characteristics of the potential customers (Creusen, 2010), and weather conditions (Praskievicz and Chang, 2009). Shelf space also has many operational implications for a retail store. For example, L. A. Fancher (1991) argues that poor space management in a retail store can lead towards customers' dissatisfaction and increased inventory.

Mathematical models have been developed in order to help managers make optimal shelf space allocation decisions under store specific constraints. These models do not capture time varying attributes of variables such as of ‘demand of each brand’. In order to address such dynamic and complex problems system dynamics is considered a more appropriate approach (Milling, 1996). This paper conceptualizes shelf space allocation decisions a time-varying dynamic problem and tests the use of system dynamics approach to investigate this problem. The following sections in this paper present brief literature review of shelf space allocation problem, a system dynamics model that conceptualizes and analyzes shelf space allocation decisions, interpretation of the model results, sensitivity analysis, and future research directions.

2. LITERATURE REVIEW

The issue of shelf space management has generally attracted attention from researchers of marketing and operations research. As a result, research studies have been conducted on both the prediction of theoretical relationship between factors affecting brand space allocation and on development of mathematical models for determining optimal brand space allocation. The system dynamics model developed in the current study is based on mathematical relationships among the relevant variables. Therefore, restricted by lack of space, this paper limits the literature review to studies on mathematical models for shelf space allocation. Summary of the relevant papers is shown in table 1.

There are different approaches suggested in literature for addressing the issue of shelf space management. According to Mayer et al. (1990) there are two methods which are used in industry for managing shelf space in retailing stores. These methods are “sales productivity method” and “build-up method”. Sales productivity method emphasizes to increase sales and tends to give more display to the brand which contributes more towards sales.

Kampo and Goossens (1981) highlight the role of demographic characteristics on shelf space allocation decisions. Objective of their research was to shed light on impact of demographic factors on relevant appeal of particular categories’ sale and profit. They argue that such local differences in category attractiveness have a role in optimal allocation of the store space across categories. They emphasize on addressing local needs in each store and allocating space, manpower, and promotional budget accordingly.

	Title	Authors	Key Features	Year
Mathem-atical Model	Shelf-space allocation of national and private brands	Nawel Amrouche, Georges Zaccour	Game theoretic model for shelf space allocation.	2007
	An efficient algorithm to allocate shelf space	Ming-Hsein Yang	Heuristic for shelf space allocation and evaluation of solution methodology.	2001
	A study on shelf space allocation and management	Ming-Hsien Yang, Wen-Cher Chen	Space allocation model and interpretation of space management strategies using survey data.	1999
	Optimal Competition and Allocation of Space in Shopping Centers	Thomas J. Miceli, C. F. Sirmans, Denise Stake	Analysis of the issues faced by profit-maximizing developer during space allocation of shopping centre.	1998
	A Sensitivity Analysis of Retailer Shelf Management Models	Norm Borin, Paul Farris	Comparison of accuracy of mathematical models and thumb rules used for shelf space allocation.	1994
	A Dynamic Model for Strategically Allocating Retail Space	Marcel Corstjens and Peter Doyle	Incorporates changing needs and changing product life cycle in existing static shelf space allocation model.	1983
	A Model for Optimizing Retail Space Allocations	Marcel Corstjens and Peter Doyle	Space allocation model which incorporates cross-space elasticities and cost function using a case study.	1981
	A Mathematical Model for Simultaneously Determining the Optimal Brand-Collection and Display-Area Allocation	Evan E. Anderson and Henry N. Amato	Employs an algorithm that uses brand preferences of final market for finding optimal brand mix and display-area allocation.	1974

Empiric-al and Mathe-matical Model	A Hybrid Knowledge-Based System for Allocating Retail Space and for Other Allocation Problems	Madan G. Singh, Roderick Cook, Marcel Corstjens	Decision support system (Resource-opt) for resource allocation with a practical example.	1988
Empiric-al studies	The impact of location factors on the attractiveness and optimal space shares of product categories	K. Campo, E. Gijsbrechts, T. Goossens , A. Verhetsel	A framework for explaining the impact of store and trading area characteristics on category and store performance.	2000
	Shelf Management and Space Elasticity	Xavier Drèze, Stephen J. Hoch, Mary E. Purk	Field experiments for comparing two shelf management approaches: "space-to-movement" and "product reorganization".	1994
	SH.A.R.P.: Shelf Allocation for Retailers' Profit	Alain Bultez and Philippe Naert Source	A theoretical shelf space allocation model focusing on the demand interdependencies prevailing across and within product-groups. Comparison of the model with the rules of thumb.	1988
	The Relationship between Shelf Space and Unit Sales in Supermarkets	Ronald C. Curhan,	Impact of shelf space changes on unit sales using stepwise multiple regression.	1972
	The Effect of Shelf Space upon Sales of Branded Products	Keith K. Cox	A randomized block field experiment for testing the influence of shelf space on sales of branded products.	1970

Compar-ative Studies	Metaheuristics with Local Search Techniques for Retail Shelf-Space Optimization	Andrew Lim, Brian Rodrigues, Xingwen Zhang	A practicable linear allocation model for optimizing shelf-space allocation and strategy that combines a strong local search with a metaheuristic approach to space allocation.	2004

Table1: Summary of Literature on Shelf Space Allocation in Retailing Industry

Crostjens and Doyle (1981) present a non linear model incorporating both demand and cost for determining optimal shelf space allocation solution. However, their model does not take into account integer nature of the shelf space allocated and hence the solution may become sub-optimal. Further their model is too complex mathematically to be used by practitioners in a real sense. Crostjens and Doyle (1983) present another strategic space allocation model which incorporates more factors than the previous one. They emphasize that profitable retail space allocation depends on changing customers' preferences, product life cycles of competing brands, and varying growth rates.

Yang and Chen (1999) present a space allocation model with an alternate form that is applicable in the retail practice. The model considers space elasticity, cross space brand elasticity, profit margin, and demand of individual brands for determining optimal solution of shelf space allocation for each brand. These authors also show that the retailers who adopted some strategy for shelf space allocation their performance is significantly different from the retailers who do not implement any strategy for shelf space management. They argue that shelf space management strategy affects performance through shelf space allocation operations.

In general the scholarly literature seems to have reached a consensus that shelf space management is a complex and dynamic problem. Most existing studies tend to avoid this complexity by focusing only on those variables which are not soft or by limiting number of variables to be addressed collectively. As a result the models thus developed become too simplistic to be practical or too hard to be solved. The current study develops a system dynamics model for solving the space allocation problem. The model incorporates important variables such as price and demand as highlighted by the literature review. The model also introduces new variables, such as education and income level, which were brought forward during interviews with concerned brand/shop managers in the store.

3. SYSTEM DYNAMICS (SD) MODEL

Research Site: An SD model is produced for a retail store of one of the most prominent shoe manufacturer and retailing firm in Pakistan. The firm owns more than 400 retail outlets that display many brands each having a number of categories. However, all the brands and categories are not displayed at each store. Display of a particular brand depends on the retailing strategy of a particular retail store. The stores also retail brands other than firm's own brands. However, those external brands capture less than ten percent of the total shelf space. For SD modeling purpose of the selected store either factual data related to the location of the store is taken or data based on the perception of brand/shop managers is used.

Research Scope: There are almost twenty brands competing for shelf space in the selected shoe retailing store. As one objective of this study is to test the use of SD for shelf space allocation decisions, it is considered that initially a simpler model that captures the essence of the problem is sufficient to be developed. Once the simpler SD model is developed and its benefits tested then a full scale model that incorporates all twenty brands can be developed for a more realistic analysis. Thus this study investigates the relationship of three brands with each other. For the sake of creating anonymity, these brands are denoted as ‘st’, ‘cc’, ‘ct’.

Research has identified a large number of variables that can play a role in shelf space management decisions. However, given the time constraint, it was difficult to incorporate all of them in this study. The variables that affect shelf space allocation decision and have been included in this study are described below. These variables have been identified in the previous literature in different studies and were brought forward by the interviewed brand managers. The system dynamics model thus developed is shown in Figure 1. IThink software, which was readily available to the researchers, was used for developing and analyzing the model.

The SD model shown in Figure 1 seems divided in four rectangles for enhancing visual understanding of the reader. The three boundary rectangles show stock and flow diagram for the three brands under study. The central rectangle models the switching phenomenon among brands by customers. Each rectangle show similar physical structure to model a brand. Figure 2 represents enlarged view of one representative physical structure of SD model for the brand ‘ct’. Figure 2 also shows customer’s switching portion of the model.

There are two stocks in Figure 2: ‘Cumulative demand of ct’; and ‘Pool’. ‘Cumulative demand of ct’ has two inflows and one outflow. The two inflows are ‘Demand rate of ct’, and ‘Sales which substitutes ct for some other brands’. The outflow from ‘Cumulative demand of ct’ is ‘customers who don’t buy ct’. ‘Demand rate of ct’ is a function of seven variables whose arrows are directed into it. Theoretical relationships of the seven incoming variables are explained in the later paragraphs. Mathematical relationships between ‘Demand rate of ct’ and the seven incoming variables are given in Appendix 2. ‘Sales which substitutes ct for other brands’ is a function of ‘Pool’ and it has positive relationship with it.

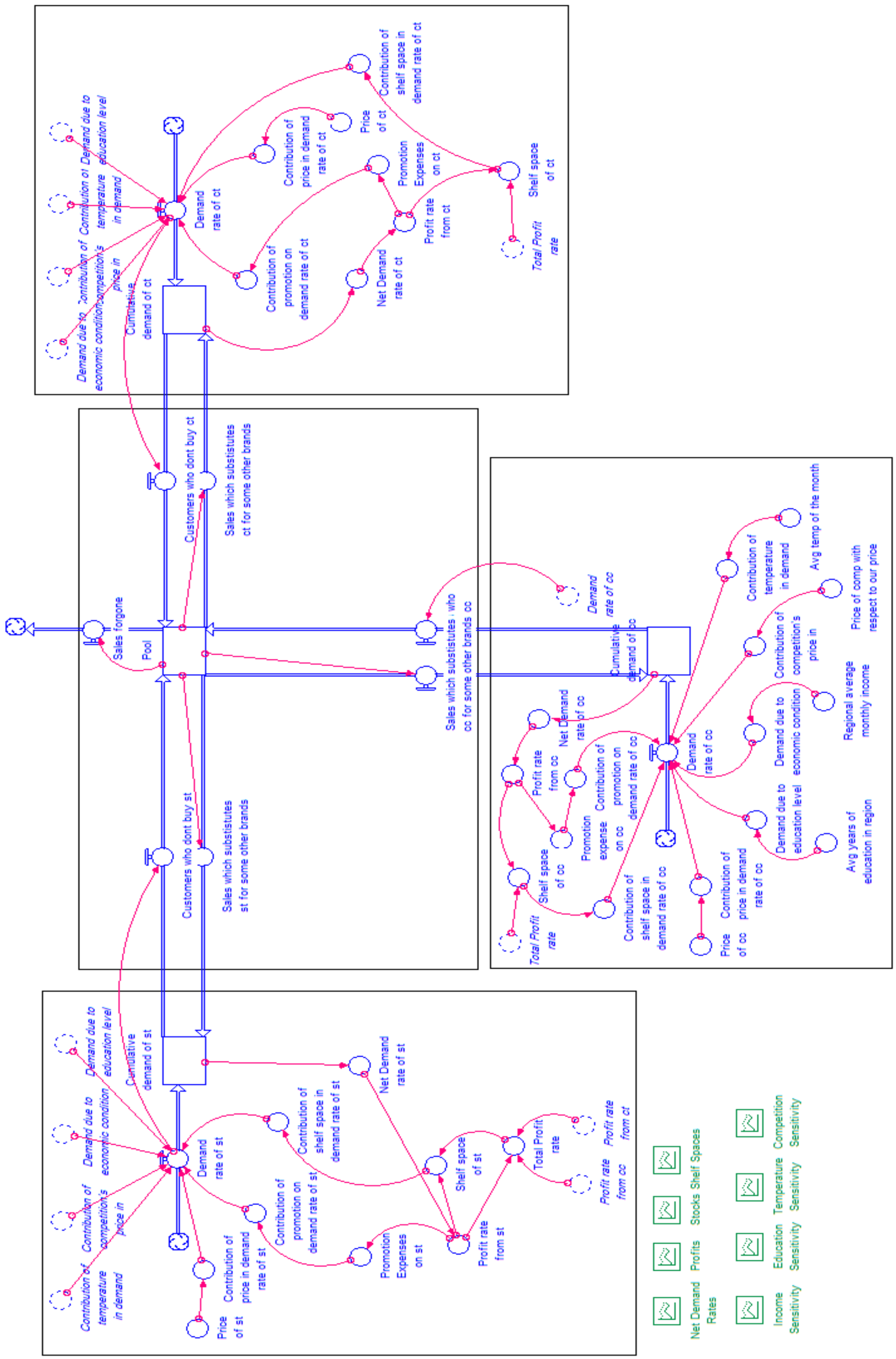

Figure 1. System Dynamics Model of the Shoe Retailing Store Developed in IThink

'Pool' has three inflows and four outflows. The three inflows are the rate of customers who want to switch from one brand to another and these are represented by inflows 'Customers who don't buy i', where 'i' may stand for one of the three brands. These three inflows increase 'Pool' and the four outflows decrease the level of 'Pool'. The four outflows are 'Sales forgone' and 'Sales which substitute i for some other brands'. 'Sales which substitute i for some other brands' are the three outflows of 'Loop' which contribute positively in the demand of other brands. Whereas there are some customers who come in the retail store and they do not like their first choice and are unwilling to substitute their choice with any of the other two brands and as a result they leave the retail store without making any purchase. Such customers are represented as 'Sales forgone'. Mathematical relationships between these variables are given in Appendix 2.

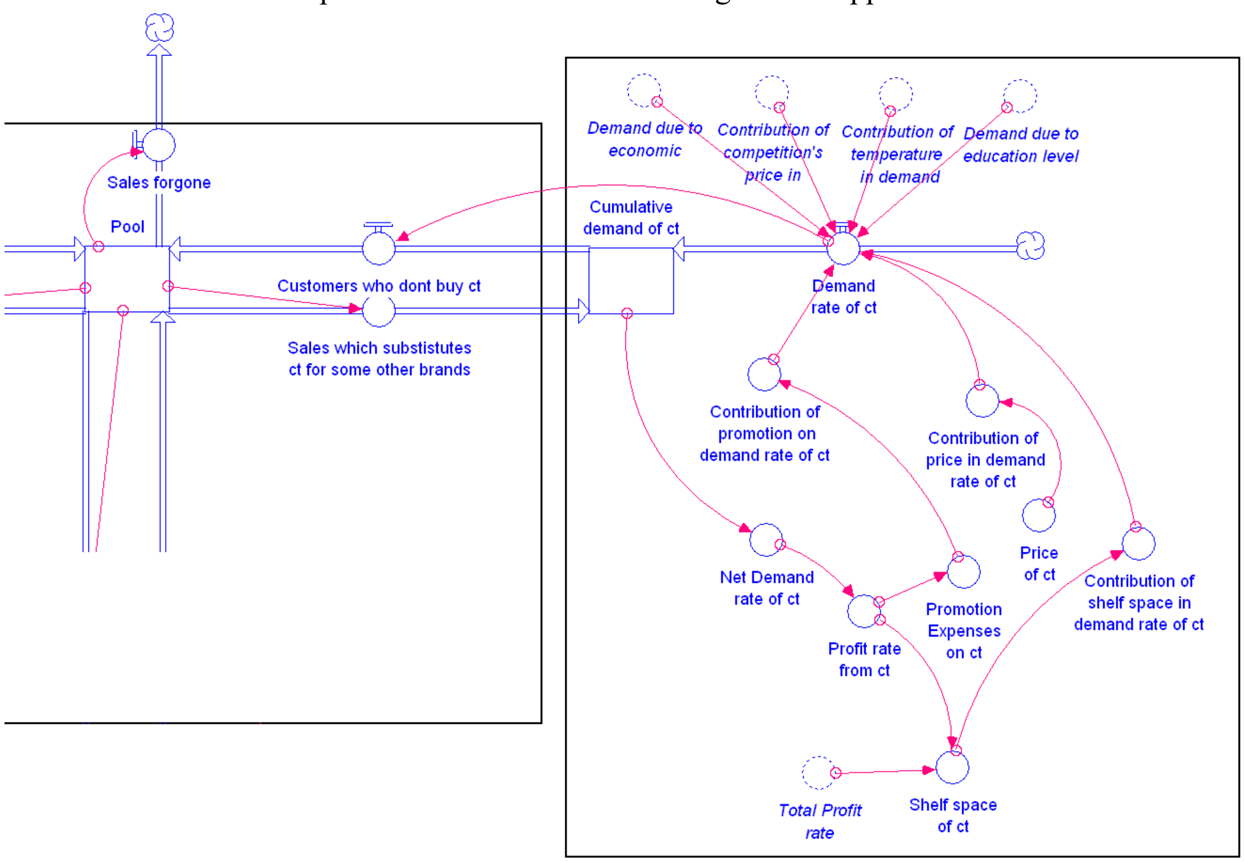

Figure 2. Stock and Flow Diagram of Brand 'ct'

Apart from the above mentioned variables which are directly influencing either stocks or inflows, there are some other variables that are indirectly affecting them. 'Net demand rate of ct' is first derivative of 'Cumulative demand rate of ct' and it helps in finding 'Profit rate from ct'. Some of the profit from 'ct' is spent on further promotion of the brand 'ct' and it is represented by 'Promotion expenses on ct'. 'Price of ct' negatively affects demand of 'ct'. Whereas 'Shelf space of ct' positively influences demand of 'ct' and the former is assigned on the basis of contribution of 'ct' in 'Total profit rate' and relationship between 'Shelf space of ct' and its impact on sales of 'ct'. Mathematical relationships between these variables are given in Appendix 2. Following subsections describe important variables used in previous research and their usage in the current model.

Product Space Elasticity: According to Curhan (1972) space elasticity is the ratio of relative change in unit sales to relative change in shelf space. Positive change in space allocated to a brand brings positive change in sales; however, this change may not be a linear function (see Appendix 2 for its relation with display space). This relationship has been developed after interviewing retailing manager. However, the values of product space elasticity have been assumed in this study.

Inter Product Space Elasticity: Sale of one brand can affect sale of another brand (Gillooley and Varley, 2001). However, the change in sale depends upon the relation of brands with each other, complement or substitute. When two brands complement each other, the increase in sale of one brand shall increase sale of the other brand. Whereas, in case where brands are substitute of each other, increased sale of one brand may result in decreased sale of substitutive brands. In the current study the selected brands are in general substitute of each other. The relationship of their substitution are put in the model after interviewing with the retailing manager and given in Appendix 2.

Operating Cost Elasticity: Marcel and Peter (1981) define operating cost elasticity function as the impact on operating cost by increased sales. As the sales of a particular brand increases, its fixed cost and even variable cost per unit of production may decrease. In the current study the relationship between sales and profit is assumed to be linear and the relationship for each brand is given in Appendix 2. The data on profit margin of each brand is taken from relevant brand manager. The relationship can be further refined after collecting relevant empirical data.

Total Shelf Space Available: Total shelf space is the maximum number facings that can be displayed in the store. Shelf space is measured in square feet or number of facing, depending on the implications of the model. In the current study the maximum number of facings that can be allocated to the three brands under consideration is 15. This number is specific to the retail store under study.

Upper and Lower Bounds of Brand Space Allocation: In the start of product life cycle, a brand's demand is low however with time it increases gradually. In order to promote a certain brand in the initial stage of product life cycle a minimum bound of display space for that brand can be fixed in the model. This feature may also be included when number of brands is large and one strategically wants to restrict the model from allocating all the space to one or few brands whose profit margins are the highest. Another rationale behind allocating upper bound is that generally beyond a certain amount of display, sale of a brand does not improve significantly and it may be suboptimal to give more space for display to that specific brand.

The values of upper and lower bound are decided very carefully because it is a restriction on the model while determining optimal solution. These values can be determined from empirical data. In the current model all of the brands are assumed to be in maturity stage of their product life cycles and all of them are strategically intended to compete on the basis of their profit contribution. Therefore, the feature of upper and lower bounds of space is not included in the current model.

Shelf Space/Display Space: Shelf space of each brand is the number of shoes that can be displayed for that brand. The maximum allowable shelf space for the three brands that we have selected in the study is 15. The number 15 is decided by the shop / brand manager. The shop / brand manager decides this number on the basis of the global optimal space allocation solution of the store. The global optimal of the retail store is determined on the basis of analysis of all the potential brands of a particular store. In this shoe retailing company the shop /brand managers usually allocate this number on the basis of their experience and team agreement. However, the model presented in this study can be extended for this purpose too.

Demographic Factors: The demographic factors of the location of the retail store affect on the sale of the different brands of the shoes. Based on the interviews with the brand managers two main demographic factors have been identified and included in the system dynamics model. These factors are average monthly income and education level of the potential customers which can be obtained from local government agencies in terms of monthly income and number of years of schooling respectively. The relationships between the sales of the three brands and average education and average monthly income are determined from interviews of the brand managers. These relationships are given in Appendix 2.

Environmental Factors: The environmental factors such as temperature and rainfall have potential to impact on the sale of shoe brands in a retail store. These factors depend upon the location of the retail store. Based on the interviews from the brand managers, temperature has been identified as a significant category that has direct influence on the demand/sale of the three brands of this study. The relationship between the sales of the brands and the average monthly temperature of location of the retail store are determined on the basis of previous years' sales and interviews with the relevant brand managers. The relationships are given in Appendix 2.

Price of the Competition: It is widely accepted in marketing literature that price of competitive brands is a direct threat on the sale of a brand. Therefore, impact of price of competition has been included in the current study. It is hard to determine the relationship between price of competitive brands and sale of the three brands used in the study. Interviews of brand managers are used for estimating the relationship between price of competition with respect to the price of the three brands and the sales of the three brands. The relationships are given in Appendix 2.

4. RESULTS OF THE SYSTEM DYNAMICS MODEL

The profit of the retail store depends on the sales and profit margins of all the brands in the store. Objective of the retailer is to seek and implement such combination of sales of different brands with varying profits that maximizes the retail store's total profit. In the current study, the term demand will be used synonymous to sale, which assumes that all the demand is met by the retail store and there is no stock out. In this SD model the graphical results shall be used to find out the values of shelf spaces to be allocated to the three brands when profit is at its maximum value.

Graphs 1-4 show behavior of the important variables in the SD model. These graphs indicate that there is disturbance in the model in the early parts of the graphs. However, the model becomes noticeably stable after time 7.5. Therefore, the values of the variables after time 7.5 are more meaningful for the current study's objectives.

Graph 1 shows the relationship between net demand rates of the three brands and total profit rate. Net demand rates are monthly sales of the each brand and total profit rate is the total profit per month from sales of the three brands. The graph indicates that net demand rate of 'st' is more than 'ct', which in turn is more than the demand rate of 'cc'. These results reasonably match with anticipated demand. The price of 'st' is less than 'ct' and the price of 'ct' is less than that of 'cc'. Generally, such relationship of price produces similar sales results. Other variables such as, expenses on promotion, brand elasticity, and brand substitutability also show theoretical harmony with the graphical results of Graph 1. The comparison of the net profit rates of the three brands is shown in Graph 2. The relationship between the net profit rates show congruity with the values of their net demand rate and respective profit margins. Values of both net demand rate and profit margin of 'st' are higher than the both respective values of 'ct' individually. Similarly, values of both net demand rate and profit margin of 'ct' are higher than the respective values of 'cc'. Hence the comparison shown in Graph 4 rightly predicts that the profit rate of 'st' is more than that of 'ct' and the profit rate of 'ct' is more than that of 'cc'.

Graph 3 shows the comparison of the accumulated sales of the three brands and their relationship with the total profit rate. Accumulated sales of the three brands are represented in the form of stocks in the system dynamics model. The graph indicates that the accumulated demands are increasing as the time passes, which is a reasonable relationship. Total profit rate is sum of monthly profits from three brands under study. When the system becomes stable, which is after time 7.5, the accumulated demands of each brand are increasing with a constant slope. As a result the total profit rate has become almost constant after this time period, which is also a reasonable relationship between accumulated sales and the total profit rate of the retail store.

5. SENSITIVITY ANALYSIS OF THE SYSTEM DYNAMICS MODEL

In the current study four regional variables have been incorporated in the system dynamics model: average monthly income of the a household around the retailing store; average education level of the target customers; average monthly temperature of the region where the retailing store is located; and price of the brands with respect to the price of competition. The model shows an acceptable level of accuracy and sensitivity in its results when values of these variables are changed. The graphs showing sensitivity of these variables are given in Appendix 1.

Sensitivity for Average Monthly Income: The model shows reasonable (corroborated by the interviewed brand managers) sensitivity towards average monthly income of household around the retailing store. The sensitivity of the model towards this variable is shown in Graphs 5-7. When the value of average monthly income varies from PKR 2000 to PKR25000 to PKR 50000, setting the other variables of the model constant, the value of total profit of the retail store from the three brands varies from PKR 338000 to PKR 399000 to PKR 465000 respectively. The graphs show that when location of the retail store is changed from low level of monthly income to higher level sales of the retail store also increases.

Sensitivity for Average Education Level: The model shows reasonable (corroborated by the interviewed brand managers) sensitivity towards average education level of the potential customers of the retailing store. The sensitivity of the model towards this variable is shown in

Graphs 8-10. These graphs show the change in purchasing decisions of the shoe buyers with the change in their education level. When the value of average education level varies from 2 years to 5years to 10 years, setting the other variables of the model constant, the value of total profit of the retail store from the three brands varies from PKR 351000 to PKR 375000 to PKR 415000 respectively. The demand of the brands increases with the increase in the average education level of the potential customers of the shoe store. Such behavior is corroborated by the brand managers. According to the brand managers the selected brands are liked by more educated people.

<u>Sensitivity for Average Monthly Temperature:</u> The model shows reasonable (corroborated by the interviewed brand managers) sensitivity towards average monthly temperature of region where the retailing store is located. The value of average monthly temperature generally varies from 12 °C to 35 °C. The sensitivity of the model towards this variable is shown in Graphs 11-13. When the value of average monthly temperature varies from 12 °C to 23 °C to 35 °C, setting the other variables of the model constant, the value of total profit of the retail store from the three brands varies from PKR 379000 to PKR 406000 to PKR 435000 respectively. Demand of some of the brands of the shoes is weather sensitive. Demand of the selected brands is highest during summer and the same pattern is reflecting in the graphs 11-13.

<u>Sensitivity for Price of Competition:</u> The model shows reasonable (corroborated by the interviewed brand managers) sensitivity towards price of competition. When price of the competition increases, sales of the three brands also increases and vice versa. The sensitivity of the model towards this variable is shown in Graphs 14-16. When the value of ration between the price of the competition and the prices of three varies from 0.1 to 1 to 1.9, setting the other variables of the model constant, the value of total profit of the retail store from the three brands varies from PKR 240000 to PKR 419000 to PKR 598000 respectively.

6. CONCLUSION AND FUTURE RESEARCH
7.

The desired output of the model is the optimal space allocation scheme for the case-study retail store specific conditions. Graph 4 shows the relationship between shelf spaces allocated to each brand and the total profit rate. Our objective is to find those values of shelf spaces of each brand at which the total profit rate is maximum. It is clear from the graph that from time 7.5 onwards the value of total profit rate has reached its maximum value and is almost constant. The values of shelf spaces of 'st', 'ct', and 'cc' from time 7.5 onwards are 7, 5, and 3 respectively. Hence, these values of shelf spaces are optimal values that yield maximum profit from the three brands with the given store specific parameters incorporated in the model. These values may change if values of other store specific variables such as, education level and brand specific values such as, shelf space elasticity are changed.

Potential users of the model are shop/brand managers or the personnel who want to find out the optimal space allocation scheme for the competing brands. Inputs of the model are generally available to the brand/shop managers. The approach used in the current study can be used in many other retailing sectors, such as GMCG, electronic goods, and food industry. The model developed so far has some limitations which can be addressed in future research.

The data used in this study is largely based on managerial experience and perception. The relationships between the variables in the model can be further refined by collecting empirical data.

All areas in the store do not have same potential of getting customers' attention and contribution in sales. Therefore, the retailer has to decide that which brand is to be displayed at which place. The current model has not incorporated this aspect so far. Future research can further the model by building its capability to handle varying potential of shelf space.

The model developed in this study assumes that profit margin and operating cost is a linear function of sales/demand, which may not be a reasonable assumption. Future research can be conducted for incorporating such non-linear relationship between demand/sales and profit margin.

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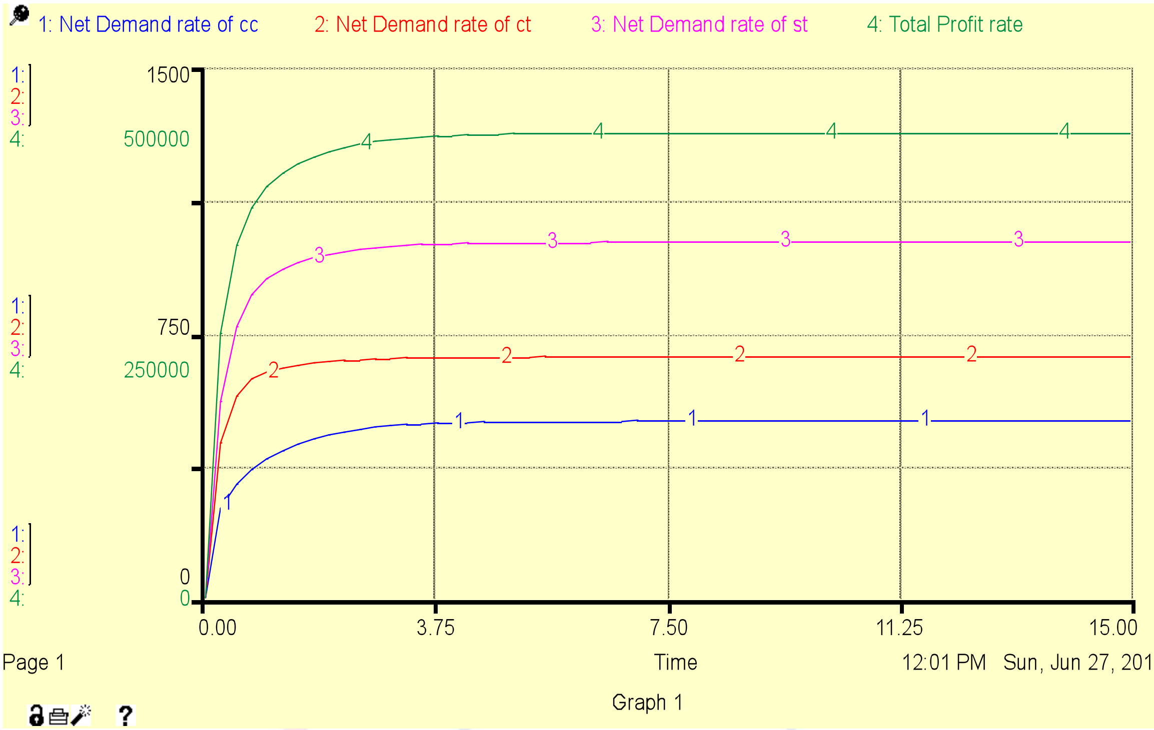
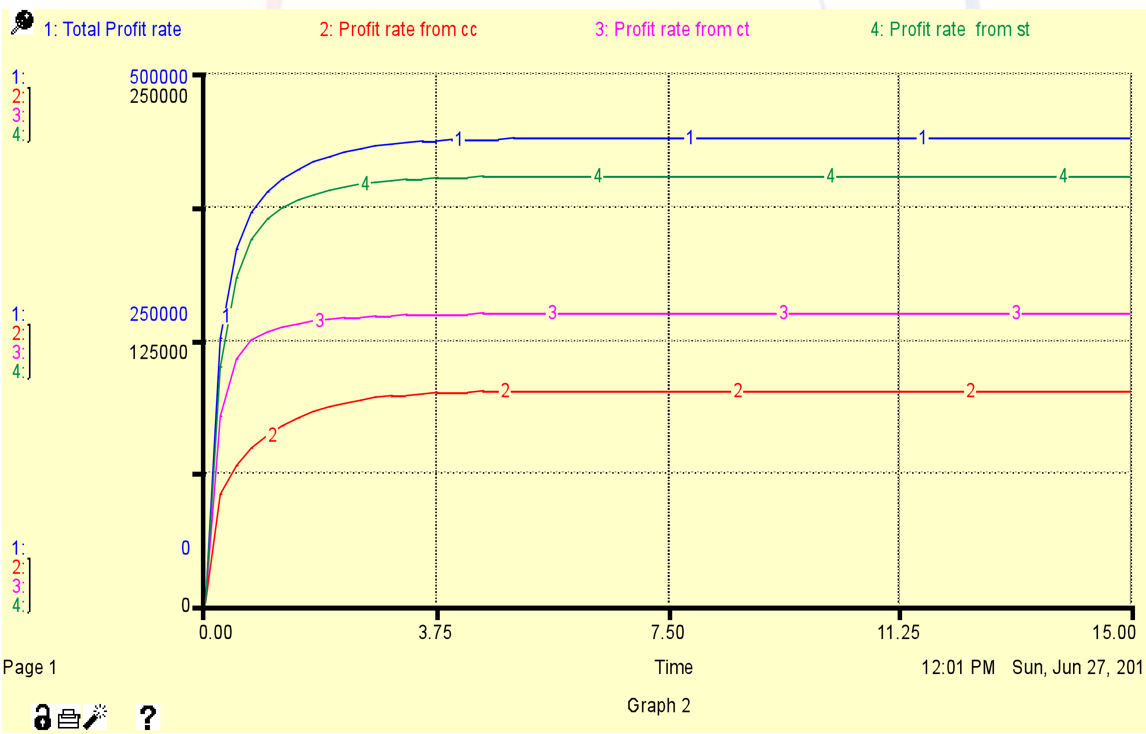
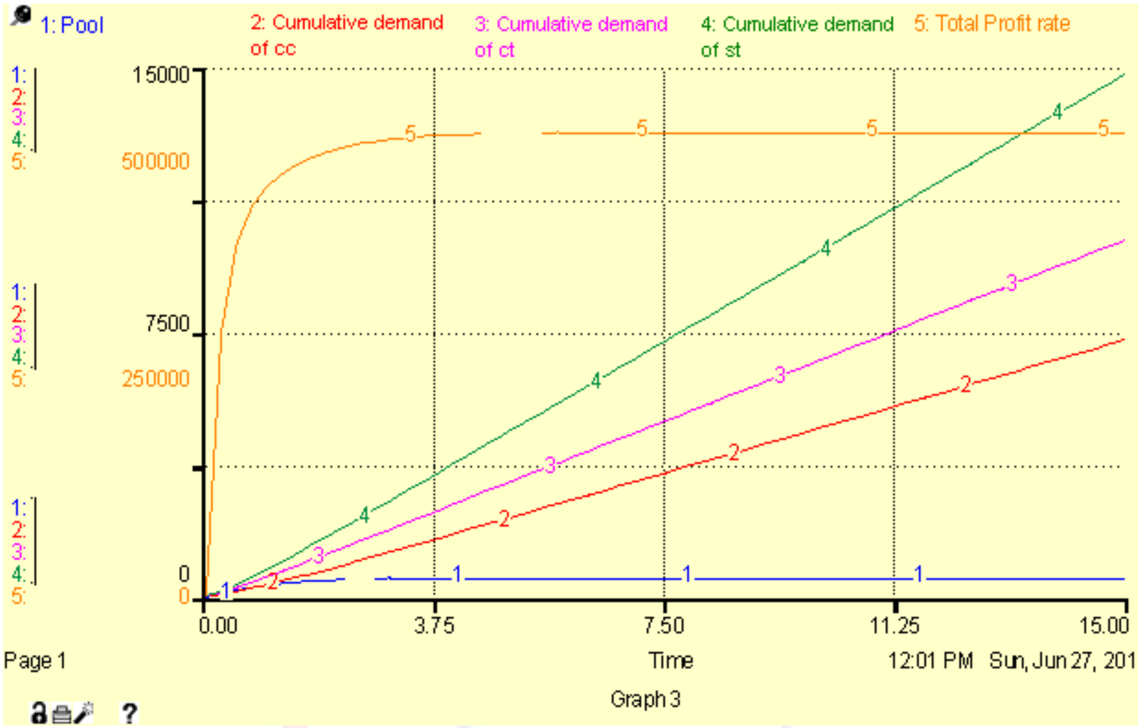
Appendix 1



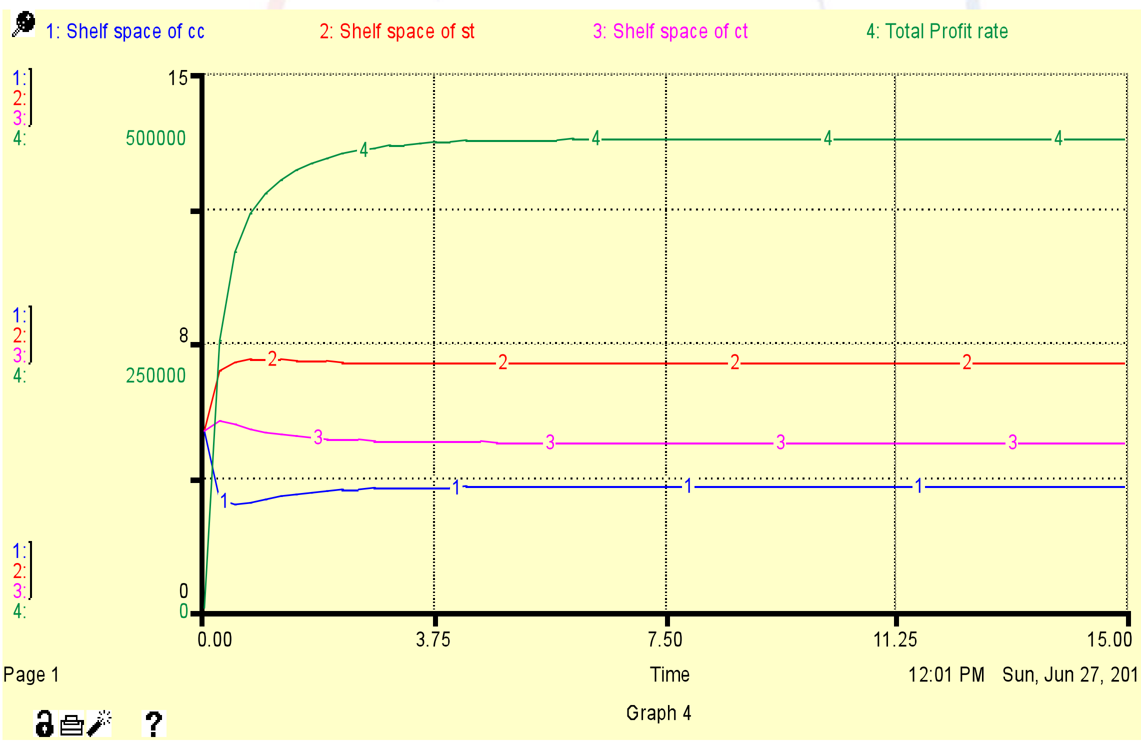
Graph 1. Net Demand Rates of Brands



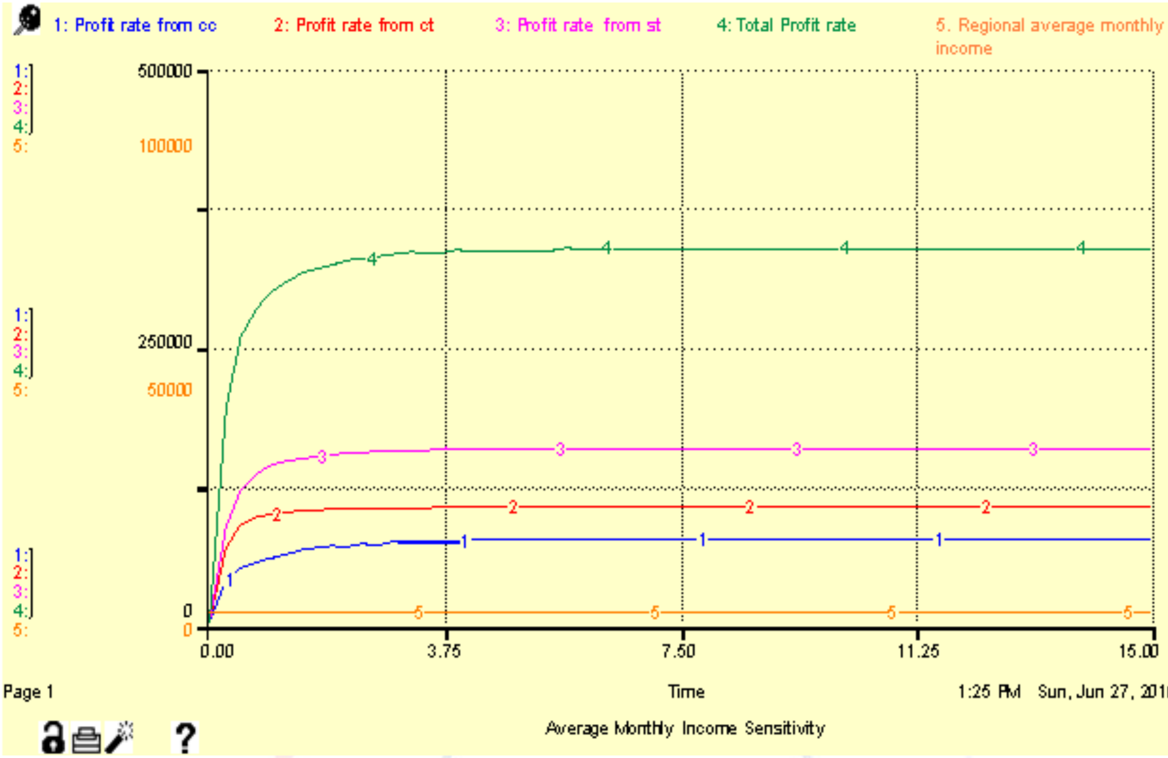
Graph 2. Profit Rates of the Three Brands



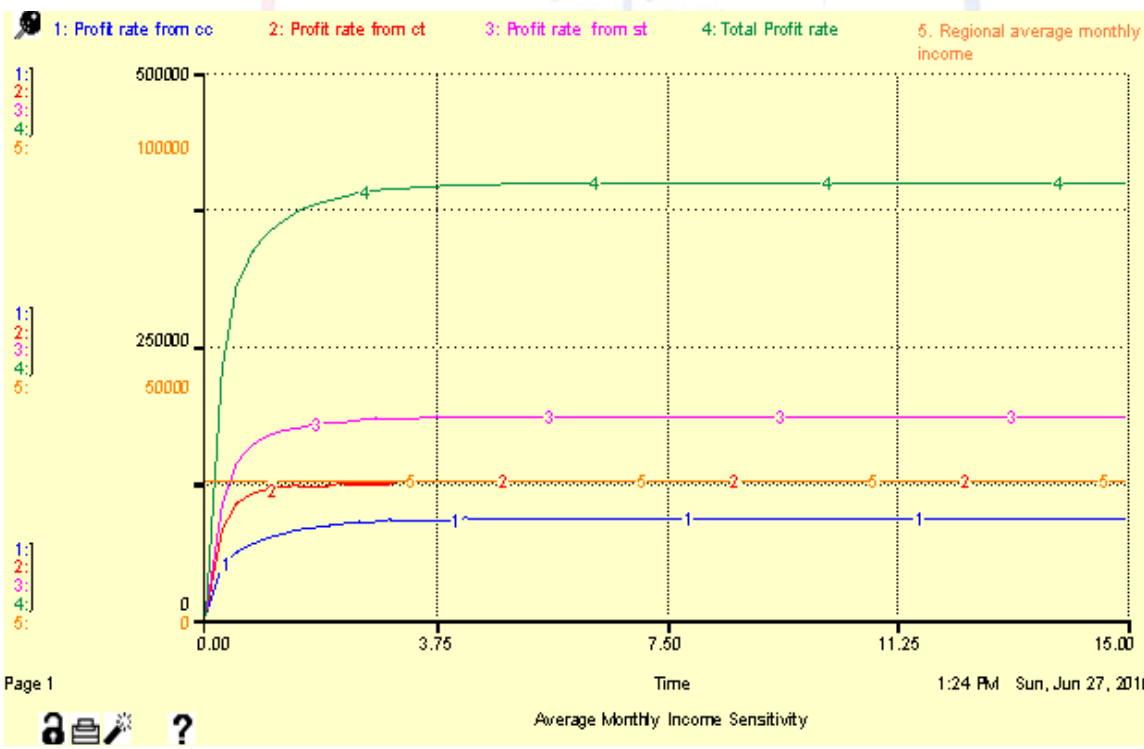
Graph 3. Cumulative Demands



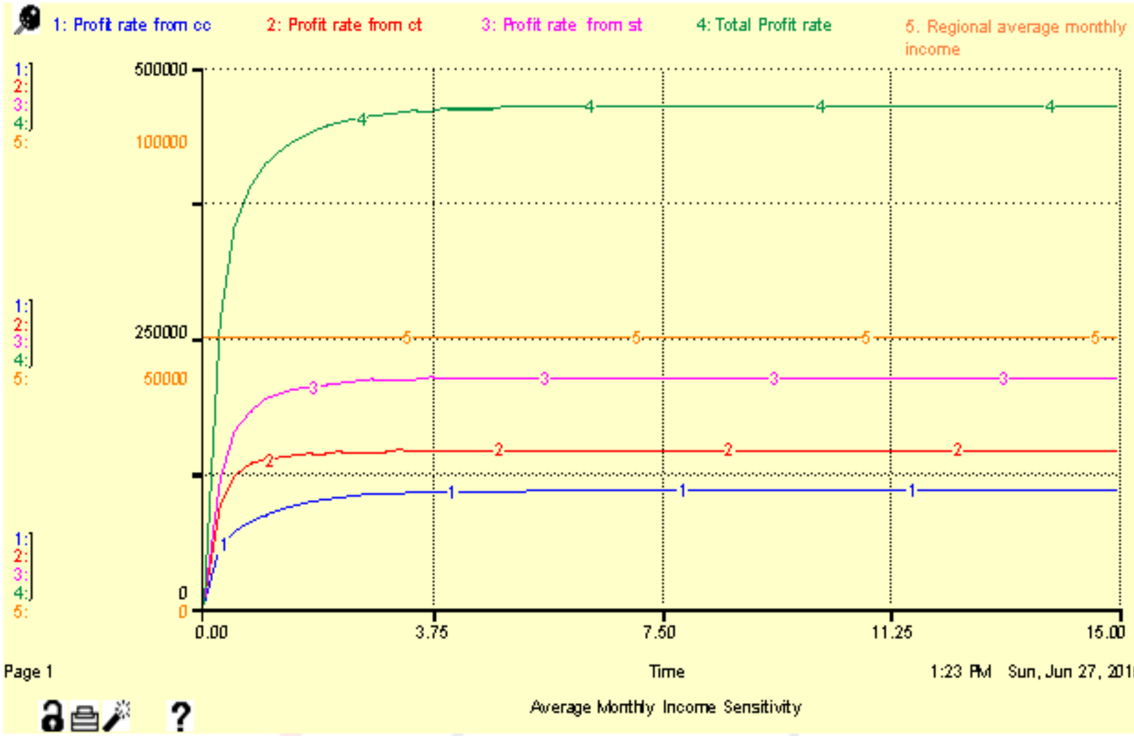
Graph 4. Shelf Spaces and Total Profit Rates



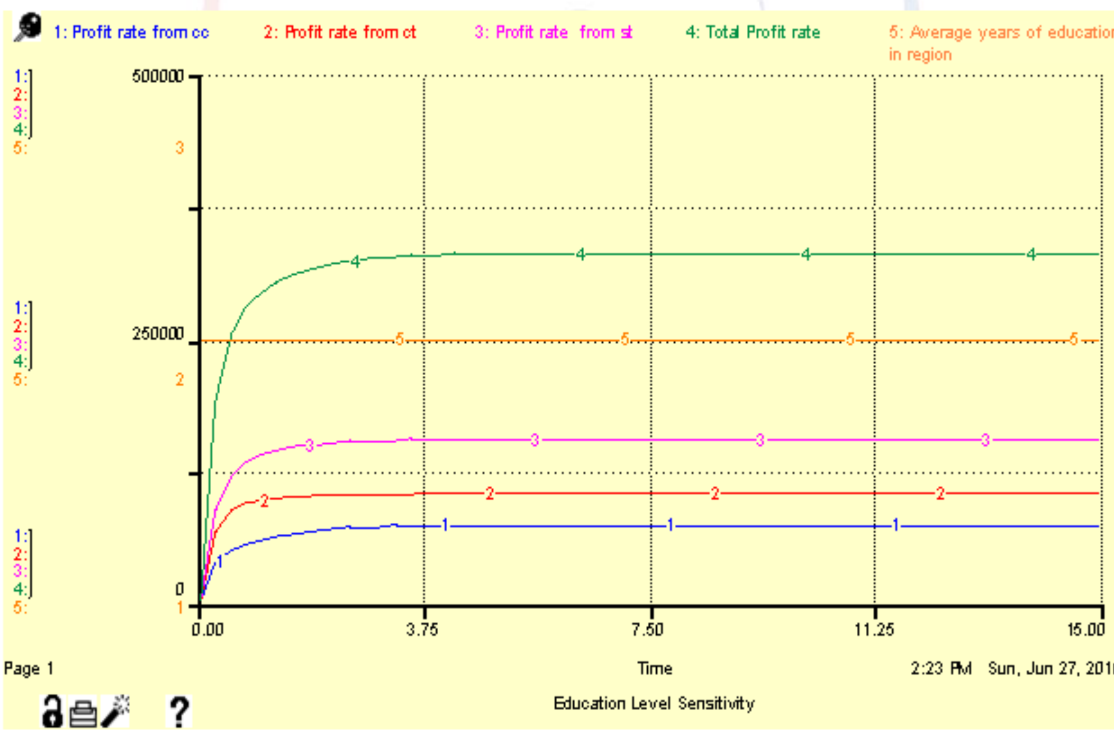
Graph 5. Sensitivity for Average Monthly Income (PKR 2000)



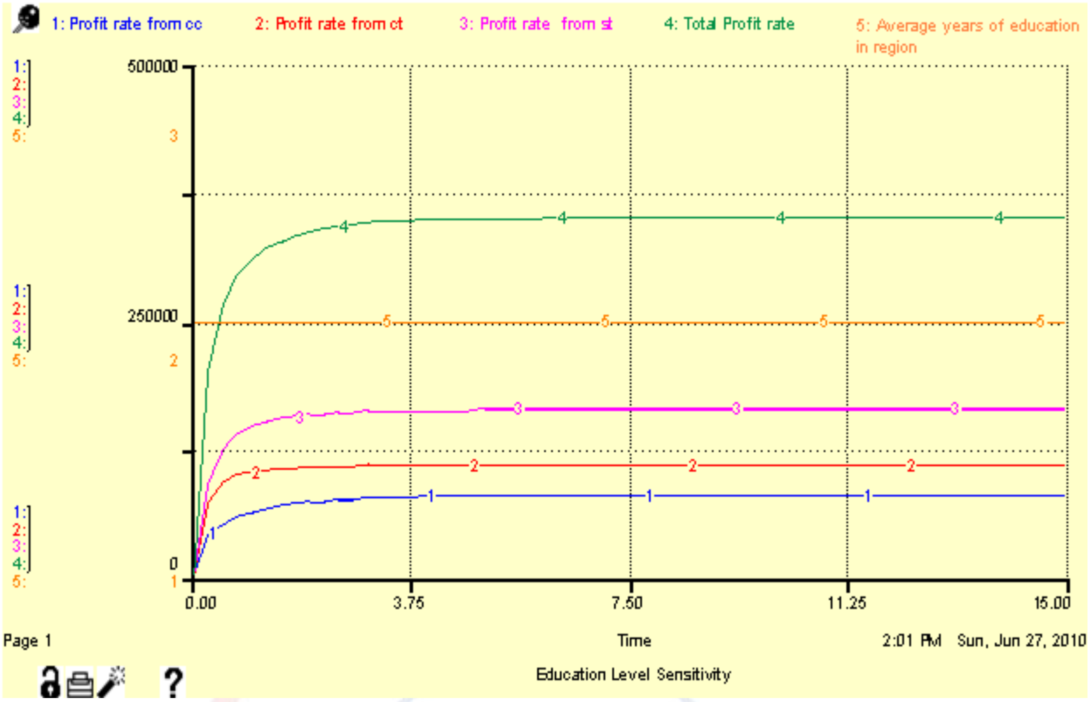
Graph 6. Sensitivity for Average Monthly Income (PKR 25000)



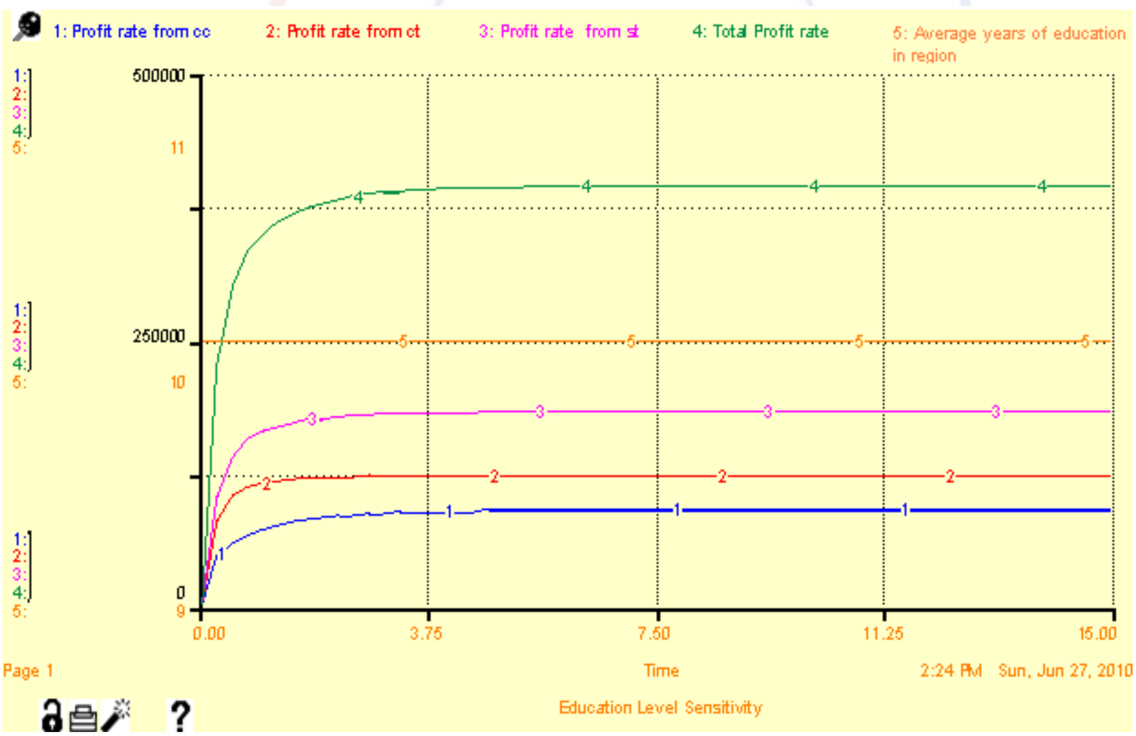
Graph 7. Sensitivity for Average Monthly Income (PKR 50000)



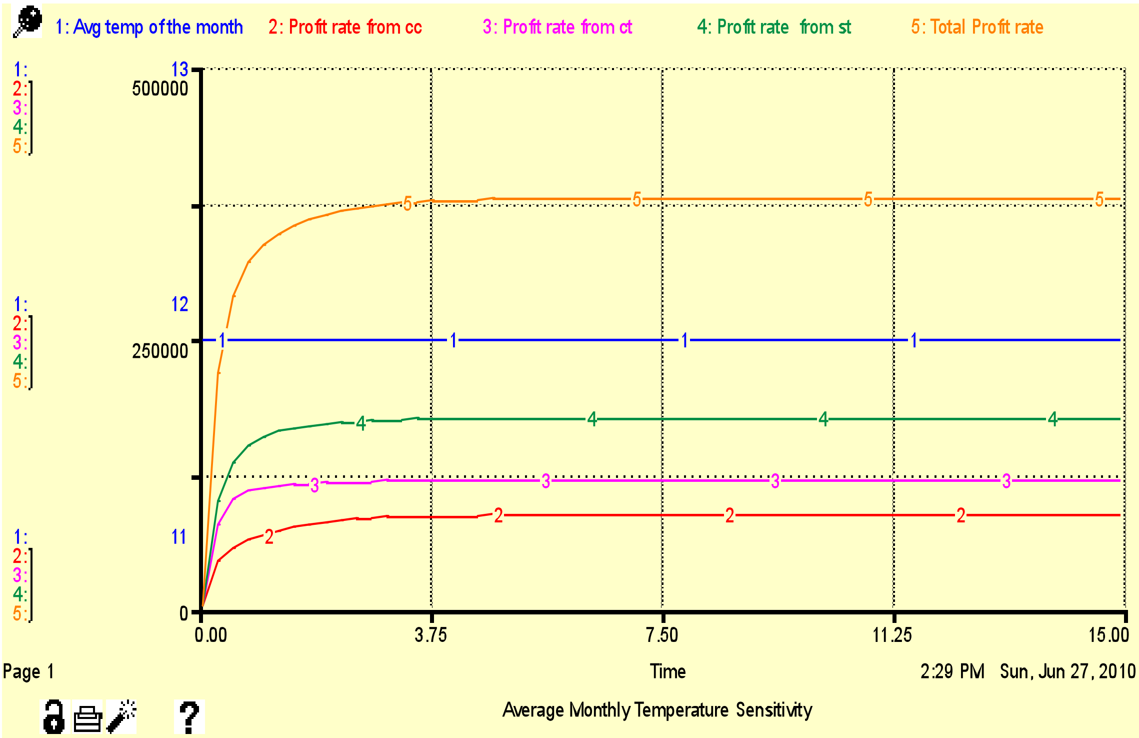
Graph 8. Sensitivity for Average Education Level (2 Years)



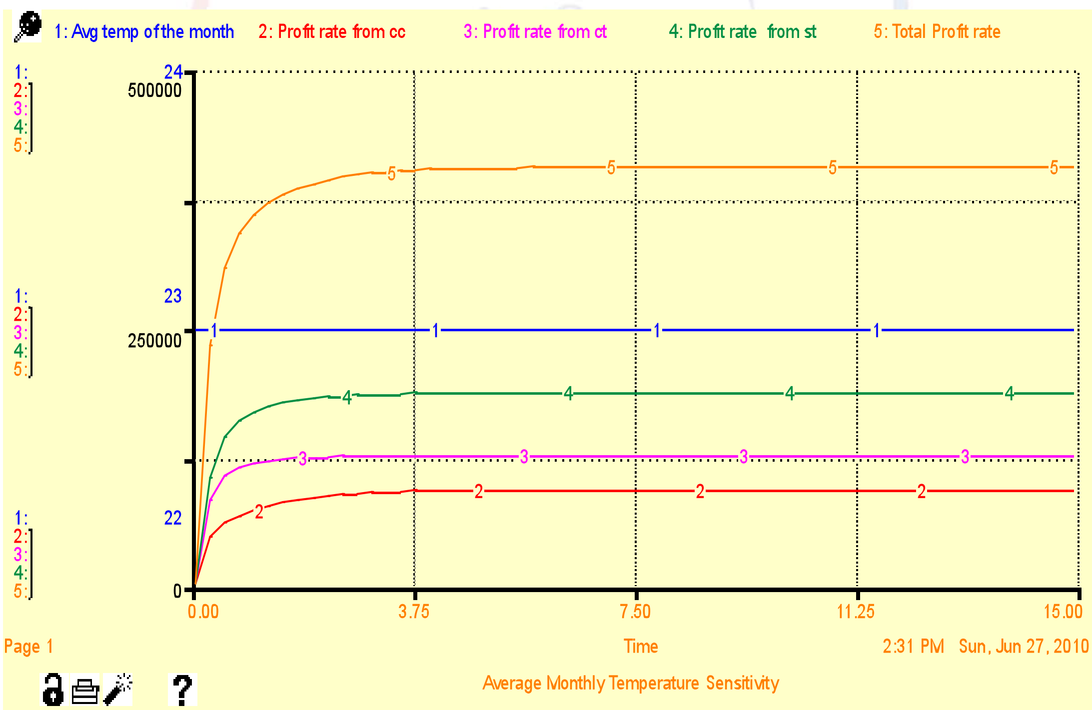
Graph 9. Sensitivity for Average Education Level (5 Years)



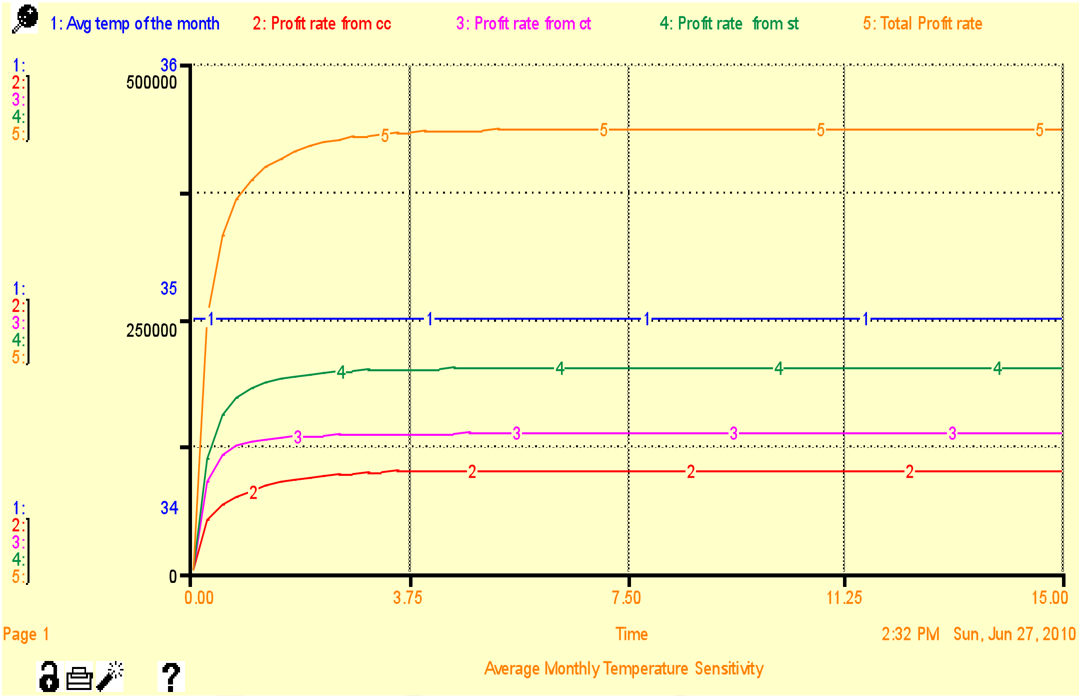
Graph 10. Sensitivity for Average Education Level (10 Years)



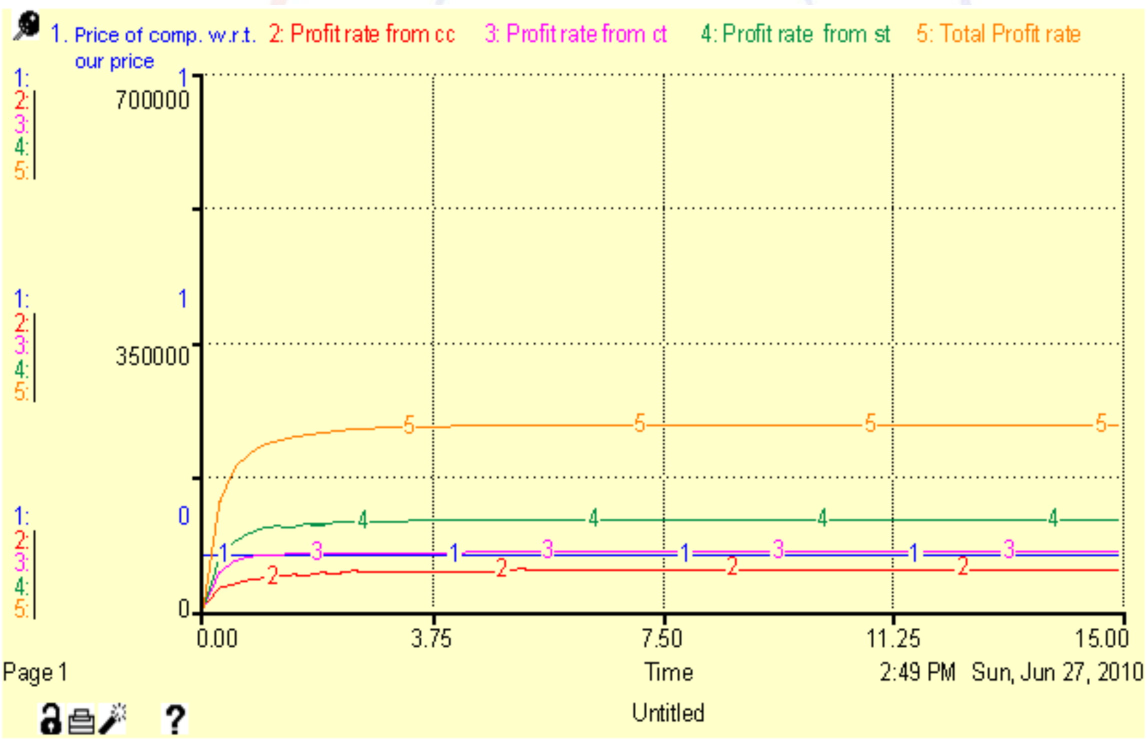
Graph 11. Sensitivity for Average Monthly Temperature (12℃)



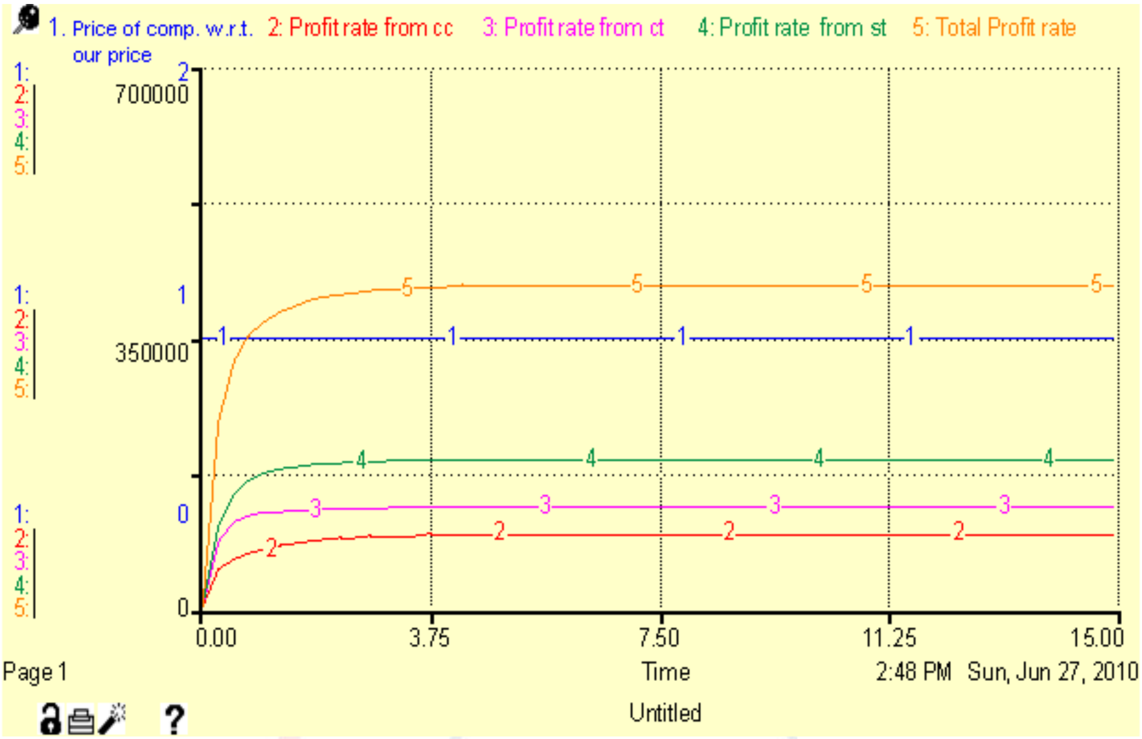
Graph 12. Sensitivity for Average Monthly Temperature (23℃)



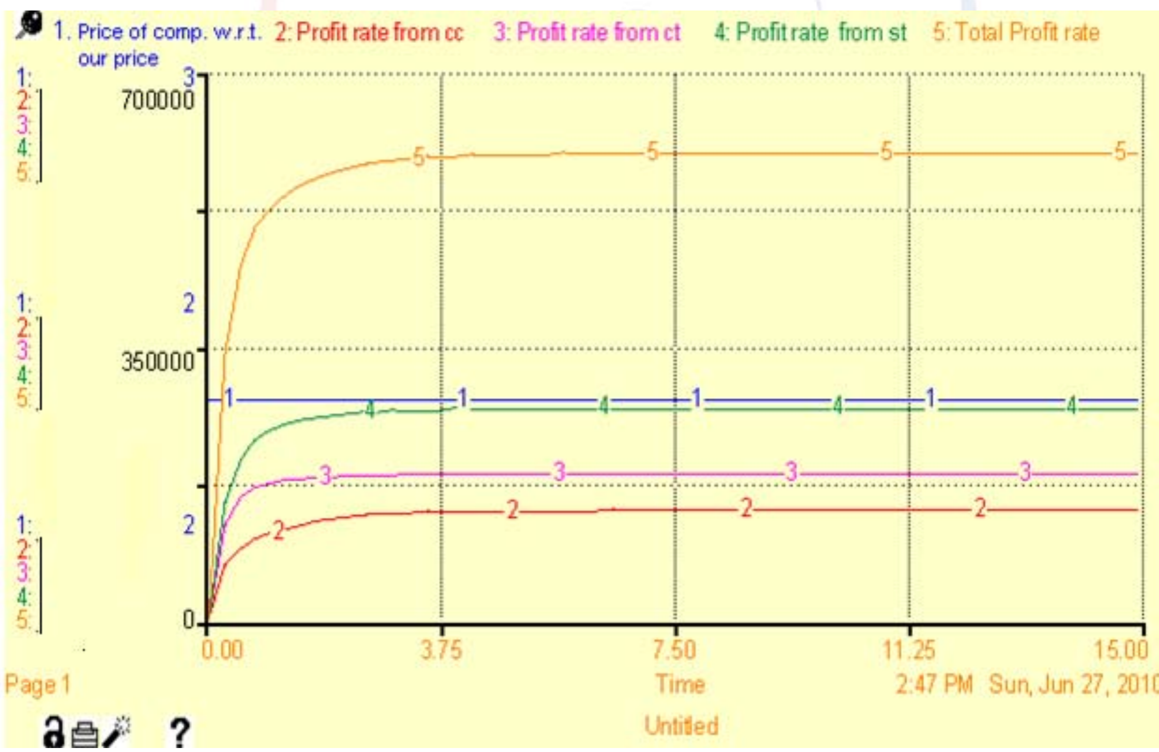
Graph 13. Sensitivity for Average Monthly Temperature (35℃)



Graph 14. Sensitivity for Price of Competition (0.1)



Graph 15. Sensitivity for Price of Competition (1)



Graph 16. Sensitivity for Price of Competition (1.9)

Appendix 2

STOCK: CUMULATIVE DEMAND OF CC

Cumulative_demand_of_cc(t) = Cumulative_demand_of_cc(t - dt) + (Demand_rate_of_cc + Sales_which_substistutes_cc_for_some_other_brands - Customers_who__dont_buy_cc) * dt
INIT Cumulative_demand_of_cc = 1
UNITS: Pairs

INFLOWS:
Demand_rate_of_cc =
Contribution_of__competition's__price_in__demand+Demand_due_to__education_level+Demand_due_to__economic_condition+Contribution_of__price_in_demand__rate_of_cc+Contribution_of__promotion_on__demand_rate_of_cc+Contribution_of__shelf_space_in__demand_rate_of_cc+Contribution_of__temperature__in_demand
UNITS: pairs/time
Sales_which_substistutes_cc_for_some_other_brands = 0.3*Pool
UNITS: pairs/time

OUTFLOWS:
Customers_who__dont_buy_cc = 0.5*Demand_rate_of_cc
UNITS: pairs/time

STOCK: CUMULATIVE DEMAND OF CT

Cumulative_demand_of_ct(t) = Cumulative_demand_of_ct(t - dt) + (Sales_which_substistutes_ct_for_some_other_brands + Demand_rate_of_ct - Customers_who_dont_buy_ct) * dt
INIT Cumulative_demand_of_ct = 1
UNITS: Pairs

INFLOWS:
Sales_which_substistutes_ct_for_some_other_brands = 0.1*Pool
UNITS: pairs/time
Demand_rate_of_ct =
Contribution_of__competition's__price_in__demand+Demand_due_to__education_level+Demand_due_to__economic_condition+Contribution_of__price_in_demand__rate_of_ct+Contribution_of__promotion_on__demand_rate_of_ct+Contribution_of__temperature__in_demand+Contribution_of__shelf_space_in__demand_rate_of_ct
UNITS: pairs/time

OUTFLOWS:
Customers_who_dont_buy_ct = 0.2*Demand_rate_of_ct
UNITS: pairs/time

STOCK: CUMULATIVE DEMAND OF ST

Cumulative__demand_of_st(t) = Cumulative__demand_of_st(t - dt) + (Sales_which_substistutes_st_for_some_other_brands + Demand__rate_of_st - Customers_who_dont_buy_st) * dt
INIT Cumulative__demand_of_st = 1
UNITS: Pairs

INFLOWS:
Sales_which_substistutes_st_for_some_other_brands = 0.2*Pool
UNITS: pairs/time
Demand__rate_of_st = Contribution_of__competition's__price_in__demand+Demand_due_to__education_level +Demand_due_to__economic_condition+Contribution_of__price_in_demand__rate_of_st+Contribution_of__promotion_on__demand_rate_of_st+Contribution_of__shelf_space_in__demand_rate_of_st+Contribution_of__temperature__in_demand
UNITS: pairs/time

OUTFLOWS:
Customers_who_dont_buy_st = 0.05*Demand__rate_of_st
UNITS: pairs/time

STOCK: POOL

Pool(t) = Pool(t - dt) + (Customers_who__dont_buy_cc + Customers_who_dont_buy_ct + Customers_who_dont_buy_st - Sales_which_substistutes_st_for_some_other_brands - Sales_which_substistutes_ct_for_some_other_brands - Sales_forgone - Sales_which_substistutes_cc_for_some_other_brands) * dt
INIT Pool = 0
UNITS: Pairs

INFLOWS:
Customers_who__dont_buy_cc = 0.5*Demand_rate_of_cc
UNITS: pairs/time
Customers_who_dont_buy_ct = 0.2*Demand_rate_of_ct
UNITS: pairs/time
Customers_who_dont_buy_st = 0.05*Demand__rate_of_st
UNITS: pairs/time

OUTFLOWS:
Sales_which_substistutes_st_for_some_other_brands = 0.2*Pool
UNITS: pairs/time
Sales_which_substistutes_ct_for_some_other_brands = 0.1*Pool
UNITS: pairs/time
Sales_forgone = 0.4*Pool
UNITS: pairs/time
Sales_which_substistutes_cc_for_some_other_brands = 0.3*Pool
UNITS: pairs/time

CONVERTERS:

Avg_temp_of_the_month = 20
UNITS: degC
Avg_years_of__education_in_region = 8
UNITS: yr
Contribution_of__competition's__price_in__demand = -275+250*Price_of_comp_with_respect_to_our_price
UNITS: pairs/time
Contribution_of__price_in_demand__rate_of_cc = 505-0.5*Price_of_cc
UNITS: pairs/time
Contribution_of__price_in_demand__rate_of_ct = 505-0.5*Price_of_ct
UNITS: pairs/time
Contribution_of__price_in_demand__rate_of_st = 505-0.5*Price_of_st
UNITS: pairs/time
Contribution_of__promotion_on__demand_rate_of_cc = -5+0.035*Promotion__expenses__on_cc
UNITS: pairs/time
Contribution_of__promotion_on__demand_rate_of_ct = -5+0.035*Promotion_Expenses_on_ct
UNITS: pairs/time
Contribution_of__promotion_on__demand_rate_of_st = -5+0.035*Promotion_Expenses_on_st
UNITS: pairs/time
Contribution_of__shelf_space_in__demand_rate_of_cc = 10+5*Shelf_space_of_cc
UNITS: pairs/time
Contribution_of__shelf_space_in__demand_rate_of_ct = 19+6*Shelf_space_of_ct
UNITS: pairs/time
Contribution_of__shelf_space_in__demand_rate_of_st = 16+4*Shelf_space_of_st
UNITS: pairs/time
Contribution_of__temperature__in_demand = 15.9+3.09*Avg_temp_of_the_month
UNITS: pairs/time
Demand_due_to__economic_condition = 20+0.0033*Regional_average__monthly_income
UNITS: pairs/time
Demand_due_to__education_level = 40+10*Avg_years_of__education_in_region
UNITS: pairs/time
Net_Demand_rate_of_cc = MAX(DERIVN(Cumulative_demand_of_cc,1), 0.0001)
UNITS: pairs/time
Net_Demand_rate_of_ct = MAX(DERIVN(Cumulative_demand_of_ct,1), 0.0001)
UNITS: pairs/time
Net_Demand_rate_of_st = MAX(DERIVN(Cumulative__demand_of_st,1), 0.0001)
UNITS: pairs/time
Price_of_cc = 650
UNITS: PKR
Price_of_comp_with_respect_to_our_price = 0.1
Price_of_ct = 600

UNITS: PKR
Price_of_st = 500
UNITS: PKR
Profit_rate_from_cc = Net_Demand_rate_of_cc*200
UNITS: PKR/time
Profit_rate_from_ct = Net_Demand_rate_of_ct*200
UNITS: PKR/time
Profit_rate__from_st = 200*Net_Demand_rate_of_st
UNITS: PKR/time
Promotion_Expenses_on_ct = 0.05*Profit_rate_from_ct
UNITS: PKR/time
Promotion_Expenses_on_st = 0.05*Profit_rate__from_st
UNITS: PKR/time
Promotion__expenses__on_cc = 0.05*Profit_rate_from_cc
UNITS: PKR/time
Regional_average__monthly_income = 25000
UNITS: PKR/time
Shelf_space_of_cc = 15*Profit_rate_from_cc/Total_Profit_rate
UNITS: Facings
Shelf_space_of_ct = 15*Profit_rate_from_ct/Total_Profit_rate
UNITS: Facings
Shelf_space_of_st = 15*Profit_rate__from_st/Total_Profit_rate
UNITS: Facings
Total_Profit_rate = Profit_rate_from_cc+Profit_rate_from_ct+Profit_rate__from_st
UNITS: PKR/time

Notice

Further information on the System Dynamics model (model equations) and subsequent steps of model development are available on request.

Supply Chain Collaboration and Integration in India's FMCG Retail Sector

Arpita Khare
Associate Professor, LDC Institute of Management,
Allahabad, India
[9 JL Nehru Road, Allahabad 211 002, India / email: khare.arpita@gmail.com]

Anshuman Khare (Corresponding author)
Professor, Athabasca University,
St. Albert, Canada
[301-22 Sir Winston Churchill Avenue, St. Albert AB T8N 1B4, Canada / email: anshuman@athabascau.ca / ph: 1-780-4187533]

Abstract

The Indian retail industry has been dominated by approximately 12 million small shopkeepers who can be categorized as 'mom and pop' stores. They provide employment to about 21 million people. Increasing competition have made companies understand the significance of this unorganized small retail industry and therefore, coordinating their downstream supply chains has become a priority. This is coupled with the belief that close monitoring of supply chain is possible with integration not only across the organizational silos but also between companies. To retain and expand their market shares and ensure competitive advantage in a crowded market, effective management of downstream supply chain and integration with small retailers enhances opportunities for success.

The paper examines the supply chain coordination of major FMCG manufacturing multi-national companies with the unorganized small retail sector in India. The main findings of the research confirm that supply chain integration, information sharing and supply chain design are being given proper attention by FMCG companies. They understand the strategic value in the need to establish collaborations with the small retailers for effective supply chain management. Even in the fragmented, ill-defined, unorganized and disjointed small retail sector in India, information sharing between supply chain partners is given precedence. Lack of technological infrastructure does not deter MNCs from establishing information linkages with small retailers and harnessing it for supply chain efficiency.

Keywords: Small retailers, Supply chain integration, information sharing with suppliers, information sharing with customers, supply chain design, fast moving consumer goods (FMCG) sector, India.

Supply Chain Collaboration and Integration in India's FMCG Retail Sector

Arpita Khare
Associate Professor, LDC Institute of Management,
Allahabad, India

Anshuman Khare
Professor, Athabasca University,
St. Albert, Canada

Introduction

Increased competition and desire to build competitive advantage, has driven companies to reengineer their supply chain networks and link them into a web of mutual profitable relationships. The thrust towards supply chains integration and information sharing has increased pressure on supply chain partnerships. Cassivi (2006) posits that the growth of collaborative approach in the global supply chain environment has changed radically with the initiation of the concept of integration and outsourcing. Attaran and Attaran, (2007) state that collaboration and coordination amongst suppliers and company is vital for managing global supply networks. The efficient performance of supply chains is closely linked to the degree of integration within the supply chain members (Armistead and Mapes, 1993).

In developing countries like India, companies are placing emphasis on integration and coordination between upstream and downstream supply chain members. It means expanding supply chain network and cultivating relationships across supply chain silos. It entails managing and coordinating inter-firm relationships and functions (Malone and Crowston, 1994) for efficient supply chain operations (Lewis and Talalayevsky, 1997). Akkermans et al. (1999), posit that supply chains include different organizations with multiple echelons. The challenge for global supply chains is to manage supply chain relationships and cater to customer needs efficiently. The goal of supply chains is to competently fulfill the needs of the customers and contribute to the profitability (Akkermans et al., 1999). In retailing, supply chains have a significant role. Information is considered to be force that can enable companies achieve close coordination and cooperation across supply chain partners. Lee et al., (1997) and Metters (1997) have discussed about strategic importance of information sharing in reducing inventory costs and bullwhip effect. As business strategy information sharing between various supply chain members can reduce uncertainty and increase profitability. The bullwhip effect can be substantially reduced with information sharing and availability of point-of-sales data (Croson and Donohue, 2003; Ouyang, 2007). Supply chain can be understood as inter-organizational integration and alignment of business goals strengthened through technology (Lewis and Talalayevsky, 2004). In their research Zhou et al. (2008) have discussed the importance of information sharing in multi-echelon and multi-layered supply chains.

The Indian retail sector is poised to grow as organized retailing is making inroads into the country. However, small retailers are of crucial importance to companies, as they have much control and reach in the markets being located in the nexus of colonies. The Indian retail industry has been majorly dominated by small shopkeepers of approximately 12 million which can be termed as 'mom and pop' stores providing employment to about 21 million Indians (Rao, 2006; Rakesh and Khare, 2009). This sector has a good understanding about the market demand and customers' needs. Developing and nurturing collaborations with sector would help companies strengthen their supply chains and improve their profits. This sector cannot be ignored as it constitutes a huge chunk of distribution network ensuring extensive reach and coverage. Even though organized retailing is growing and changing the retail landscape, these small retail outlets are critical partners in supply chains. Most Indians, prefer to do their daily grocery shopping from nearby stores. This is the inherent characteristic of Indian consumers, as they prefer to purchase fresh groceries and in small quantities. Small retailers are easy to access, being located in close proximity. FMCG companies in the recent years have tried to extend their reach on these retailers, and the research findings posit that their endeavors are in the right direction. Lack of infrastructure and communication networks has not deterred them in building collaborations with the small Indian retailers. Supply chain integration efforts directed towards managing retailer- supplier relationships would ensure efficiency and profitability.

Our research looks at the downstream supply chain and was directed towards understanding the level of information sharing in Indian retail supply chains (comprising only of retailers selling groceries and household products serving the FMCG sector) and how the information flow facilitated in the collaboration and supply chain integration. The availability of information about demand patterns, and customer needs can enable supply chain members manage their operations in a synchronized manner (Pontrandolfo et al., 2002) and aid in attaining supply chain goals in an efficient manner. Considering the fragmented and unorganized nature of Indian retail sector, we felt that availability of information from small retailers would be as pertinent for the suppliers for planning their distribution strategies as information from organized retailers. The unorganized small retail sector comprises of a large segment of Indian retail sector and constitutes a major contributor of revenues to the companies. Nurturing and developing relationships with this sector would be of vital importance for companies in aligning their supply chain strategies. This sector has far wider reach amongst customers, than the typical shopping centers and malls. Located within the peripheries of local communities and colonies, these offer services and products to the local residents. The size of these stores barely is more than a small 250-400 square feet. Indian retail is characterized by these small retailers, who store wares for the local residents and have strong relationships with the customers, as they know all of them personally, being themselves also residents of that area. In most cases the retail outlet and the retailers' home is under the same roof. The degree of supply chain integration between the retailers with the companies, would determine the success of marketing strategies and reducing operating and inventory costs in the supply chains. Sezen (2008) in his research has discussed supply chain information sharing, integration and design in 125 manufacturing companies in Turkey. The research posits that flexibility, and performances of supply chains can be improved by accentuating integration and information sharing, and explicitly by concentrating on the supply chain design (Sezen, 2008). We used the questionnaire developed by Sezen (2008) for his research and replicated it in Indian small retail sector. The questionnaire was administered on small retailers (comprising only of retailers selling groceries and household products serving the FMCG sector) to understand the role of information sharing and supply chain integration and design on supply chain performance.

The reason for selecting the small retail sector was that the organized retail sector predominates in getting more attention from companies in supply chain planning and collaboration. The small retailers are considered to be lacking resources and know-how for appreciating supply chain intricacies and consequently collaborating with their suppliers. The strategic importance of information sharing cannot be undermined, as they are major contributors of profitability for the FMCG sector in India. Their reach and accessibility in all cities and villages cannot be underestimated. Malls and organized supermarkets have not affected their survival and profits. The scale was adapted from Beamon's (1999) which included questions for flexibility performance, resource performance, and output performance.

The **first** section of the paper is the literature review whereby we explore the advantages of coordination with technology adaption in supply chains. It examines the importance of collaboration in retail supply chains. The **second section** of the paper includes the research methodology. The **fourth section** deals with the findings, analysis and discussion. The **fifth** section includes managerial implications of supply chain integration in improving the performance of small retail supply chains in India.

Literature Review

In India where IT adoption and proliferation is still in the nascent stages, the potential of integrating technology for routine supply chain decisions and operations is immense. Dyer and Nobeoka (2000) posit that appropriate supply chain network strategy can actually translate into supply chain effectiveness. Successful supply chain requires close coordination amongst various supply chain members and sharing information on a timely basis.

Supply chains are complex systems integrating the physical and information flow across the various functional and organizational levels (Handfield and Nichols, 1999, Chopra and Meindl, 2001). Organizations can improve their performance by deploying technology and harnessing its potential for controlling and monitoring the supply chains. The effective supply chain management would mean effective information sharing amongst the various partners (Freeman, 1998; Lee and Whang, 2000). This entails moving from formal organizational set-ups towards inter-organizational relationships which is based upon trust between supply chain members (van Hoek, 2001). Collaboration involves "the process for building improved and stronger upstream and downstream business linkages" (McAfee et al., 2002). Lee et al. (2007) posit that supply chain integration leads to competitive advantage. Most organizations attempt to design their supply chain networks mixing centralization with decentralization (Sabath and Autry, 2001) for competitive advantage (Markley and Davis, 2007). Much research has been directed towards understanding supply chain performance factors (Gunasekaran, et al. 2004). LaLonde and Pohlen, (1996) discuss supply chain performance being related to total cost ownership issues; Lau et al. (2008) speak of supply chains' ability to control and manage risks; Yang et al., (2008) refer to ability to manage relationships as being a predictor of supply chain performance; Holweg and Pil (2008) equate supply chain performance with the ability to coordinate and, Wang et al. (2009) discuss supply chain performance being resultant on the ability to develop new products.

Chen and Paulraj (2004) speak of identifying and aligning the organizational goals with that of the overall supply chain strategy of the company. This would entail comprehending the demand patterns, customer requirements, retailer relationships and use of technology in supply chain processes and aligning them with the supply chain strategy. Increasingly companies are realizing that supply chain goals affect the other supply chain decision areas such as procurement, outsourcing, supplier relationships, and transportation and logistics networks (Yan and Child, 2004; Cross et al., 2005; Michalak and Williams, 2005). Supplier networks are characterized by different firms working together for a common goal under the directions of a dominant network leader (Subramani, 2004). With different organizations and firms involved in these decisions, supply chains become multifarious and intricate. This would require coordinating the disparities, risks, variability and fluctuations between the various entities in the supply networks. Collaboration thus may be referred as the dynamic force behind effective supply chain management (Horvath, 2001). It becomes imperative for firms to coordinate cross-firm activities, work reciprocally for mutual benefits to harness capabilities for superior performance (Anderson and Narus, 1990). Many researchers have identified critical steps to attain effective supply chain collaborations (Lummus et al., 1998; Corbett et al., 1999; Boddy et al., 2000) stating that cooperative supply chain networks improve communication, increase competitiveness and make the supply chains integrated and efficient (Gopal and Cypress, 1993; Berry and Naim, 1996; Li and O'Brien, 1999; Zhao et al., 2002; Sahin and Robinson, 2005; Li et al., 2006).

Lin et al. (2002) posit that increased accessibility to information between firms' results in lowering operating costs and reducing order processing and consequently the cycle time. Thus, it is of strategic importance for managers to understand the value of information in supply chains and deciding what kind of information to share, with whom and how (Holmberg, 2000; Byrne and Heavey, 2006). Landeros and Monckza, (1989) and Boddy et al. (2000) speak of building supplier relationships for more productivity. In their research Mason-Jones and Towill (1998) posit that supply chains which harness information are more competitive and efficient than those that do not have coordination and information sharing relationships beyond their company. Yan and Woo (2004) state that information sharing leads to lower inventory costs but can result in increased backorders. Through collaborations the supply chains should be able to gain strategic advantage in the market and would be able to compete with the rival companies more effectively. The typical supply chain network should be therefore aimed at attaining operational goals and targets through smooth product and information flow (Harrington, 1991; Scott and Westbrook, 1991). The partnerships in the supply chain have to be adapted for supply chain business relationships. They have to be connected together for a common goal, "shared risk and shared rewards that yield a competitive advantage, resulting in business performance greater than would be achieved by firms individually" (Lambert, et al., 1996).

In building communication networks across supply chain partners, suppliers and customers, technology plays a pivotal role. It has the potential of bringing different firms together and making information easily available to all the firms aligned together. Accessibility to information on a real-time basis not only increases the susceptibility of supply chains to become more responsive but enables them to manage fluctuations and variations competitively. It makes monitoring, planning and controlling easier. Thus, effective supply chain management would mean effective information sharing amongst the various partners (Freeman, 1998; Lee and Whang, 2000). Supply chains are more of inter-organizational information sharing systems, and various functions can be harnessed to the fullest by deploying technology and e-commerce (Van Weele, 2002; Garcia-Dastugue and Lambert, 2003; Cagliano et al., 2003, Zheng et.al. 2006). Research identifies the barriers to effective implementation of IT in supply chains as shortage of resources, differences in operating goals and objectives of the partners, lack of trust between supply chain firms, disparities in the organizational strategies, fear of losing control, fear of over-reliance on information systems, and breakdown of information networks (Kwan, 1999; Kadambi, 2000; Ayers, 2001; Zhao and Xie, 2002; Li, 2002; Agarwal and Shankar, 2003). The underlying assertion for nurturing relationships is to enhance the supply chains' responsiveness towards customer needs and designing it for fulfilling the specification of a customer orders (Selldin and Olhager, 2007). Smaros et al. (2003) state, that even partially available demand data improves production decisions and helps firms in controlling excess inventory. Thus, information sharing becomes a major concern for integration in supply chains. Zhao et al. (2002) have conducted research on the different effects of information sharing on the performance of the manufacturer and the retailer. Coordination between supply chain partners is likely to reduce the transactional costs (Clemons and Row, 1992) and operating risks in the supply chains (Clemons et al., 1993, Chopra and Meindl, 2001 and Nissen, 2001) improve decision making (Sheombar, 1997).

Barrett and Konsynski (1982) posit that use of information systems enables organizations to eliminate organizational boundaries and efficiently connect with their suppliers and customers thereby improving organizational performance (Gunasekaran et al., 2001; Kannabiran and Bhaumik, 2005). The electronic modes for conducting routine business has simplified the transactions between different organizations and facilitated faster decision making (Timmers, 1999; Van Weele, 2002). The research was directed towards understanding the level of integration in between suppliers and small retailers in India. As mentioned earlier, we adapted the questionnaire developed by Sezen (2008) for conducting the research. The hypotheses were to:

> H1: The level of supply chain integration would improve small retailer segments' supply chain performance.
> H2: The level of information sharing between supply chain partners would improve small retailer segments' supply chain performance.
> H3: The level of information sharing between customers and retailers would improve small retailer segments' supply chain performance.
> H4: The supply chain design would affect small retailer segments' supply chain performance.

Alignment of supply chain goals across the supplier and vendor network is of critical relevance for companies (Chopra and Meindl, 2004) and greater the thrust on information sharing systems (Garcia-Dastugue and Lambert, 2003; Cagliano et al., 2003, Zheng et.al. 2006), the more competitive the supply chains can become. For understanding the idiosyncrasies of market, forging relationship with downstream suppliers becomes imperative. Appropriate synchronization of supply chain practices with retailers enables companies in reducing inventory and minimizing the bullwhip effect (Sterman, 1989; Lee et al., 1997; Towill and McCullen, 1999). The research used the questionnaire developed by Sezen (2008) for measuring the supply chain performance in the Indian small retail sector.

Research Design

The research was administered through the questionnaire comprising of four dimensions related to the supply chain. The original questionnaire developed by Sezen (2008) was modified for the Indian small retail supply chains. The questions were rated on a five-point Likert scale with responses ranging from 1- strongly agree to 5- strongly disagree. The questionnaire comprised of four sections with 20 constructs:

- Supply chain integration,
- Information sharing with suppliers,
- Information sharing with customers, and
- Supply chain design.

The sample comprised of small unorganized retail sector in India, we did not deliberately include the organized sector in the survey, as our research objective was to identify the level of technology used and integration in the small retail supply chains. This group comprised of small stores which are operated from small rooms by families. The assortment of goods and services offered by these retailers is for their local clientele who resided in the vicinity. “There are about 12 million retail outlets spread across India, earning the epithet of a ‘nation of shopkeepers’. More than 80% of these 12 million outlets are run by small family businesses, which use only household labor” (Ernst and Young, 2006). These retailers generate self-employment and cater to the needs of the local community, and consumers are dependent on them for fulfilling their daily needs of groceries (Khare and Mayo, 2010). Supply chain coordination with this sector can be a source of vital profitability for companies.

The data was collected on 225 small retailers, comprising only of retailers selling groceries and household products serving the fast moving consumer goods (FMCG) sector. The store size of these retail outlets varied from less than 150 square feet space to more than 600 square feet space. Out of 225 questionnaires, we could use only 207 completed questionnaires. The questionnaires were filled by personally visiting the stores, talking to the retailers’ about the objective of the research and seeking their cooperation for the research.

The details of store size are given in **Table 1**.

Table 1: Size of Stores

Store Size Description	**Total Number of Stores**	**Percentage**
Less than 150 sqft	31	15
150 – 250 sqft	72	34.8
250 – 350 sqft	54	26.1
350 sqft to 600sqft	34	16.4
600sqft above	16	7.7
Total	207	100.0

The retail outlets are generally owned by the family and are a part of family business in India. **Table 2** shows the total number of stores covered with respect to their being owned by individuals or families and controlled by the company. The company-controlled outlets were stocking 'more' brands of a particular FMCG company and it were the company's responsibility to give first priority to these set of retailers. The retailers were given preference in terms of quicker replenishment, ensuring availability of more brands, involving them in promotional endeavors, and extending financial support to them. Hindustan Unilever has such relationships with local retailers under the initiative of 'Super Value' stores and Marico has under the "Mera Outlet" (IT.TMCNET.COM., 2006). Hindustan Unilever covers about 6.3 million retail outlets, including a direct reach of about 1 million (Pal and Alulkar, 2009). It has a tie-up with local retailers and gave them special preference for stocking their brands. Hindustan Unilever has a competitive advantage in this arena, it has tapped the potency of small retailers in the country, and this strategy has enabled it in reaching the interiors of both rural and urban India. The strategy is to support the local retailers with respect to credit and infrastructure facilities. In villages, the company supports the local retailers, who are primarily women under its initiative of Project Shakti (Prahlad, 2005). Since the local retailers are having a good relationship with the local people, they are able to recommend the brands of the company. To use them for marketing of their brands would entail integrating them within the purviews of company's supply chain networks. However, it was not that they could not stock products of other companies. Therefore, they cannot be treated exclusively in partnership with a particular company.

Table 2: Ownership

Ownership Type	**Total Number of Retailers**	**Percentage**
Family owned	151	72.9
Company controlled	56	27.1
Total	207	100.0

The total sample consisted of shopkeepers located in and around the district of Allahabad, a city in Eastern Uttar Pradesh in India. The sample was selected on a random basis and some of the village retailers were also covered. The attempt was not to only focus on retailers in the metropolitan area, but also from those areas which were not well-connected by roads. The objective was to include all kinds of retailers especially those having very small stores. The objective was to determine whether in the case of these small retailers there existed any collaborative arrangements with suppliers and the kind of supply chain strategy being pursued.

Findings and Discussion

The four variables affecting supply chain performance were supply chain integration, information sharing with suppliers, information sharing with customers and supply chain design. For effective performance and profitability of any organization, these supply chain variables were important (Berry and Naim, 1996; Beamon, 1999; Lin et al., 2002; Sahin and Robinson, 2005; Sezen, 2008). The four variables had in total 20 constructs (See **Appendix**) and the Cronbach alpha was computed for the reliability of the constructs.

We ascertained the reliability of the items by computing the Cronbach Alpha and the score for the same was .840. The items were computed under four supply chain variables/components of supply chain integration, information sharing between company and suppliers, information sharing with customers and supply chain design. The interplay of all these variables plays a crucial role for determining supply chain performance and efficiency. Considering that the study was on only on small retail segment in India (comprising only of retailers' selling groceries and household products catering to the FMCG sector), we wanted to ascertain the level of Correlations between the supply chain integration, information sharing with suppliers, information sharing with customers and supply chain design variables **(see Table 3).** For efficient supply chain performance, all these variables are important (Ellram and Cooper, 1990; Berry and Naim, 1996; Beamon, 1999; Lin et al., 2002; Sahin and Robinson, 2005; Sezen, 2008). The Correlation analysis show that all supply chain variables have positive and significant relationships; the $p < 0.01$.

The interplay of all the four variables in the small retail supply chains in India is significant. For efficient supply chain planning the information sharing with suppliers, with customers, integration and design will have to be kept into consideration. Even though the retailing in India is unorganized, the results show that supply chain amalgamation efforts are being diligently pursued by Fast Moving Consumer Goods companies (FMCG).

Supply chain coordination with the retailers would give companies a competitive advantage, as these small retailers have loyal clientele and they cater to the local community needs. Irrespective of the growing surge in organized retail segment, the small retail segment continues to thrive in India. This may be attributed to the fact that these small retailers are operating on small margins and their marketing is only focused to the fulfilling the needs of their local regular customers. Considering that India has still low Internet connectivity, supply chain information sharing and coordination with the small retailers was expected to be low. However the results show that companies are focusing on strengthening communication with these retailers. This segment promises immense potential for supply chain synchronization and customer relationship strategies. As they do not have financial back-up, they only stock goods which have demand in the market. Thus, they have clear idea about what sells, and they can be vital sources for supply chain planning initiatives. Suppliers can use the information provided by the retailers for planning inventory levels to stock and promotions.

Table 3: Correlations Between Supply Chain Integration, Information sharing with suppliers, information sharing with customers and Supply Chain Design

		Supply chain Integration	Information sharing with Suppliers	Information Sharing with Customers	Supply chain design
Supply chain Integration	Pearson Correlation	1.000	.545**	.451**	.441**
	Sig. (2-tailed)		.000	.000	.000
	N	207.000	207	207	207
Information sharing with Suppliers	Pearson Correlation	.545**	1.000	.595**	.420**
	Sig. (2-tailed)	.000		.000	.000
	N	207	207.000	207	207
Information Sharing with Customers	Pearson Correlation	.451**	.595**	1.000	.394**
	Sig. (2-tailed)	.000	.000		.000
	N	207	207	207.000	207
Supply chain design	Pearson Correlation	.441**	.420**	.394**	1.000
	Sig. (2-tailed)	.000	.000	.000	
	N	207	207	207	207.000

**. Correlation is significant at the 0.01 level (2-tailed).

Our findings support earlier researches which state that performance of supply chains depends upon inter-organizational integration and alignment of business goals which is strengthened by the use of technology (Gunasekaran et al., 2001; Lewis and Talalayevsky, 2004; Kannabiran and Bhaumik, 2005). Thus supply chains become more of inter-organizational information sharing systems deploying technology and e-commerce for improved productivity (Van Weele, 2002; Cagliano et al., 2003, Zheng et.al. 2006)

The hypotheses (H1, H2, H3 and, H4) get accepted that a positive relationship between supply chain integration, information sharing with suppliers, information sharing with customers and supply chain design affects supply chain overall performance and efficiency. All the variables contribute to the performance of small retail supply chain. The information sharing with customers and suppliers are most important variables in supply chain performance. The effective supply chain management would imply effective information sharing amongst the customers, retailers and suppliers (Lambert, et al., 1996; Freeman, 1998; Lee and Whang, 2000; Byrne and Heavey, 2006). The successful supply chain entails ‘horizontal cross functional integration both across and within firms' and managing partnerships (Burgess and Singh, 2006; Yang et al. 2008; Zelbst, et al. 2009).

For predicting the importance of supply chain design and supply chain integration in improving supply chain performance, a regression analysis was computed. **Table 4** shows the result of multiple regression analysis, where the Dependent variable is supply chain design.

Table 4: Multiple Regression Analysis for Supply chain integration, information sharing with suppliers, Information sharing with customers on determining Supply chain design for Small retailers in India.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.133	1.498		7.430	.000
	Supply chain Integration	.293	.079	.271	3.689	.000
	Information sharing with Suppliers	.179	.085	.172	2.108	.036
	Information sharing with Customers	.170	.077	.170	2.222	.027

a. Dependent Variable: Supply chain design

Regression Analysis shows that supply chain design would be affected by supply chain integrations. The p value of .000 (significant at .01 levels) for supply chain integration variable significantly predicts the dependent variable, i.e. supply chain design for small retailers. The t value and the significance columns indicate whether each independent variable is contributing to the supply chain design **(Table 4).**

The results are in tandem with earlier researches which state that coordination amongst various participants in supply chain improves supply chain performance. Mason-Jones and Towill (1998) had stated that companies which stress on information sharing within their supply chain networks are more competitive and efficient than those that lack coordination and information sharing relationships. In retail supply chains, information may be of competitive strength to companies as it would enable them having more knowledge about market trends and customer purchase/demand patterns. In India where retailing is fragmented and has a multitude of retail formats, information sharing and coordination may be major challenge for companies. The research posits that despite the common belief that Indian small retail sector does not have clear supply chain strategy and coordination, there does exists a concentrated effort by companies to align their supply chain goals and information sharing objectives with the local small retailers. It has equal significance for them as the organized retailing. Supply chain integration and information sharing relationships not only improve supply chain performance but also improves delivery of products, on time and at lower costs (Zhao et al. 2002; Cousins and Menguc, 2006; Sezen, 2008). Earlier research on supply chains state that high degree of integration does improve overall productivity and performance (Armistead and Mapes, 1993; Zailani and Rajagopal, 2005; Li et al., 2006; Sezen 2008). The success of supply chains and its performance is dependent upon the ability of supply chain to manage relationships and use it for effective information sharing (Heizer and Render, 2006; Holweg and Pil, 2008; Yang et al. 2008; Zelbst, et al. 2009). Our findings also support these researches, if the companies are able to forge relationships with the retailers, they would be able to cut down on their overall supply chain costs and improve the supply chain performance.

Conclusions

The research identifies the priority information sharing and collaborations have for MNCs with small retailers scattered in the hinterland of India. It is not that the organized retailing gets all the attention in supply chain planning for MNCs. The small retailers, who are the major contributors of the revenues to the companies and span the nook and corner of India, are vital partners in supply chain networks. Though the fragmented and disjointed nature of Indian retailing may make information accessibility and collaboration difficult, the study posits that there exists an adequate emphasis on information sharing, supply integration, and supply chain design with these retailers. Unavailability and lack of technological infrastructure are not a deterrent to supply chain efficiency. The small retailers may lack computer literacy, or may not be having the resources for establishing technological networks with their suppliers, but there does exist collaborative efforts for linking these downstream members of supply chain network with the overall supply chains of MNCs.

It can be concluded from the findings that companies like Hindustan Unilever, Procter &Gamble, Nestle, Dabur, Marico Industries and Godrej are aware of the potential of the small retailers and their control over the local markets. Their supply chain collaborative efforts are directed towards profit sharing, financial assistance, and planning promotions (Prahlad, 2005; R.E.T.A.I.L.O.R.A.M.A, 2006; IT.TMCNET.COM, 2006; Pal and Alulkar, 2009). These efforts are likely to intensify, as competition would compel companies to tighten their hold on these small retailers and bring them under their coordinated supply chain strategies. If small retailing is more of cultural phenomena in India, supply chain integration and collaboration with these retailers is bound to increase the efficiency and performance of companies.

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Appendix

1. Supply chain integration a. Vendors of our store establish frequent contact with us. b. Our vendors and suppliers communicate through information system (internet, mobile, fax) c. Our firm uses technology (Web-based tools, mobile etc) to communicate with customers/suppliers d. Our firm participates in the marketing efforts of its vendors/suppliers (companies) e. Our firm provides assistance to the vendors in taking right decisions of its suppliers	**2. Information sharing with suppliers** a. Our firm provides the information to suppliers on demand of the month/year. b. Our firm and its suppliers share their capacity planning information c. Our firm can easily monitor the status of its orders from the suppliers. d. Our firm can easily find information about the suppliers' products and prices e. Our firm shares its production plans with suppliers
3. Information sharing with customers a. Our customers provide us the demand forecast information b. Our customers can easily monitor the status of their orders c. Our customers use technology to see the status of their orders. d. Our customers' participate in promotional activities taken up by us and our suppliers	**4. Supply chain design** a. Number of suppliers and their capacities are sufficient to handle any possible needs of our customers b. Distribution channels in our supply chain can sufficiently serve the current and potential markets c. Logistical activities in our supply chain are coordinated to minimize the problems in distribution/service d. Distributors and logistics providers share information with us on timely basis on product availability and delivery. e. Our logistics partners use technology to provide us with information regarding product packages from suppliers. f. Sales and billing is done using information technology tools by us (through e-mail and fax etc)

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Author Herwina Rosnan, Department of International Business, Faculty of Business Management, Universiti Teknologi MARA Shah Alam, Malaysia.

Professor Dr. Mohd Nazari Ismail, Department of Policy and Business Strategy, University of Malaya, Malaysia.

Email Address : herwinarsn@yahoo.com

Mobile Phone No. : +603 019-368 4916

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Global Economy and its Influence on National Industry: A Case Study of Malaysia

Herwina Rosnan,[1] Mohd Nazari Ismail [2]

[1] Lecturer, Department of International Business, Universiti Teknologi MARA, Malaysia.

[2] Professor, Department of Business Policy and Strategy, Faculty of Business and Accountancy, University of Malaya, Malaysia.

The current scenario of global economies shows the changing trend in global economic activities. New industries like services industries are gaining their importance. This scenario has been made possible by the phenomena of globalisation. The forces brought about by globalisation phenomena pose many challenges and opportunities to national economies. Globalisation has significantly affects many countries, industries, businesses and citizens in many different ways. Hence, the present study is to investigate how national economy is affected by global economy by selecting Malaysian film industry as a case study. Subsequently, it examines the role of national government in ensuring harmonised national economic activities. Many developing countries acknowledge the necessity of government intervention to protect as well as promote the development of local industry. The findings are based upon interviews conducted with film industry players and relevant government agencies in Malaysia. This study suggests that the globalisation of film business provides opportunity for national film industry to penetrate global market and at the same time it posed threats especially in terms of competition from global players. The study suggests that government's role is instrumental in ensuring the development of local industry. However, government intervention in the economies has led to the inefficiency in resources allocation. This study is perhaps one of the first to address the issue of government intervention in the film industry. Practically, it enhances the understanding on how global economies challenges local industry.

Keywords: global economy, globalisation, Malaysia, film industry

Introduction

The current scenario of global business environment shows the changing trend in global economic activities. The advancement of new communications and transportation technologies are so rapid providing new avenue for businesses to seek global customers and cheapest supplies. This new international business environment enables the creation of new economic activities. For example, new industries like service industries are gaining their importance. This scenario has been associated with globalisation phenomenon.

With the advancement of communications and transportation technologies, it made possible to increase efficiency in doing business in foreign land. Many business decisions are influenced by the desire to operate at the lowest cost. This movement of international production affects many countries in different ways. As a result of global business environment, Leinchko (2009) argues that there are winners and losers among countries. Countries which are able to benefit from globalisation are most likely to be the winners, while losers are those which unable to reap the advantage of the new trends in global economic activities.

There are increasing trends towards the creation of new economic activities, an example is in global film business. Globalisation has significantly altered the trends in the global film industry. Developed countries have recognised the importance of the global market and global production location. There is an increasing trend for the film production sector to capitalise on foreign production locations. Producers are motivated to shoot their films in foreign locations as they are attracted by, among other factors, cheaper production costs. With the emergence of the New International Division of Cultural Labour (NIDCL), (Miller, 2003) similar to that of the trend in the global manufacturing industry, film production has also fled from industrialised countries to relocate to cheaper production locations. Globalisation allows multinationals to reduce labour costs and take advantage of tax incentives, exchange rates and more favourable terms offered by global locations for cultural production. Even American producers have increasingly shot in countries like Canada and Mexico (Gornostaeva and Brunet, 2009; Hoskins and McFadyen, 1991). Hence, many countries have responded to this global trend by positioning their countries as an attractive location for shooting films. The desire to attract global producers to shoot films is rooted in the goal to capture economic benefits and other spillover effects, which include employment, income, and the transfer of expertise.

Thus, it is the ability of developing countries to seize the opportunities brought about by the process of globalisation that differentiates between winners and losers in the process of globalisation. It can be concluded that globalisation has changed the way of doing business and that this development provides opportunities for developing countries to benefit from new trends in audiovisual industries (UNCTAD, 2008; Baltruschat, 2002).

The Changing Role of Government

During the process of economic development in the western developed countries in the nineteenth century, the role of governments was limited to providing a favourable environment for private capital formation and the major role played by private enterprises. Early proponents of classical economics argued that government intervention in the economy creates disincentives and can cause detrimental effects. Globalization spread free market and capitalist ideology which argues for a limited role of government in the economy.

However, the process of globalisation increases market forces in an economy. For economically smaller countries, these global forces are affecting their competitiveness and ability to survive even in their own domestic market. Authors like Haque (2006), Davies et al. (2005), Higgot (1998) and Strange (1996) claimed that the process of globalisation are weakening national government especially in the area of policymaking. In the case of developing countries, they are facing the issue of fragile private enterprises and weak economic conditions. This demands government intervention in the economy, which could regulate the market and provide essential information for the market to work well for the economy.

In the twenty-first century, governments in developing countries face dilemma to juggle between embracing free market ideology and the desire to protect national businesses from stiff foreign competition. This is because it was argued that the economies of many developing countries are relatively weaker than the developed countries (Jomo, 2006; Hartungi, 2006, Khor, 2000). Globalisation increase competition and that many developing countries are unable to withstand stiff competition from global industry players. Hence, national industries need to be protected against 'unfair' foreign competition. One way of government intervention is through national industrialisation strategy. For many Asian countries, evidences show that government plays instrumental role in the development of their national economies.

How Global Business Affects National Economies: The Case of Film Industry

The film industry began around the world at the same time in the 1880s and 1890s when a rapid series of drawings or photographs was used as the basic technique in recording and reproducing motion. Hence, the cinema industry started with a low possibility of commercial value and its development was driven by the invention in filming technology. From this perspective, the demand for the film industry was created by the supply that was fuelled by continuous inventions and improvements in the technology to record and reproduce motion.

Inventions in cinematography led to the spread of filmmaking in the third World that was able to make cinematography user friendly, enabling filmmaking to be one-man operation. As according to Armes (1987) the cinematography was imported usually by businessmen to countries as far as Brazil and India. Films reached the major cities of Asia, Latin America, and North America within a matter of months of the first showings in Paris, London and New York (Armes, 1987, p. 2). In East and Southeast Asian countries, the influence on local film production was first initiated by the exhibition of films in countries that reflected the colonial situation. Generally, advances in the industrialisation process throughout the region, which began in the 1930s, marks the growth of local film production in the East and Southeast Asian regions (Armes, 1987).

Earlier studies by Nordenstreng and Varis (1974, 1984) shows that the global flows of television programmes indicate 'one-way' flows from developed to less developed countries. Later, studies on the global flows of television programmes found that there were changes in the nature of global television flows (Rogers and Antola, 1985; Oliviera, 1986). The study by Rogers and Antola (1985), who studied the flows of television programmes between the United States and Latin American countries, found that locally produced Brazilian, Mexican and Venezuelan programmes successfully competed against the US television programmes imports. For example, compared to the 1960s, Brazilian TV networks now broadcast almost 80 percent indigenous programmes, an increase of 40 percent (Olieveira, 1990; Straubhaar, 1984). In addition, the television programmes produced are able to displace US-imported programmes in neighbouring countries (Rogers and Antola, 1985; Oliveira, 1990; Straubhaar, 1991).

Accordingly, the study by Varis (1984) on television programmes exchange shows that there is a trend in the regional exchange of television programmes. He found that in Western and Eastern European countries, more than 40 percent of the imported television programmes originate in other countries of the region. The same scenario is evident where regional programme exchanges can be traced among the Arab countries with approximately one-third of the imported programmes coming from the countries within the region such as Egypt. In these instances, cultural proximity plays an important role in the spread of television programmes in the region. The study by Straubahaar (1991) in the Dominican Republic found that audiences prefer more culturally proximate television programmes. This is because audiences can relate easily to the common styles, values, beliefs, institutions and behavioural patterns that are depicted in local or regional programmes compared to imported United States television programmes. The study further revealed that locally-produced programmes became the first preference followed by programmes from regional countries of Latin

America, Asia, or Africa, which shows that programmes are more culturally proximate, compared to programmes imported from the United States. The following are further discussions on countries that have successfully participated in the global audiovisual market.

In Latin America, regional integration through MERCOSUR has facilitated the development of cultural industries in the region, particularly the television production industry as discussed earlier. Argentina, Brazil and Colombia have emerged as important players in the global television industry. Indeed, the penetration of television broadcasting into the film production sector has benefited the industry tremendously in terms of programme exports. Brazil's TV Globo and Mexico's Televisa are the main exporters of television programmes, especially in the form of the popular 'telenovela' or soap opera.

India has emerged as the world's largest film producer, producing about 1,000 commercial films annually, more than Hollywood, which produces around 800 commercial films annually. However, in terms of world market share Hollywood still dominates as India's Bollywood products are mostly for domestic consumption only (UNCTAD, 2008). The exportation of India's films predominantly focuses on the Indian diasporas market (e.g. Mauritius, Sri Lanka, Qatar, Oman, Fiji, Bahrain, Kuwait).

In Asia, China has emerged as one of the largest film producers. The development of the Chinese film industry is impressive, especially in its attempts to penetrate the Hollywood market. For example, the Chinese film *Crouching Tiger Hidden Dragon* grossed more than US$100 million in the United States market alone and it was the first foreign-language film to take in that amount of cash (Plate, 2002). Similarly with South Korea, which has emerged as one of the most successful film producers-its film industry has turned into an export-industry. The development of the Korean film industry can be traced back to 1996 when the government provided strong support for the industry to become one of its engines for economic growth (Jin, 2006). The success of Asian countries' cinematic output and creativity has captured the interest of Hollywood. For example, Japanese horror movies are successfully capturing not only Asian audiences but also North American. The American horror movie *The Ring* was a Japanese re-make employing American actors and the shooting was done in American cities. The evidence thus indicates that Asian countries have been able to benefit and advance their capabilities in film production.

In response to the demand for cultural products by modern African countries, the Nigerian so-called 'Nollywood' has become successful in the video-based film industry. It has claimed to be the world's third largest producer of feature films in terms of the number of films produced annually. The US$250 million a year industry is claimed to have generated thousands of jobs within a short time span of 13 years. Producing mostly low-budget films between 500 to 1,000 movies a year, the development of the Nollywood film industry is made possible by the availability of digital technology and Nigerian entrepreneurship. The huge African market provides the demand for Nollywood cultural products (http://www.thisisnollywood.com/).

The changing trend of global flows of film and television programmes has challenged the traditional debate of cultural imperialism and the North-South flows of cultural and media products (Sinclair, Jacka and Cunningham, 1996). Nonetheless, the US is still widely recognised as the largest producer and exporter of audiovisual services. Mukharjee (2002) reported that, in 1998, the US film, television and home video industries earned over US$12 billion through exports to 105 countries. In 2009, European Audiovisual Observatory reported that US film industry dominates the world market in both production and distribution.

Generally, developing countries are the net importers of global television programmes or content. From the above evidence, although some have been successful in benefiting from its cultural industries, others lack the capacity to develop a sizable indigenous production industry. In light of the above, it can be summed up that one interesting development identified has been the rise of regional programmes suppliers. As reported by Wideman and Siwek, (1988), in Bicket (2003), Brazil and Mexico have been important exporters of programmes for the Latin American market while Egypt has been an important supplier to the Arab World. By the same token, Hong Kong supplies much of the programmes to the Southeast Asian market. Although quantitative evidence shows that the US exports to all these regions remains very important, regional producers have begun to offset the absolute impact of the US global and regional supply of programmes.

Methodology

The globalisation of film business has affected many countries and how the indigenous film industry is affected by the new trend in global film business is the main motivation of the study. The study is also to examine how local film production companies respond to these global changes. In order to increase our understanding of the phenomena under study, a qualitative research approach is employed. Interviews were conducted as the primary source of information from film industry players in Malaysia.

The population of the study obtained from Sinema Malaysia, an agency under FINAS. As at June 2009, there were 241 independent production houses.[1] The purposive sampling of snowball or chain sampling was employed. This chain sampling begins with identifying the most relevant respondent that is willing to participate in the study as the purpose of the study is to gain a deeper understanding of the phenomenon. The criteria for the first sample selected is a company that is currently an active 'hard-core player' (the term used by industry people) in the production of films for cinema exhibition as well as for television broadcast. The study found many registered company were either dormant or non-active. The in-depth interview and the information gained led to the identification of other respondents. In this case, another production house was identified.

One important consideration is that the company is actively producing film as many registered film companies in Malaysia are dormant. The guidelines for data collection for case studies by Yin (2003) were closely followed. The participants of the interviews were from (i) one government agency (FINAS) and, (ii) representatives from six film production companies. The average interview sessions lasted two to three hours. Secondary documents were used as a means to gain multiple sources of evidence that will enable triangulation during the data analysis process. As according to Yin (2003, p. 87) the benefit of using documents is to corroborate and augment evidence from other sources. This can increase the quality of qualitative research associated with internal validity (Golafshani, 2003). Data from the interviews was transcribed and the contents were analysed to highlight emergent themes. The interviews were conducted in April 2009.

Findings

[1] www.sinemamalaysia.com.my

Malaysian Case Study

The first feature film was introduced to Malaysia (known as Malaya) during British colonial period in 1898. However film was produced in Malaya/Singapore (Singapore was part of Malaya before 1963) in 1933. Historically, national film production was initiated by foreign capital and foreign talent. Local film was made and produced by Shanghai directors between 1938 to 1941 and later in the 1950s Indian directors were synonymous with local film production (Ahmad, 2000).

It was only in the 1970s that Malaysia begun to seriously look at the film as an important economic activity. At that time, many political leaders began to realise the importance of developing local film industry. Film was recognised as an industry after the establishment of National Film Development Corporation Malaysia (FINAS). FINAS is a government agency that is given the responsibility to develop and regulate local film industry.

Government support was one of the reasons behind the development of Malaysian film production industry. The importance of establishing local film industry is partly for cultural reason and also for economic reason. Nordenstreng and Varis (1974) reported that Asian countries imported nearly three quarters of their television program. For Malaysia, in 1970 the ratio of imported versus locally produced programmes was 71: 29. The influx of foreign programme is also associated with the concern over the influence of foreign culture to the citizens. Later, with the establishment of local television stations, local film production industry begin to experience changes with the increase of local production houses producing local programmes for television station (Ahmad, 2000). Television industry in Malaysia is restricted by the government. At present, there are six free television station operators namely RTM1, RTM2, TV3, NTV7, 8TV and Channel 9, and one subscription-based television station operator ASTRO. Local production houses actively produce made-for-television programmes targeting at local television stations.

Notwithstanding, despite increase number of local programmes produced, local film industry is still dominated by foreign films. Table 1 shows the total number of programmes imported between 2004-2009. Although there are decreasing number of total imported programmes particularly in 2008 and 2009, the ratio against locally produced films are still high as shown in Table 1 and Table 2.

Table 1: Importation of Foreign Films, 2004-2009

TYPES OF FILMS	2004	2005	2006	2007	2008	2009
Feature	3,754	4,555	3,213	3,228	2,004	3,809
Documentary	2,424	3,312	1,477	2,262	1,839	543
Musical	714	14	951	1,260	437	137
Animation	45	0	155	7	3	15
Trailer	952	816	916	907	726	400
Sports	94	116	208	210	247	63
Commercial	22	487	691	727	700	805
Comedy	6	0	10	11	2	1
Promotion	319	359	716	666	400	357
Reality TV	0	0	5	0	0	0

Game Show	0	0	69	0	0	0
Education	0	0	6	4	0	0
Others	23	1,849	0	0	0	0
Total	**8,723**	**11,508**	**11,508**	**9,282**	**6,358**	**6,130**

Source: FINAS, http://www.finas.gov.my/index.php?mod=industry&sub=import retrieved 14 Feb 2010.

Table 2: Number of Local Production based on Category, 2004-2009

CATEGORY/YEAR	2004	2005	2006	2007	2008	2009
Feature Cinema	33	30	38	45	38	50
Feature VCD	27	8	13	5	8	10
Feature TV	146	90	88	106	124	153
Drama TV	137	196	160	182	212	213
Musical	45	58	92	43	35	50
Documentary	77	82	109	91	67	63
Education and others	63	63	115	54	56	62
Animation	0	0	0	1	10	4
Total	**528**	**527**	**615**	**527**	**550**	**605**

Source: FINAS, http://www.finas.gov.my/index.php?mod=industry, retrieved, 14 Feb 2010.

Despite increased competition by foreign players, the Malaysian film industry is developing progressively. This is based on the increasing number of films produced annually and the larger participation by industry players witnessing the increase number of film production houses.

Table 3 indicates the progress of local film industry. For example, the number of cinema admissions has increased from 16 million in 2004 to 40 million in 2009, an impressive number, by Malaysian standard.

Table 3: Malaysia Film Statistics 2004-2009

	2004	2005	2006	2007	2008	2009
Admission (Million)	16.69	25.92	27.87	33.55	43.85	44.13
Gross Takings (RM Million)	124.62	217.35	234.98	289.31	380.72	403.30
No. of Cinema	59	66	68	76	91	93
No. of Screens	233	265	287	353	453	485
No. of Seats	55,950	61,482	66,822	78,496	92,642	101,165

Source: FINAS http://www.finas.gov.my/index.php?mod=industry retrieved 14 February 2010.

Government Involvement

Government plays an instrumental role in the development of local film industry by supporting local film industry through the provision of incentives and grants as well as regulation governing the film sector. Specifically, government direct involvement can be seen in the role played by FINAS, an agency given the authority to develop and facilitates the film industry. The 2005's National Film Policy further strengthen FINAS's role. The emphases of this policy are:

- To support the national film industry to be more progressive and internationally competitive.
- To be the catalyst for the industry's development by making the country a filming destination in the region.

The new policy reflects government's response to global trends in the film production industry. By aiming to be a hub for international filming, efforts are geared towards providing incentives to attract foreign producers to produce films in Malaysia.

FINAS has been providing direct assistance to film industry players which include the provision of facilities, funds, technical supports, training programmes and other related courses facilitated by FINAS. Another element of government assistance is through government control of the local cinema. Under 'Syarat Wajib Tayang' or 'Compulsory Screening' scheme, the exhibitors must screen approved (by FINAS) local film in the cinema hall. This is to ensure that exhibitors will not discriminate local films against the big-budgeted foreign films.

Other government agencies are also supportive of the local film industry. Ministry of Science and Technology and Innovation, Malaysia (MOSTI) for example is providing grants through its e-content fund for the production of animation films. Other agencies like Tourism Malaysia and Malaysian Development Corporation (MDeC) are actively sponsoring local film productions. In addition, Malaysian public television, RTM has allocated substantial number of television hours for local films. In recent development, Khazanah Berhad, an investment holding arm of the Government of Malaysia is investing RM400 million to develop a world-class film studio in collaboration with international player (Pinewood Shepperton Plc, Britain). This collaboration is to boost local film industry to become one of the important sectors in Malaysia.

Government through many of its agencies have facilitated the development of local film industry. However, according to local film players, there are many areas in which government can be more efficient in ensuring continuous development of the Malaysian film industry.

Consequences of Government Involvement

It is undeniable that film industry in Malaysia has received numerous supports from the government since its inception. However, government involvement is subject to criticism. According to the interviews, government's continuous support has resulted in dependency among filmmakers on government assistance. Until recently, most production houses are still depending on government loans and grants to produce films.

In another area, government through its public television station RTM is pursuing a policy to give priority to local filmmakers by giving more hours or programme slots to local production houses. However, local production houses lamented that its procurement practices are abused where major film supply contracts are awarded to companies that have direct links to the leadership of RTM.

Another case in perspective is government direct involvement in the production first national animation project. Through MDeC, the government directly invested in national animation project to produce film animation called *Saladin*. *Saladin* is an unsuccessful national project that has led to constant public debate.

Government has had a direct role in the recent growth and performance of the local film industry. Its involvement has positively impacted the direction of the industry. However, there is a need to ensure that the resources allocated for the development of the local film industry are used in the most efficient way and are fully capitalised for the benefit of the industry.

Conclusion

The government has always assumed a central role in Malaysian economy. Despite the criticism over government interventionist role, it does not amount to a complete rejection. According to Jomo (2000), as a result of government's interventionist role, the structural transformation and industrialisation of second-tier Southeast Asian NICs have gone well beyond what would have been achieved by exclusive reliance on market forces and private sector initiatives.

Globalisation increases competition and for economically smaller countries, this phenomenon poses challenges to their domestic industries. Without government supports, the industry can be swiped away by foreign competition which are also giant global players. Support from the government does not guarantee success but if properly implemented it can foster economic development. If the government can manage this, the industry may become more developed and progress better than it is today.

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Tan Wee-Liang
Lee Kong Chian School of Business
Singapore Management University

International Cooperation and Internationalization of Small and medium-sized enterprises in Asia

Abstract

The proponents of globalization speak of the benefits of internationalization. Despite the criticisms of globalization, it is clear that one group of firms may not be as well placed to participate in international activities - the smaller firms. The small and medium-sized enterprises are handicapped by the size, geographical reach and the resources required for venturing abroad. The internationalization activities of SMEs have recently become the subject of some research attention. However, there has been scant research on the internationalization of SMEs in Asia. Much attention has been devoted to the internationalization from developed countries to developing countries and little about the activities in the opposite direction or within Asia.

This paper explores international cooperation, one way for SMEs to overcome their inherent deficiencies in international activities. International cooperation envisages the SMEs seeking out prospective partners with resources they could leverage upon and who are willing to share risks. The same obstacles to international business confront SMEs but at a higher degree as they usually cannot afford to hire internal staff or consultants to conduct the needed due diligence. Hence, this paper reports a study of SMEs in Asia who have embarked on international cooperation, identifying the processes by which the SMEs have overcome the obstacles such as differences in culture, language and trust. The study examined five SMEs who have successful alliances. It found the interesting role played by information gathering activities that enabled the firms to overcome the initial distrust.

Introduction

With globalization, small and medium-sized enterprises (SMEs) in Asia are realizing they need to "plug into" the global market place, where their smallness and newness to new markets, which can operate as constraints domestically, are compounded. Larger enterprises have the advantages of size, resources, competences and reach. Large firms could easily extend themselves by establishing new beachheads by deploying staff to begin new units overseas. On the other hand, SMEs need to engage in cooperative arrangements as cooperation permits them the opportunity to share resources, risk and leverage on the resources of their "partners".

International cooperation is fraught with risks of opportunism on the part of the opposite party with whom the focal firm (the firm seeking the overseas cooperation) seeks to collaborate. SMEs face an interesting time in international cooperation as they have less resources for the search, due diligence and negotiation that precede the entry into international cooperation. Accounts of failed international cooperative arrangements between SMEs exist in anecdotal accounts and popular literature. These accounts motivated this study into the search processes engaged by SMEs seeking international cooperation as improving their search processes would improve the likelihood of success.

The decision to focus on search is based on it being the first step in the international cooperation process. While some prior research has examined the selection of international partners, the emphasis on selection presupposes that there has been a antecedent stp of searching for prospects, and developing a shortlist prior to the selection decision. A second reason for exploring the search process lies in the uphill task that SMEs have as they move from the known environs of their domestic markets to the unknown host country environs. The unfamiliarity of the territories that they venture into heightens the critical role played by search. A third reason for choosing the search process as the point of interest is the partner selection is predicated on the respondents having identified suitable candidates. The SMEs conduct their search in unknown territories among firms and individuals that the respondents are not acquainted. They are confronted with issues of mistrust and uncertainty, and having to bridge the structural holes created by transnational borders.

This paper reports an exploratory study involving interviews with five SME-owners from Singapore with experience in international cooperation. It begins with a review of the relevant literature on the importance of search in international cooperation before reporting on the findings from the interviews.

Relevant Literature

In response to global competition, firms are relying increasingly on cooperative strategies with much of initial interest on globalization being on the larger corporations (McDougall and Oviatt, 1996). There has been a growing realization among entrepreneurship researchers that SMEs are also engaged in international cooperation (Das & He, 2006; Rialp, Rialp, Urbano & Vaillant, 2005; Groen, During & Weaver, 2002). However, SMEs face significant barriers opposing their efforts towards internationalization: of finance and human resources (Chen & Huang, 2004); when working with large firms as partners, differences in bargaining power, capabilities, purposes and complexities in the interfirm dynamics (Rothkegel, Erakovic & Shepherd, 2006; Alvarez & Barney, 2001).

The alliance partner is of critical importance to successful cooperation (Spence et al 2008; Das & He, 2006; Dacin *et al*, 1997) and there is a search for a partner selection process model to assess partner fit (Holmberg and Cummings, 2009). Yet integral to the selection is the search process. Prior research on cooperation failure points the importance of conducting an effective international partner search. The search process will affect the ultimate international partner selection. The selection begins with the search for prospects that are measured up against the criteria. The criteria may in turn change over time during the search process if the search process is tedious or prove to be difficult.

Prior research indicates the need for research into ways for SMEs to conduct effective international partner searches. There is research on how domestic inter-organization relations develop and grow (see for example Baum et al, 2000; Hite & Hesterley, 2001; Larson, 1992). Research on exchange relationships between entrepreneurs and partners reveal that they do employ networking (Kirkels & Duysters, 2010; Groen, 2005; Hong & Antoncic, 2003; Hite & Hesterley, 2001, Larson, 1992), they seek the target partner directly (Nohria, 1992) and they use network bricolage (Baker, Miner & Eesley, 2003) – referrals. Recent interest in this area includes work by Vissa (2008) on the entrepreneurs networking action in seeking partners. In contrast to domestic situations where SMEs may have established networks, the question remains how and what do they do in their search for partners overseas.

Hence, this study hopes to contribute by examining how the SMEs bridge the gap across country's borders.

Method

To understand the processes that SMEs engage in seaching for their partners, the research involves SME owners who have experience with international cooperation(the experts). Five entrepreneurs whose companies engaged in ongoing international cooperation were selected to participate in the study. The semi-structured interviews took an average of 2 hours to complete with questions about the steps the SMEs took in their search for international partners, and based on their experience, the steps they would recommend to others. The interviews were recorded, transcribed and coded for the content on the search process.

The five experts are cloaked and identified as B, G, J, K and W. Table 1 provides details about each of the experts and the countries with which they have international cooperative arrangement.

Table 1: Demographics of the 5 Experts in the Search Process Study

Expert	**Industry**	**Country of Partner/s**
B	Pharmaceutical & Medical Supplies	Vietnam, Germany, United States, Thailand
G	Optical accessories	Italy, Hongkong, Japan
J	Maritime Communications	China, Sweden, Malaysia, Japan
K	Printing and packaging	China
W	Construction roofing specialist	United Arab Emirates, Malaysia

Findings

The respondents' interview accounts provided insights into the search processes. The observations are summarized below before being discussed in the next section.

Source for leads The search process comprises an initial phase where the respondents seek out leads for consideration and subsequent evaluation. In this phase, the respondents found the search needed to be extensive when they did not have ideas as to suitable international partners. Where the firm is aware of a good partner, the firm receives an unsolicited visit from a potential partner (walk-ins), or it has been referred to a specific potential partner, the search process could be shortened.

In normal circumstances where they have no leads on potential partners, the respondents reported that they relied on formal and informal sources of information

Table 2 below is a summary of the formal and informal sources of information used by the SMEs in searching for partners.

Formal sources	Informal Sources
Publicly available documentary sources – journals, directories, etc.	Prior contacts
Government agencies	Networking
Chambers of commerce and trade associations	Exhibitions
Banks	Attracting contacts
Embassies	
Research for leads	

The respondents sought information from the formal sources such as published sources, agencies like trade associations and government offices, banks and embassies for business opportunities. Of particular note, is the mention by the respondents that there may be instances where they need to conduct formal research into the industry and the industry players in their intended host countries. The more informal sources of information about potential international partners saw the respondents in using personal interaction. They used prior contacts they had in their businesses. These contacts can point the way to prospects or be a source of leads. They engaged in networking. They used contacts from their various personal networks; they sought referrals and background information about prospects.

Exhibitions are the best source for leads regarding overseas ventures. While the respondents came from different industries, there was unanimous advice on the use of international exhibitions and shows as means to start the international cooperation process. All the respondents utilize these means when they have no contacts or leads in a country they are seeking to venture into. They "work" the various exhibits at the trade shows and exhibitions, moving among the exhibitors. Participation at such shows allows them to

- establish contacts
- promote their products and services – with the view of attracting prospective partners
- obtain information about the industry, the players and the other stakeholders from the other exhibitors.

It was surprising to learn from two respondents that they found overseas contacts by attracting them. By this, they meant that they drew the interest of prospects through their websites and industry activities. They found that they could draw prospective partners through trade publications or the firms' websites. Their internet presence enabled the firm in Case 6-18 to be identified and reach an international cooperative arrangement. Another way to search for prospects is through an industry presence. Hence, two respondents open representative offices overseas as a first step after ascertaining that there was a potential demand for their products and services. The representative office and the employees provided them with a presence in the target countries and they were able to draw the interest of prospective partners there.

Begin the Search when there is a clear purpose

The interviewees emphasized the importance of knowing why they are looking for an international partner through references to their “products” or “services” or as a respondent couched it, “you must have something to sell or something for which the overseas partner is required.”

These references to products, services, or projects have been encapsulated under the rubric of purpose. Without a clear idea of the possible complementaries to be obtained through an international partner for a specific product, service or project, there is no reason to venture abroad. Without this clarity of purpose, the prospects would not be able to assess whether they would wish to engage in discussion or explorations with them.

While the interviewees speak of the purpose, it is what is implicit in the purpose that is of interest. The purpose implies the unstated search criteria for the overseas partner among other things. The purpose also envisages the characteristics of the prospective partner as the role the partner would play has different implications on requirements in operations, financing, market access, knowledge, etc.

Conduct due diligence

It is from these contacts that there may be follow-up interactions where the SME owner obtains an opportunity to visit the factory or offices of the prospective partners and then explore business. They noted that follow-up is necessary. There is a need for the contacts made to be acted upon. Merely identifying leads would be a waste of time.

It is important to find out information on possible contacts for the international partnership, to narrow the field, and meet a few prospective partners. The checks form part of the SMEs' due diligence process. Knowledge about the prospective partners appears to be critical to their decision-making. The purposes of such checks are:

- to verify what the prospective partner has told them
- to obtain a third party assessment of the prospective partner
- to obtain information additional to that provided by the prospective partners and/or others.

Once they have contact details, the respondents turned their attention to obtaining more information about the history and activities of the potential partner. To this end, they practiced triangulation of information. They asked around and talked with other businesses. The process of checking includes talking with others about their experience and knowledge of the potential partner. In Case B, it was a third party inquirer who found out about him, so that the SME approaching him had checked on him through the principal manufacturer.

In addition to other sources of information about the prospects and their businesses, the respondents utilized opportunities made available to observe the individual prospects. The respondents recommend observing the individual to see what their behaviour reveals about them and the business proposition. This means of obtaining information requires the SME owners to have good powers of observation and to be applying rules of thumb with which to assess the parties they are considering. They considered the nature of the interaction and personality of potential partners as well as the extent to which they falsified or exaggerated information given by them.

After establishing contacts via the trade fairs or exhibitions, the SME owners might get invited to visit the factories or premises of their contacts. Alternatively, the SME owners might suggest visiting their prospective partners. These visits also served the purpose of ascertaining the capabilities, quality of work, credibility(matching what they have said with the reality), openness in sharing, management style and other aspects that the participant observation opportunities that company and factory visits offers.

In the context of manufacturing, the checking is of the manufacturing capability, the quality of work, etc. Testing could be by way of trying the prospects out on test batches. Case G reported placing small orders to evaluate the prospect's production capability, reliability in meeting orders and timeliness of delivery. In the same manner that they assess various prospective partners during their search, the respondents highlighted their recognition that the opposite parties are also assessing them in turn. The interviewees felt that it was important to act with integrity and to demonstrate trustworthiness in their approach to any prospective partner. Case B said most earnestly and with deadpan seriousness:

Case J echoes the same sentiment – that the focal firm itself will also be "checked-out" by the prospects. Further, he does not consider it a tactic but an intrinsic part of his firm's attributes. He equates it to reliability.

Personal integrity was important to the SME-owners as a vital asset, part of the social capital they proffered. The word "proffered" is chosen even though it has a similar meaning as "offer" but it has the additional sense of something being "held out." The holding out of this vital asset is important because we are dealing with SMEs. They are the enterprises in the growth phase – they are not yet large corporations. As such, they do not have the financial assets found with large firms that have been the subject of prior studies. They have few resources and essential to what they have is their personality and their integrity. This integrity they seek to demonstrate becomes their "reputational capital." This important criterion fits in with emphasis of all the respondents that the relationship was more important than the business.

Build and use relationships

The interviewees point to the need to build relationships with prospects in order to find out more about the possible nature of future partnerships. The relationships they build may or may not lead to the cooperation but that is beside the point. The SMEs are satisfied with developing the relationships and do not disassociate from prospects even if no cooperation occurs. At the same time, there is value in the relationships they develop because should cooperation arise, the relationships undergird the cooperation.

The elements of time and effort are critical to the development of the relationships that are important for successful international cooperation. Contacts obtained from the various sources by themselves are not useful. They are useful when they lead to business relationships where there is exchange of information and discussion of business opportunities that both parties can embark upon. The respondents sought to develop relationships with the potential for mutual benefit. Hence in their search process, the respondents sought for prospective partners with this potential.

Case W told the story of an agreement with a larger company for the supply and erection of the roofing infrastructure for the "partner." According to the agreement, Case W was entitled to a better price for the components he supplied because of the specifications required. His "partner" had made a mistake. He could have insisted on the contract but he looked at the long term picture. The two companies might be working together in the Middle East. He decided the relationship was more important and took a loss by providing better quality materials at the lower price – losing some $90,000 in the process. The researcher probed further only to obtain the answer – the amount lost was not as important as the potential for future cooperation.

It was important for to the respondents that they be able to bring value to the table when they cooperate with others and to find out what the other party needs and how they can help out. Case J, the fourth interviewee used the technical term, synergy and speaks of imparting training and exposing his partners' employees to training with his company so that they might grow.

Social interaction provides opportunities for the acquisition of information.

Shortlisting: The SMEs pick the partner they trust

All the respondents were unanimous in noting that comfort in the prospective partner was critical. Yet they could not specify objectively what this trust and comfort referred to. To them it was a feeling, yet this feeling came from interactions and other related key observations that are drawn from the interviews. The expression "gut feel" was also used by Case B and Case K. Case W while being less colloquial also referred to the importance of trust. There was a point in time when one would know when one could trust the prospective partner.

The SME-owners are processing the information they have gathered, within their minds. They weigh the pros and cons of entering a business arrangement. The key criterion is the level of comfort with an individual. If there is no comfort with the individual, there is no forward movement. The SME owners will either maintain contact or walk away.

The non-linear nature of the search process
The interviewees did not articulate a linear series of steps in a discernible order. However, the steps they articulated are clear. Whilst in reality, some steps may be undertaken in conjunction with others and in some case may be iterated, the researcher attempted to place them in a linear sequence.

The steps in the search process as suggested from the observations involve firstly, preparing for the search by a) determining before hand, the reasons for venturing overseas and knowing what objectives that are being met through overseas ventures and b) determining a relational strategy built on being trustworthy. The next step is to search for leads and follow-up on them. A number of sources for information on leads are provided by the interviewees. Third, the SMEs check on the prospects. Fourth, they develop a shortlist of prospective partners. Fourth, they develop relationships with these prospects. Fifth, they develop a shortlist of prospective partners, choosing those they trust and are comfortable with.

Discussion

The study reveals that the focal firms seeking prospects in host countries are able to bridge the cross border structural hole created by distance, different cultures and unfamiliarity with new territories. The means that they employ are not unique in themselves but the respondents demonstrate the focal firms being able to harness their limited resources in conducting their search. The SMEs have employed their resourcefulness in bridging the gap and conducting their search. Whilst not being able to rely on professional managers, in all the five cases, the information was gathered directly by the SME-owner. This approach is not without benefits as there is the immediacy of the information, the opportunity to observe facial, body and organizational nuances through meetings and visits, th. These observations, of course, assume that the SMEs are not affected by the relationships that are being built and that there is a degree of objectivity.

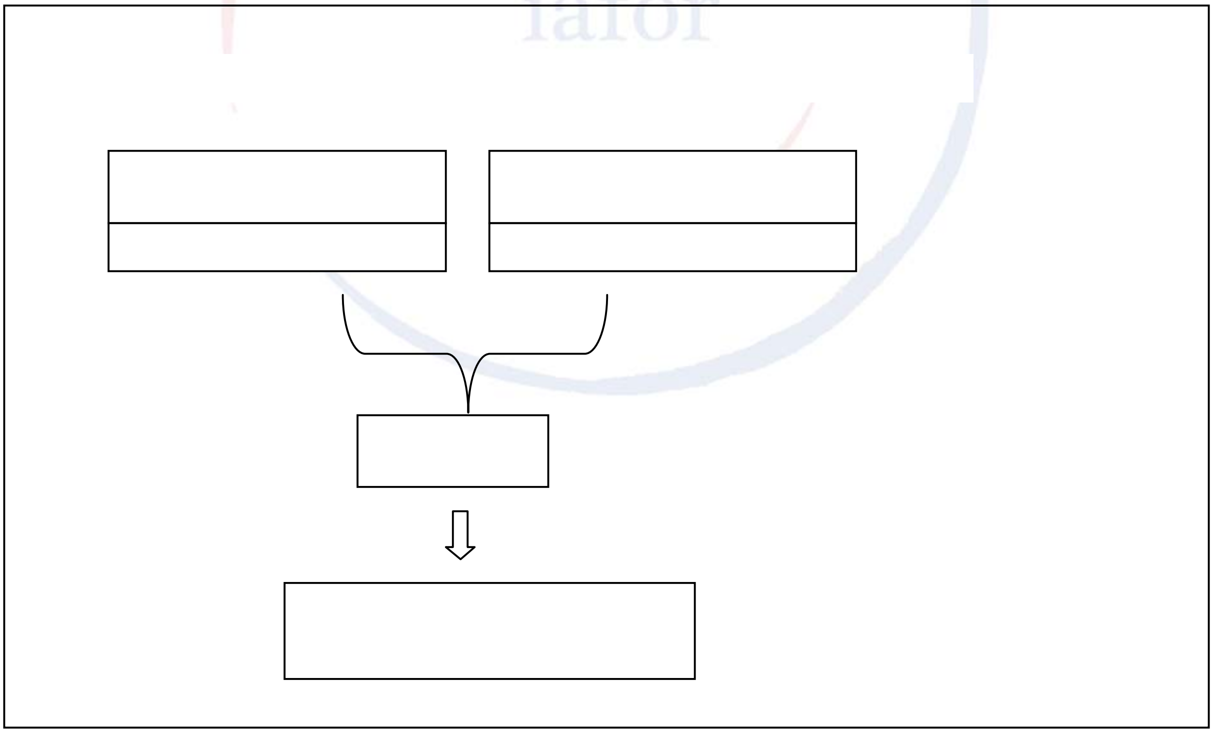
Unlike their larger cousins that might engage in-house managers to explore new markets or consultants to act as brokers to bridge the structural holes, These focal firms found other mechanisms to overcome the liability of newness and smallness of the SMEs moving out of their domestic settings to the host countries. These mechanisms are simple and not complex. Yet in their simplicity and accessibility they reveal the focal firms' tenacity and ingenuity.

Parallel processes at play in the search phase. There is both the gathering of information and the processing of the information gathered. The information gathered and process address the criteria discussed in prior research, those of competence, capability, compatibility and trust. What is interesting from the findings is the use of the mechanisms to obtain information. The avenues that the respondents relied upon involved relatively low cost. Participation at exhibitions and trade shows are part and parcel of marketing and sales but the respondents' accounts revealed the multiple purposes of the SMEs' participation. The exhibitions and shows facilitated an understanding of the host country's market, industry players and could also provide the occasional business and factory visits.

The interviews spoke about the level of comfort that the respondents had that led to the inclusion of prospects in a shortlist. This level of comfort is subjective in nature. It also suggests the use of heuristics such as rules of thumb by the SMEs in assessing the prospects. Further probing on the usefulness of company visits, revealed that SMEs could ascertain with confidence the competence and capability of the prospects through a factory visit. Case G boldly asserted that he had been in many factories producing optical accessories before and could tell at once whether the facilities were up to standard or not.

The level of comfort follows the information gathering and processing, which is the equivalent of due diligence that larger firms undertake. The SMEs' due diligence is less formal. They engage in background investigations. The SMEs have a range of tools in their investigation kits. They harness relationship building activities for background checks. They go as far as to test the prospects with initial orders. The initial orders enable them to check on the prospects' ability, quality of goods or services, and trustworthiness. One respondent went as far as to deliver to a prospect without any background checks and wholly on the basis his belief that the way forward in business is to risk US$20,000 in making a shipment.

There are three iterative processes that the SMEs are employing in the search phase: information gathering, information processing and judgement. The information gathering is evident from the findings on the mechanisms used to source for leads. Information gathering took the form of background checks, sample tests, relationship building, etc. Yet in all these the non-linear process suggests an iterative process, undergird by judgement being exercised by the SMEs in their search. Figure 1 below depicts in diagrammatic form the processes and activities employed in the search process.



Conclusion

This exploratory study reveals that there is much that can be learnt about the SMEs and their international forays. While this researcher had wondered about the ways SMEs could search for partners, through this research they have shown their resourcefulness and that their efforts are purposeful while opportunistic.

There are limitations to the study as it is interview based and only involved five SME-owners. It would be better to extend the study to validate its findings with other SMEs. The relevance of the findings may be confined to the context of SMEs moving out from Singapore, which is a developed economy, with SME-owners who may be better trained.

Further research is necessary as there is a need to understand the way that affect and information plays in the decision to shortlist or exclude a prospect. The respondents refer to a level of comfort, but do not provide further insights, which would be needed for a better understanding. The interplay of the processes of information gathering, processing and judgement also merit further investigation.

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THE STUDY OF AREA-SEGMENTATION WITH THE JOINT SEGMENTATION MODEL -THE CASE OF TOKYO METROPOLITAN AREA -

†Yoshiyuki Ishida[1], Yumi Asahi[2], Toshikazu Yamaguchi[3]

[1]Department of Engineering, Management Science,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
sub3164@ms.kagu.tus.ac.jp

[2]Department of Management Science,Faculty of Engineering,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
asahi@ms.kagu.tus.ac.jp

[3]Department of Management Science,Faculty of Engineering,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
yama@ms.kagu.tus.ac.jp

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†Yoshiyuki Ishida[1], Yumi Asahi[2], Toshikazu Yamaguchi[3]

[1]Department of Engineering, Management Science,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
sub3164@ms.kagu.tus.ac.jp

[2]Department of Management Science,Faculty of Engineering,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
asahi@ms.kagu.tus.ac.jp

[3]Department of Management Science,Faculty of Engineering,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
yama@ms.kagu.tus.ac.jp

Abstract.

Recently, the department store industry is exposed to difficult situations in Japan. As the market size has decreased 2 trillion yen since 1991, it is difficult to open new stores. Therefore, they aim at the increase of sales amount to survive in the industry by some methods such as business integrations, remodeling of in-store layout and reorganization of tenants purpose of activation of existing stores. Especially, activation of existing stores is one of the important marketing actions, because it is lower risks than new branches and business integrations. Above all, department stores are necessary to adopt good tenants to get profits, because they receive the greater part of profits from tenant's sales. Therefore, we focused on the problem of the optimum adoption of in-store tenants. This study suggested the model of tenant adoption based on integer linear programming on purpose to contribute the strategy of department stores. The data of the department store were collected from the 3 branches in the Tokyo metropolitan area for 1 year. On the basis of the present analysis, the authors found that customer behaviors exists two patterns, one is a trial customer group and another is a repeat purchasing group. In addition, we think that the tenant's adoption is not a problem that it only has to leave the tenant with only high sales. It is necessary to decide tenants consider the relations between tenants to keep away to loss excellent customers.

Keywords: category management, consumer behavior, in-store marketing, the EM algorithm, POS data

1. INTRODUCTION

Area-marketing is the method which changes products, services, prices and promotions, depending on area's demands and the situation of competitions. In Japan, it is said that area-marketing is essential for retail industry (Hirashita, 1997). The reason is that consumer's needs have become variety, and manufactures qualities have become equivalent, and it is said that many data (e.g., point of sales data, market data etc) has differences between areas. Then, retail companies change their strategies to be satisfied each demand.

Recently, it is made use of GIS (Geographic Information System) to analyze area information (Matsuoka, 2005). GIS is the system show various information on map at one time about the location data, the space data and consumer data. It is possible to grasp the demand distribution visually, to understand area characteristics for consumer acquisition and to plan the promotion strategy. However, it is difficult to show plural information on a map at one time because category of products and purchasers are manifold. Then we make segments in similar area, grasp segment characteristic, and integrate plural information and understand the differences between areas. This segmentation is called area-segmentation.

Area-segmentation is likely to be wrong area evaluation, because traditional area-segmentation is based on only census statistic data (population data, traffic data, etc). Census data is not able to measure differences of consumer's purchasing responses (Satomura, 2005). We think these responses must use in area-segmentation, not only census variable but also purchasing data.

This study focuses area-segmentation by using consumer's purchasing responses. And the joint segmentation model (V. Ramaswamy, R.Chatterjee and H.S.Cohen, 1996) is used this study for area-segmentation. The model is a latent class framework. By using this model, we are possible to include consumer's purchasing responses with a segmentation and use plural variables. We attempt to analyze area-segmentation about a case of department store at Tokyo metropolitan area.

2. OUTLINE OF THE JOINT SEGMENTATION

2.1 PREVIOUS RESEARCH

***V. Ramaswamy, R.Chatterjee and H.S.Cohen* (1996)**

The joint segmentation model was proposed by V. Ramaswamy, R.Chatterjee and H.S.Cohen in 1996. The model is a latent class framework for market segmentation with categorical data on two conceptually distinct but possibly interdependent bases for segmentation (e.g., benefits sought and usage of products and services). The joint latent segmentation model explicitly considers potential interdependence between the bases at the segment level by specifying the joint distribution of latent classes over the two bases, while simultaneously extracting segments on each distinct basis.

***Satomura* (2005)**

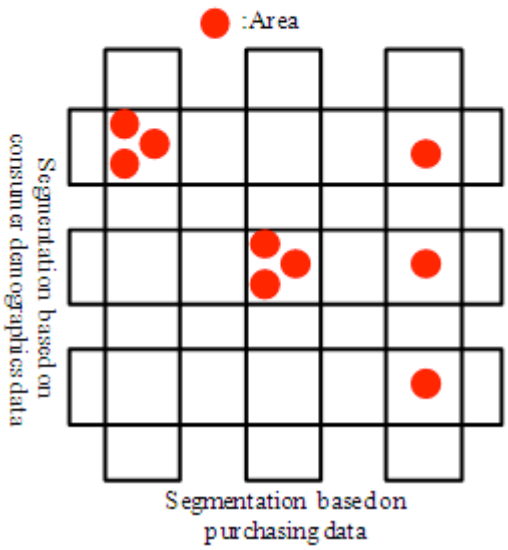
This traditional joint segmentation model is modified by Satomura(2005). In the study, two distinct bases is used as not categorical data, but non-categorical (quantitative) data and adapted to area-segmentation. The segmentation of this study was based on purchasing information and the residence area of consumers was classified clearly. But an object is local area in Japan and we think that we may examine different area.

2.2. MERITS OF THE JOINT SEGMENTATION

In this section, we explain merits which use the joint segmentation model for area-segmentation. There are four main reasons.

The first reason is that the joint segmentation considers interrelation between two distinct bases. If we segment two distinct basis, cluster analysis and cross tabulation is utilized. However, this method can't consider interrelation between two distinct bases. The joint segmentation considers interrelation, we classify it more clearly.

The second reason is that the joint segmentation model is the segmentation which uses all information. For instance, principal component analysis integrates information. For that reason, it is a risk to lose important information. In contrast, the joint segmentation classifies all information and it is no risk to lose it.



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The third reason is a perspective of the number of segment. General cluster analysis decides the number of cluster. Therefore, it involves subject of analysts. In contrast, the joint segmentation is able to decide the number of segments which are proper statistically.

The final reason is that this model fits well with area-segmentation. This model can use plural variables at once. Therefore, plural information can be shown on map at the same time when we use GIS for area-marketing analysis. Besides, it is possible to classify areas based on consumer behavior.

2.3. THE JOINT SEGMENTATION MODEL

In this study, we attempt to segment by using consumer demographics data and purchasing data with the joint segmentation.

Let

j: index segments on the first segmentation basis (j=1,…J)

k: index segments on the second segmentation basis (k=1,…K)

i: index variable in the set constituting the first basis for segmentation (i=1,…I)

d: index variable in the set constituting the second basis for segmentation (d=1,…D)
g: index the area in the sample (g=1,…G)

Now, we define the following:
x_{gd}: the number of demographic d consumer at area g
y_{gk}: the average purchasing money of products-category i at area g

The observed data consist of values of x_{gd} and y_{gk} over the sample. The variables x_{gd} consist of consumer demographics data. And the variable y_{gk} consist of purchasing data. In traditional latent class analysis (Dillon and Kumar 1994), a singles set of latent classes is specified and estimated. In the joint segmentation model (V Ramaswamy R Chatterjee and H S Cohen, 1996), it is focused on two distinct but potentially interrelated segmentation bases. In the study of Satomura (2005), two distinct segmentation bases are supposed multinomial distribution and normal distribution. In contrast, we treat both of bases as normal distribution.

For a given area g, the first segmentation basis follow normal distribution, the likelihood function of the first segment j can be specified as

$$f_j(X_{\mathbf{gs}}) = f_j(y_{g1},\ldots,y_{gD}) = \prod_{d=1}^{D} \frac{1}{\sqrt{2\pi\sigma_{jd}^2}} \exp\left(-\frac{1}{2\sigma_{jd}^2}\left(y_{gd}-\beta_{jd}\right)^2\right) \quad (1)$$

where
$\beta_{jd:}$ the means of normal distribution on the first segment j on the first segmentation basis d
σ_{jd}^2: the variance of normal distribution on the first segment j on the first segmentation basis d
$f_j(\mathbf{x_g})$: the likelihood of the first segment j

For a given area g, the second segmentation basis follow normal distribution, the likelihood function of the second segmentation can be specified as

$$f_k(\mathbf{y}_{\mathbf{gs}}) = f_k(y_{g1},\ldots,y_{gI}) = \prod_{i=1}^{I} \frac{1}{\sqrt{2\pi\sigma_{ki}^2}} \exp\left(-\frac{1}{2\sigma_{ki}^2}\left(y_{gi}-\beta_{ki}\right)^2\right) \quad (2)$$

where
$\beta_{ki:}$ the means of normal distribution on the first segment k on the second segmentation basis i
σ_{ki}^2: the variance of normal distribution on the first segment k on the second segmentation basis i
$f_k(\mathbf{y_g})$: the likelihood of the second segment j

Now, let φ_{jk} denote the joint probability of an area belonging to segment j and segment k, such that

$$0 < \phi_{jk} < 1, \quad \sum_{j=1}^{J} \sum_{k=1}^{K} \phi_{jk} = 1 \quad (3)$$

The likelihood function for the sample of g area is thus given by

$$L_g(\mathbf{x_g},\mathbf{y_g}) = \sum_{j=1}^{J}\sum_{k=1}^{K}\phi_{jk}\left\{f_j(\mathbf{x_g})\cdot f_k(\mathbf{y_g})\right\} \quad (4)$$

The likelihood function for the sample of G areas is thus given by

$$L = \prod_{g=1}^{G} L_g(\mathbf{x_g},\mathbf{y_g}) = \prod_{g=1}^{G}\sum_{j=1}^{J}\sum_{k=1}^{K}\phi_{jk}\left\{f_j(\mathbf{x_g})\cdot f_k(\mathbf{y_g})\right\} \quad (5)$$

The parameters to be estimated consist of θ_{jd}, β_{ki}, σ_{ki}^{2} and φ_{jk} for particular values of J and K. The parameters are adopted when the likelihood is estimated to the maximum. And it would be estimated to maximum likelihood estimation. However, the likelihood function (5) is complicated, it is possible for the likelihood calculated by numerical optimization not to be the maximum values.

In this study, maximum likelihood estimation is carried out using the EM algorithm, which is probably the most popular estimation approach and conventional joint segmentation model used this approach. The EM algorithm is a method for finding maximum likelihood estimates of parameters in statistical models, where the model depends on unobserved latent variables. EM is an iterative method which alternates between performing an expectation E-step, which computes the expectation of the log-likelihood evaluated using the current estimate for the latent variables, and a maximization M-step, which computes parameters maximizing the expected log-likelihood found on the E-step. These parameter-estimates are then used to determine the distribution of the latent variables in the next E-step.

To carry out the EM algorithm, unobserved latent variables z_{gjk} is given. z_{gjk} is 1 if area g belongs segment j and segment k, 0 otherwise.

The log-likelihood for the complete information logL_c is thus given by

$$L_C = \prod_{g=1}^{G}\sum_{j=1}^{J}\sum_{k=1}^{K}\left\{\phi_{jk} f_j(x)\cdot f_k(y)\right\}^{z_{gjk}}$$

$$\log L_C = \sum_{g=1}^{G}\sum_{j=1}^{J}\sum_{k=1}^{K} z_{gjk}\log\phi_{jk} + \sum_{g=1}^{G}\sum_{j=1}^{J}\sum_{k=1}^{K} z_{gjk}\log\psi_{g|jk} \quad (6)$$

where

$$\psi_{g|jk} = f_j(\mathbf{x_g})\cdot f_k(\mathbf{y_g})$$

$$= \left(\frac{1}{\sqrt{2\pi\sigma_{jd}^{2}}}\exp\left(-\frac{1}{2\sigma_{jd}^{2}}\left(y_{gd}-\beta_{jd}\right)^{2}\right)\right)\left(\frac{1}{\sqrt{2\pi\sigma_{ki}^{2}}}\exp\left(-\frac{1}{2\sigma_{ki}^{2}}\left(y_{gi}-\beta_{ki}\right)^{2}\right)\right) \quad (7)$$

E-step

E-step is calculated the expected value of the log likelihood function, with respect to the conditional distribution of z given observed parameter $F(\mathbf{x_{gd}},\mathbf{y_{gi}})$ under the current estimate of the parameters *logLc*.

$$E_z[\log L_C] = \sum_{g=1}^{G}\sum_{j=1}^{J}\sum_{k=1}^{K} E[z_{gjk}\mid F]\log\phi_{jk} + \sum_{g=1}^{G}\sum_{j=1}^{J}\sum_{k=1}^{K} E[z_{gjk}\mid F]\log\psi_{jk} \quad (8)$$

where

$$E[z_{gjk} \mid F] = \frac{\phi_{jk}\psi_{g|jk}}{\sum_j \sum_k \phi_{jk}\psi_{g|jk}} \quad (9)$$

M-step

M-step is found the parameter that maximizes $E_z[logL_c]$.

3. THE RESULT OF ANALYSIS

In this section, we estimate the model using POS data of department store in Japan. The data analyzed here consist of 49 areas at Tokyo metropolitan area, during April 1, 2008 and March 31, 2009. Residence areas of consumers can be distinguished by zip code. The number of 49 areas at Tokyo which purchased in this department store between April 1 and July 31, 2008 was selected. Sex and age of consumer is made use of demographics data, each brand store in department store is made use of product categories.

By applying the joint segmentation model, we extracted 4 segments based on demographics data and 3 segments based on purchasing data (BIC= -997.04). This solution was chosen after examining BIC values which keep BIC to a minimum, which are shown in Table 1. The combination is interpreted as the validest combination.

Table 1

BIC VALUES FOR DIFFERENT SOLUTION

Number of segments based On demographics data	Number of segments based on purchasing data		
	2	3	4
2	-273.65	-704.06	-561.72
3	-651.03	-745.58	-823.31
4	-776.51	**-997.04**	-984.31

Table 3

Table 2

VALUES OF PARAMETER β_{jd}

Female demographics	The fist segmentation			
	Segment 1A (***Great Area***) 15.4%	Segment 1B (***Good Area***) 25.0%	Segment 1C (***Not Good Area***) 25.0%	Segment 1D (***Bad Area***) 34.6%
20 – 24 years old	3.149	1.162	-0.458	-0.104
25 – 29 years old	4.229	1.721	-0.445	-0.082
30 – 34 years old	2.040	0.566	-0.490	-0.315
35 – 39 years old	0.850	-0.033	-0.511	-0.429
40 – 44 years old	0.195	-0.274	-0.515	-0.476
45 – 49 years old	0.133	-0.284	-0.518	-0.470
50 – 54 years old	-0.035	-0.364	-0.523	-0.490
55 – 59 years old	-0.263	-0.439	-0.526	-0.511

Clothing for woman	1.887	1.398	2.740
Bag for woman	0.096	0.038	0.003
Shoe for woman	0.369	0.274	0.489

In Table 2 and 3, the means of normal distribution is shown (β_{jd}, β_{ki}), which makes

Table 4

MATRIX OF ESTIMATED JOINT PROBSBILITIES

	Heavy Needs	***Light Needs***	***Only Clothing Needs***
Great Area	15.4%	0%	0%
Good Area	25.0%	0%	0%
Not Good Area	5.3%	19.7%	0%
Bad Area	0%	19.1%	15.5%

us known a interpretation of each segment. In Table 2, the first segmentation is extracted 4 segments. There is characteristic that main consumer is young people in this department store. Under the influence of the characteristic, the parameters of all segments show high value about young generation (e.g., demographics of 20 – 24 years old and 25 – 30 years old). That is to say, the first segmentation is classified under only the number of consumer. In segment 1A (15.4% of the total sample), appears to be characterized that all parameter values are higher than other segments. We can know that areas belong to segment 1A has many consumers and the areas are very important for the department store. Segment 1A would be interpreted as "***Great area***". The parameters of segment 1B (25.0% of the total sample) show high values next to segment 1A. Segment 1B would be interpreted as "***Good area***". In contrast, segment 1C (25.0% of the total sample) and segment 1D (34.6% of the total sample) are estimated lower than segment 1A and 1B. We would interpret that areas belong to segment 1C and segment1D has few consumers. Especially, the parameter of segment 1D is very small. Segment 1C and segment1D would be interpreted as "***Not good area***" and "***Bad area***".

In Table 3, the second segmentation is extracted 3 segments. There are some characteristic about product category. Firstly, segment 2A (45.7% of the sample) appears to be characterized by *Glasses*, *Watch and Clock* and *shoe for man*, which are expensive compared with other categories. Areas of this segment tend to purchase expensive products comparatively and a purchasing amount of money is larger than other segments. Segment 2A would be interpreted as "***Heavy needs***". Secondly, the parameter values appear not to be different between segment 2A and segment 2B. The parameters of segment 2B (38.8% of the sample) are estimated a little smaller than that of segment 2A compare with each parameter. In the areas belong to segment 2B, a purchasing amount of money is smaller than segment 2A. Segment 2B is interpreted as "***Light needs***". Finally, segment 2C (15.5% of the sample) appears to be characterized by Clothing for man and Clothing for woman. And other categories, especially expensive categories (e.g., Interior, Jewelry, Glasses, Watch and Clock), is practically small. In this segment, clothing (relatively low prices) is purchased mainly. Segment 2C would be interpreted as "***Only clothing needs***".

The belonging probability (φ_{jk}) of each segment is shown in Table 4. We can know that all areas of *Great Area* and *Good Area* belong to *Heavy Needs* (15.4% and 25.0%). In the segment of *Great area* and *Good area,* there would be demands which purchase expensive products, such as *watch and clock* and *glasses*. In the segment of *Not Good Area*, there are *Heavy Needs 1*(5.3%) and *Light Needs* (19.7%). Finally, there are *Light Needs* (19.1%) and *Only Clothing Needs* (15.5%) in *Bad Area*. In Table 4, we can know that areas with much number of consumers tend to have demands to purchase a lot. In contrast, an area with little number of consumers tends to have a few demands to purchase something.

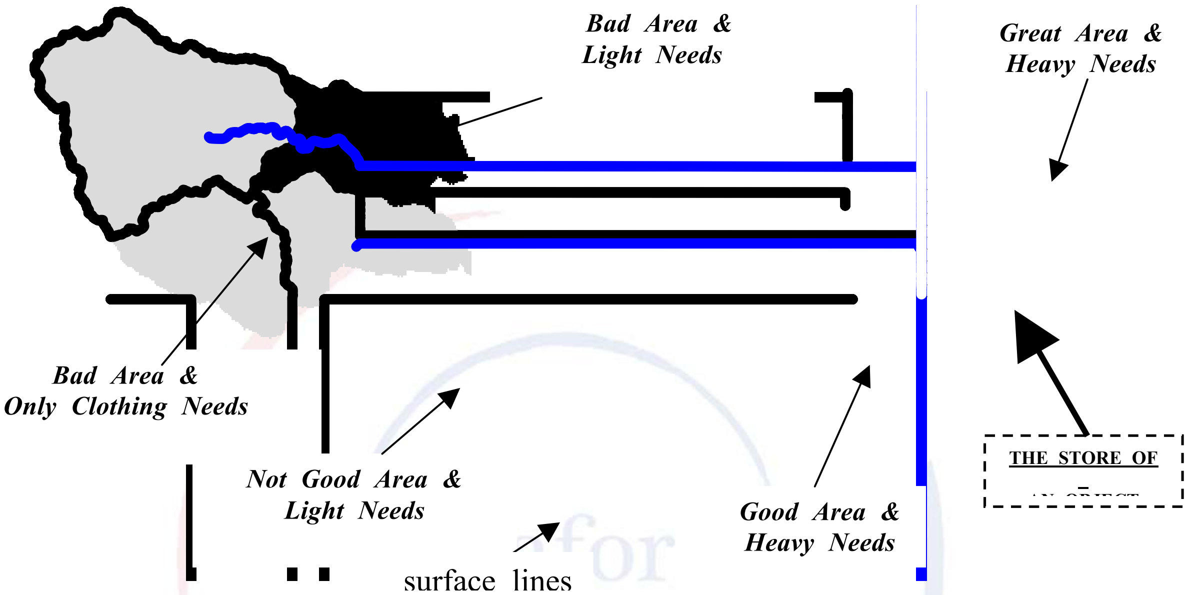
In Figure 1, the result of segmentation around Tokyo metropolitan area is shown on map.

After estimations of parameters, the segment which area g belongs is decided so as to maximize the posterior probability. The posterior probability is thus given by the following.

$$\Pr(g \in j,k) = \frac{\phi_{jk}\{f_j(x_g)\cdot f_k(y_g)\}}{\sum_{j=1}^{J}\sum_{k=1}^{K}\phi_{jk}\{f_j(x_g)\cdot f_k(y_g)\}} \qquad (10)$$

Figure 1

THE AREAS BELONGS TO EACH SEGMENT



We can know that the segments of "*Great Area & Heavy Needs*" and "*Good Ares & Heavy Needs*" are allocated near the store. In contrast, the segments of "*Not Good Area & Light Needs*", "*Bad Area & Light Needs*" and "*Bad Area & Only Clothing Needs*" are allocated far in the store. The segmentation would be dependent on the distance between the store of an object and an area. An area near the store has a tendency that there are a lot of consumers of this department store, and the consumers have heavy demands to purchase something comparatively. Around the store, areas are divided into the west segment and the east segment. The reason is that purchasing - information would be influenced of surface lines (JR Yamanote Line). If we would like to get Repeaters, we should approach the segments of "*Great Area & Heavy Needs*" and "*Good Area & Heavy Needs*". On the business, we can use this segmentation as the following.

- Because it is difficult to plan strategies in all areas, it would be carried out to each segment by assuming homogeneities on the same segment.
- When marketer uses GIS, it is difficult to display plural information at one time. It is possible for area-segmentation to integrate information.
- Based on this segmentation, it is possible for retail marketers to use other variables for analyzing (e.g., other demographics data, sales data of each tenant) .

4. CONCLUSION

In this study, we used the framework of the joint segmentation model and classified areas as a case of Tokyo metropolitan area based on two distinct bases (the first segmentation is demographics data, the second segmentation is purchasing data) for area-marketing. We can discover the deference between each segment. As the result of analysis, areas of the sample were extracted 4 segments based on demographics data and 3 segments based on purchasing data. We found that the result of segmentation depended on geographic data for sure. However, by applying purchasing data with area-segmentation, we could get the result which based on consumer behaviors. It is useful for retail marketer to plan area-strategies based on consumer behaviors.

Future research can be said three points. First point is that our data is the ward level segmentation. Therefore, if we can get address in detail, it is possible to classify areas more useful. Second point is that some department stores have plural branches in Tokyo metropolitan area. And there are possibilities that trading area overlap. Therefore, it is forceful if we know which branches should execute sales promotion in the area. We would like to consider plural branches on the joint segmentation model. Final point is that a great part of sales consist of the sales of tenants belong to department store in Japan. It is important for department stores to adapt tenants and we expand to the problem of tenant adaption.

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The Rise of China's Middle Class and its Impact upon Chinese and Global Economies----
From the Perspective of the Shift in Consumer Behavior

Szu-Yuan Liu
College of Management, Yuan Ze University
Yuan-Tung Road, Chungli, Taoyuan , Taiwan
alan-liu@live.com

Abstract

The issue of China's economic rise has been widely discussed and explored among economists. China has been regarded as the richest country in the world as its foreign exchange reserves have reached \$1 trillion, the highest ranked in the world. Sound financial system and vast financial resources contribute to significant economic bases on which China becomes able to formulate and then to implement pivotal financial policies.

China's vigorous economic growth, in many ways, gives rise to middle class masses, who mostly inhabit eastern and southern coastal areas. It has been argued that in 2030 38% of middle class masses in the world will be living in China. The middle class masses have shown incredible consuming power. Moreover, their increased income and luxurious lifestyle lead to the shift in consumer behavior in this "socialist" country. The very shift might have exerted considerable influence upon both China's economic development and global economy.

My paper aims to explore China's economic rise and its impact upon global economy from the perspective of the shift in consumer behavior by focusing on the interaction between China's economy and global economy, the contexts from which contemporary mainland Chinese middle class arises, the shift in contemporary mainland consumer behavior and its impact upon China's economic development and global economy. This paper employs existing data research as its main research method.

Keywords: China's economic rise, middle class masses, the shift in consumer behavior, global economy

1. Introduction

Every society has certain types of hierarchical class structure, which dominate people's access to products and services. Mainland China represents a significant society, where an economic boom is rapidly and continually constructing a middle class estimated at more than 130 million people (Lynch, 2002). Notably, its middle class is expected to grow to more than 400 million in the mid-2010s (Lynch, 2002).

It is unbelievable that during the Cultural Revolution (1966-1976), Mao's Red Guards even accused people of being poisoned by 'bourgeois consciousness' since they possessed a pocket watch or silk scarf. However, the situation has been dramatically changed in the 1980s as Mao's successor Deng Xiaoping claimed the credo of the new China that to get rich is glorious (Chandler, 2004). As a result of Deng's Economic Reforms, China's vigorous economic growth, in many ways, gives rise to middle class masses, who mostly inhabit eastern and southern coastal areas. Interestingly, because living costs are low, a Chinese middle class family with an annual income below the U.S. poverty threshold of about $14,000 becomes capable of enjoying luxurious comforts, including stylish, clothes, Chinese-made color televisions, DVD players, and cellphones (Chandler, 2004). More significantly, Chinese economic reforms have contributed to wealthier Chinese entrepreneurs who indulge in Cuban Cohiba cigars that sell for $25 each, a quarter of the average Chinese laborer's monthly wage (Flannery, 2004).

It has been argued that 'China's middle class today is large in absolute terms – at 157 million people, only the United States has a larger middle class' (Kharas & Gertz, 2010). China used to be a worldly factory producing a vast amount of products for global consumers. Nowadays, its middle class masses have shown incredible consuming power. Moreover, their increased income and luxurious lifestyle lead to the shift in consumer behavior in this "socialist" country. The very shift might have exerted considerable influence upon both China's economic development and global economy.

This paper aims to explore China's economic rise and its impact upon global economy from the perspective of the shift in consumer behavior by focusing on the contexts from which contemporary mainland Chinese middle class arises, the shift in contemporary mainland consumer behavior and its impact upon China's economic development and global economy.

2. Arguing with Middle Class Consumption: A Critical Review

2.1 The relationship between income and social class

In spite of the fact that consumers intend to hold the view that income/money is tantamount to class, the complex relationships among other aspects of social class and income need to be carefully examined and have been widely debated among social scientists(Coleman, 1983; Schaninger, 1981). Income/money and class are by no means synonymous. The former does not necessarily or essentially contribute to the latter. This is why many rich people still need to make considerable efforts, by making use of their income/money, in order to upgrade their social class.

There exists complicacy between family income and class. Coleman and Schaninger have argued that even though a family expands household income by dint of adding wage earners, it is possible that each additional job will be of lower status (Coleman, 1983; Schaninger, 1981). For instance, a familial member who gets a part-time job is not as likely to get one that is of equal or greater status than the main wage earner's full-time job. Moreover, the extra money earned is less likely to be managed for the common good of the family. Instead, the member who earns the money tends to use it for his/her own personal spending.

Thus, according to Coleman and Schaninger, more money does not necessarily contribute to increased status or shifts in consumption patterns since it is likely to be used to consume more of the usual rather than to upgrade to higher-status products (Coleman, 1983; Schaninger, 1981). Regarding the relative value of social class (i.e., place of residence, occupation, cultural interests, etc.) versus income in predicting consumers' choices of products that are bought for functional reasons versus those bought primarily for symbolic reasons (e.g., to convey a desired impression to other), Coleman suggests that social class appears to be a better predictor of purchases that have symbolic aspects, but low to moderate prices (e.g., cosmetics, liquor) (Coleman, 1983). For Coleman, income is a better predictor of major expenditures that do not have status or symbolic aspects (e.g., major appliances). Researchers need to collect both social class and income data in order to predict purchases of expensive, symbolic products (e.g., cars, home).

Given the above argument, we may make the following general conclusions regarding the relative value of social class (i.e., place of residence, occupation, cultural interests, etc.) versus income in predicting consumers' choices of products that are bought for functional reasons versus those bought primarily for symbolic reasons (e.g., to convey a desired impression to other): social class appears to be a better predictor of purchases that have symbolic aspects, but low to moderate prices (e.g., cosmetics, liquor). Income is a better predictor of major expenditures that do not have status or symbolic aspects (e.g., major appliances). We may need to collect both social class and income data in order to predict purchases of expensive, symbolic products (e.g., cars, home).

2.2 How social class influences purchase decisions

It has been argued that consumers tend to perceive of different products and stores as appropriate for certain social classes (Munson & Spivey, 1981). Rich and Jain have observed that working-class consumers tend to evaluate products in a more utilitarian way; that is, they may be more likely to consider sturdiness or comfort rather than style or fashionability when shopping. For Rich and Jain, working-class consumers seem to be less interested in new products or styles, such as modern furniture or colored appliances (Rich; Jain, 1968). Osborn has maintained that the wealthy tend to be more concerned about appearance and body image. Thus, they may be more interested in diet foods and drinks (Osborn, 1987). The very difference mentioned above may provide marketers with the information that they need to use class standing so as to segment markets for soft drinks and other similar products (Osborn, 1987).

In needs to be noted that all the research mentioned above focuses on American society and consumers (Munson & Spivey, 1981; Osborn, 1987; Rich & Jain, 1968). The employment of the findings of the research in order to explain China's counterparts remains arguable and insufficient as it dismisses the socio-cultural difference between the US and China.

2.3 An Outline of China's Middle Class

According to Zhang, the so-called middle class within current Chinese society refers to those who possess a certain degree of knowledge and professional reputation and mainly serve as mental labors. They make a living by wages and salaries and work in a better environment. They become able to consume some luxurious products due to their comparatively high household income. They tend to spend a certain amount of time on leisure activity and pay more attention to civil rights and morality. In sum, from the perspectives of economic, political and socio-cultural status, they occupy the middle of the hierarchy (Zhang, 2002).

Zhang's definition of current Chinese middle class contributes to seven critical points. She argues that by dint of these points one may judge if a Chinese is a middle class: (1) a certain degree of knowledge and professional reputation; (2) engaging in mental labor such as computer programming, technology, management, professorship, and so forth; (3) occupational power over subordinates, affair arrangement and office equipment; (4) a Chinese middle class's annual income is estimated to be 25000-35000 RMB; (5) a Chinese middle class's educational background is, averagely speaking, to hold a BA degree or its equivalent; (6) a Chinese middle class seeks not only material abundance but also cultural or spiritual gratification; (7) a Chinese middle class pays more attention to civil rights and morality (Zhang, 2002) .

Zhang states that the main social function of middle class lies in its ability to consolidate the established order that a modern society necessitates. Middle class, in her eyes, may well functions to mediate the contradiction between the upper class and the lower class and to uphold the so-called 'middle values' (Zhang, 2002). Yet, Zhang's above view seems to overly embellish the role of middle class, and therefore ignore the fact that middle class, in many ways, plays the key in obstructing radical social reforms.

3. Research method and analysis

3.1 Research Method

This paper employs existing data research as its main research method. I will widely and critically collect related literature and data in order to provide a comprehensive analysis of the interaction between the rise of China's economy and the rise of China middle class and of how the rise of China middle class contributes to the shift in Chinese consumer behavior and how the very shift in turn impact upon both China's economy and its global counterpart.

3.2 The Contexts from which China's Middle Class Arose

There are two conditions on which China increasingly transforms itself into a middle class society. First, after its full industrialization, China has been gradually moving its former planned economy toward a free market economy. Significantly, the subjectivity of middle class, in many ways, characterizes a free market economy. Second, since the economic reform, the rise of private enterprise and an increase in white collars predict the shift in China's economic structure. Moreover, the economic reform has, to a certain extent, led to significant effects such as the flow of information and free activity space. Based on the flow of information and free activity space, the new social power has emerged.

Notably, the economic reform also contributes to guiding principles such as 'developing a new country based on science and technology' and 'developing high-tech industry zones'. Under these principles, there has emerged a new type of middle class characterized by being specializing in high technology. One of the dogmas remaining at the core of the above guiding principles is that 'some certain people become rich in advance, and then they would make all the other people rich altogether'. The very dogma, in Fu's words, to a large extent and in many ways, gives rise to China's middle class (Fu, 2004).

According to a report by National Bureau of Statistics of China (2000), in 1980 the people's income of GDP is 57%; yet, in 2010 it has increased to 81% (NBSC, 2000). This may mean that these middle class people signify an impetus to, on the one hand, China's economic development, and on the other, to a transformation of economic achievement into people's private wealth (Fu, 2004).

4. Research Results

4.1 China's Middle Class's Impact on its Consumer Culture and Economy

Max Webber points out that the social networks status groups constitute contribute to social stratification. Middle class exemplifies a model in terms of consumption. The ways they consume signify their social status and economic capital. Middle class is viewed as playing the key in stabilizing society because of their consumption power. In particular, their powerful consumption of real estate, motor vehicle, cell phone, computer and education becomes the main factor contributing to China's economic development (Zhi, 1995). Furthermore, due to their powerful consumption, Chinese middle class has begun to dominate the formation of consumer culture and to shape the fashionablity within current Chinese society (Zhi, 1995). The consumption power the middle class dominates turn out to influence China's economic development. That is, under the influence, China's economy has transformed itself from the production-oriented to the consumption-oriented. China, however, is becoming the greatest and most noticeable market in the world.

4.2 China's Middle Class's Impact on its Consumption Structure

The shift in consumption structure may be influenced by per capita income, market supply and changes to the class structure (Lee, 2005: 67). Lee maintains that due to the rise of middle class, China has transformed itself into a 'well-off'

(Xiaokang) society. As a result of the transformation, its consumption structure has transformed from what we need to what we may consume. As Yang argues, the transformation of consumption structure has exerted considerable influence on both China's society and economy (Yang, 2005). Zhang has observed that the very transformation has emerged in rural areas as installment payment has been introduced to the inhabitants (Zhang, 2005: 275). In other word, through installment payment, the once middle class luxuries can be recently consumed by the poorer living in rural areas. In a sense, consumerism characterized by middle class lifestyle has dominated the whole Chinese society.

4.3 China's Middle Class's Impact on Global Economy

As China has transformed itself into a consumerist society and has become the greatest and most noticeable market, global enterprises have subsequently and competitively entered the market. In terms of market consumption, China is not just a rising star. Rather, China has proved itself to be a superstar. China has dominated global political order but also global economy. The phenomenon of China Fever will continue to attract global attentions.

5. Conclusion

The issue of China's economic rise has been widely discussed and explored among economists. China has been regarded as the richest country in the world as its foreign exchange reserves have reached $1 trillion, the highest ranked in the world. Sound financial system and vast financial resources contribute to significant economic bases on which China becomes able to formulate and then to implement pivotal financial policies.

China's vigorous economic growth, in many ways, gives rise to middle class masses, who mostly inhabit eastern and southern coastal areas. It has been argued that in 2030 38% of middle class masses in the world will be living in China. The middle class masses have shown incredible consuming power. Moreover, their increased income and luxurious lifestyle lead to the shift in consumer behavior in this "socialist" country. The very shift might have exerted considerable influence upon both China's economic development and global economy.

My research suggests that the consumption power of China's middle class has impacted not only on its consumer culture and economy but also on its consumption structure. It also argues that China has dominated global political order but also global economy. As the phenomenon of China Fever will continue to attract global attentions, to know more about the consumption of China's middle class may be a fascinating way to appreciating China's economic development, consumer culture, market consumption and its economic interactions with the global market.

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Title : Learning Organization Practices for Global Business: The Role of Transformational Leaders

Authors : Norashikin Hussein

Noormala Amir Ishak (Professor, Dr.)

Fauziah Noordin (Professor, Dr.)

Affiliations : Universiti Teknologi MARA, Shah Alam, Malaysia

Contact information : Norashikin Hussein (shikin6320@salam.uitm.edu.my / 6019-7254231)

Topic of the Submission : Others

Learning Organization Practices for Global Business: The Role of Transformational Leaders

In response to the challenges of globalization, many organizations are moving to adopt the strategy of continuous learning as a source of competitive advantage. The current study attempts to examine the link between transformational leadership and learning organization practices. The statistical results obtained from 150 manufacturing firms in Malaysia indicate significant positive relationship between transformational leadership and learning organization practices. This finding suggests that leadership is important to generate learning in the organization. Specifically, transformational leadership style that is characterized by shared vision, mutual trust, and respect for subordinates' ideas and feelings tend to generate an organization that continuously learns.

Keywords: Learning Organization, Transformational Leadership

Introduction

Today's business arena is characterized by turbulent changes in the business environment and fierce competition in the global market. Challenges of globalization have put increasing pressure on organizations' ability to respond quickly and adequately to change. Organizations are starting to realize that they will not survive if they do not adapt to the situation. Researchers (e.g., Janz & Prasarnphanich, 2003; Lynn, Akgun, & Keskin, 2003; Wilhelm, 2006) have widely acknowledged that the only sustainable advantage an organization will have in the future is its ability to learn faster than its competitors. As most of the organizations understand that learning means competitive advantage, many agreed that it is important to transform their organizations to be an effective learning organization (Atak & Erturgut, 2010; Rowden, 2001; Senge, 1990).

A learning organization is an organization where learning and work are integrated to maintain continuous improvement of the organization (Watkins & Marsick, 1996). In a learning organization, learning involves three levels; namely individual, group and organizational level (Watkins & Marsick, 1993). The earlier writings of learning organization were theoretical in nature (e.g., Pedler, Boydell, Burgoyne, 1989; Senge, 1990). However, Yang and Qu (2007) note that empirical studies on learning organization tend to be growing. Most writings (Ellinger, Ellinger, Yang, & Howton, 2002; Senge, 1990) on learning organization have consistently identified learning organization as crucial to organizational effectiveness. As organizations are under pressure to change, being a learning organization is thus advocated as an appropriate paradigm in managing all types of organizations (Armstrong & Foley, 2003; Burnes, Cooper, & West, 2003). Learning organization has been said to improve performance (e.g., Ellinger, Ellinger, Yang & Howton, 2002; Yeo, 2003); innovation (e.g., Liao, 2006), and organizational commitment (e.g., Atak & Erturgut, 2010).

Despite the growing interest on the learning organization concept, Atak and Erturgut (2010) highlighted that leaders today have difficulties in transforming their organizations into learning organizations. This maybe due to little evidence available suggesting which leadership style best supports the building of learning organizations (Politis, 2002; Zagorsek, Dimovski & Skerlavaj, 2009). The importance to understand the role of leaders in facilitating learning in the organization has indeed been outlined by few researchers (e.g., Senge, 1990, Marsick & Watkins, 2003; Vera &

Crossan, 2004; Zagorsek et. al., 2009). Senge (1990) for example highlighted that one of the barriers to the successful creation of learning organization is the lack of effective leaders. Nevertheless, the scarce empirical evidence does indicate that certain types of leadership behaviours such as supportive and empowering (e.g., Aragon-Correa, Garcia-Morales, & Cordon-Poza, 2007) influence learning in organizations. Since transformational leadership has been described as one of the important means of developing an effective organization (Yammarino & Bass, 1990; Bass, 2000), it is interesting to explore the link between transformational leadership and learning organization. Moreover, this issue has received minimal attention in the Malaysian context. To fill this gap, this study attempts to provide empirical evidence of how transformational leaders promote the development of learning among manufacturing organisations in Malaysia.

The Learning Organization

The need for organizations to 'learn' if they are to thrive in increasingly competitive and rapidly changing environment is well established in the literature (Ellinger et al., 2002, Senge, 1990). The many conceptions of learning organization depend on the perspective of the scholars. For example Tsang (1997) and Garavan (1997) views learning organization as an ideal form of an organization. Armstrong and Foley (2003), and Gardiner (1999) on the other hand consider learning organization a new management paradigm.

Although interest in learning organization has increased dramatically, there is also an issue of conceptualizing the learning organization itself. Senge (1990) who applies system thinking approach believes a true learning organization is an organization which regenerates itself through learning. According to Senge (1990), there are five components which are essential to a learning organization: shared vision, personal mastery, mental models, team learning and systems thinking. Pedler, Boydell, and Burgoyne (1989) take a learning perspective and proposed eleven dimensions that make up a learning organization. They are learning approaches to strategy, participative policy making, informating, formative accounting and control, internal exchanges, reward flexibility, enabling structures, boundary workers, inter-company learning, learning climate, and opportunities for self development. The cultural perspective of learning organization believes at developing learning culture at the individual, group, and systems levels so as to continuously transform and grow (Yang & Qu, 2007). Using this perspective, Watkins and Marsick (1993) identified seven distinct, but interrelated, dimensions of the concept at individual, team, and organizational levels. Watkins and Marsick (1993) believes learning organization as one that: (a) creates continuous learning opportunities; (b) promotes inquiry and dialogue; (c) encourages collaboration and team learning; (d) establishes systems to capture and share learning; (e) empowers people toward a collective vision; and (f) connects the organization to its environment and (g) provides strategic leadership for learning. In this study, Watkins and Marsick's (1993, 1996) seven dimensions of the learning organization was adapted as it is specifically designed to evaluate learning activities in the organization. Table 1 provides the definition of each of the dimensions of a learning organisation.

Table 1
Dimensions and Definitions of Learning Organization

Dimensions	**Definition**

Create continuous learning	Learning is designed into work so that people can learn on the job; opportunities are provided for ongoing education and growth.
Promote inquiry and Dialogue	People gain productive reasoning skills to express their views and the capacity to listen and inquire into the views of others; the culture is changed to support questioning, feedback, and experimentation.
Encourage collaboration and team learning	Work is designed to use groups to access different modes of thinking; groups are expected to learn together and work together; collaboration is valued by the culture and rewarded.
Create systems to capture and share learning	Both high- and low-technology systems to share learning are created and integrated with work; access is provided; systems are maintained.
Empower people toward a collective vision	People are involved in setting, owning, and implementing a joint vision; responsibility is distributed close to decision making so that people are motivated to learn toward what they are held accountable to do.
Connect the organization to its environment	People are helped to see the effect of their work on the entire enterprise; people scan the environment and use information to adjust work practices; the organization is linked to its communities.
Provide strategic leadership for learning	Leaders model, champion, and support learning; leadership uses learning strategically for business results.

Source : Marsick and Watkins (2003)

Transformational Leadership and Learning Organization

The development of learning organization requires leaders that are responsible for fostering learning in the organization (Senge, 1990). In this context, leaders provide vision, motivation, systems and structures at all levels of the organization to facilitate organizational learning, thus developing the organization to be a learning organization. The concept of transformational leadership is associated with the work of Burns (1978) and later Bass (1985). Transformational leadership refers to a leadership style that instills values to the subordinates to support visions and goals of the organization (Bass, 1985). The five factors that comprise transformational leadership are encouraging subordinates to view problems from new perspectives (intellectual stimulation), provide support and encouragement (individualized consideration), communicate vision (inspirational motivation), and stimulate emotion and identification (idealized influence) (Bass & Avolio, 1990). According to Bass (1990), transformational leaders possess good positioning as well as management skills. They use this skill to develop strong emotional bonds with their subordinates to help them exceed their present level of performance. Additionally, transformational leaders are concerned with subordinates' achievement, development, motivate interest among colleagues and subordinates to view their work from new perspectives, generate awareness of the mission or vision of the team and organization, develop colleagues and followers to higher levels of ability and potential, and motivate others to transcends self-interest to benefit the group as a whole (Bass & Avolio, 1990). Bass (1985) argued that these factors makes transformational leadership more proactive compared to transactional leadership in motivating subordinates to achieve higher performance. Table 2 provides the dimensions and definition of transformational leadership.

Table 2

Dimensions and Definitions of Transformational Leadership

Dimensions	**Definition**
Idealized influence Inspirational Motivation	Displayed when the leader envisions a desirable future, articulates when it can be reached, sets and example to be followed, sets high standards of performance and shows determination and confidence.
Intellectual stimulation	Displayed when leaders help subordinates to become innovative and creative
Individualized consideration	Displayed when leaders pay attention to the developmental needs of subordinates and support and coach their development.

Source : Bass (2000)

Previous research (Amitay, Popper, & Lipshitz, 2005; Bass, 1990; Politis, 2002) portrays transformational leaders as individuals that lead towards positive organizational outcomes. In a learning organization context, leaders play a role as the information centres in their organizations and therefore act as catalysts in the acquisition and distribution of information (Zagorsek et al., 2009). The empirical evidence, although scarce generally supports these assertions. In a study of various organizations in Slovenia, Zagorsek et al. (2009) found that transformational leadership has a strong impact of on all four constructs of organizational learning. Aragon-Correa et al. (2007) used data from 408 large Spanish firms found out that transformational leadership facilitates the organizational member's ability to create and use knowledge. Amitay et al. (2005) conducted a study at 44 community clinics of a health-care organization. They found high positive correlations between transformational leadership and organizational learning. Negative correlations were found between transactional leadership and organizational learning variables. Politis (2002) who conducted a study in a large high-tech manufacturing organization in Australia found that transformational leadership enables subordinates' knowledge acquisition. Coad and Berry (1998) based on their study suggest that desirable leadership behaviours for a learning organization is transformational leadership. Transactional leadership is associated with performance-goal orientation. However, contingent reward of transactional leadership is also found positively related with learning orientation. Gronn (1997) stated that transformational leaders create learning opportunities for their subordinates and motivate them to solve problems. Specifically, transformational leaders articulate strategic vision that helps guide followers to focus and learn what is essential to implementing the mission and vision of learning at their level, as well as at subsequent levels within organization. These leaders further encourage followers to question assumptions, methods and the goals to discover better ways to understand and translate what they have learnt into specific actions

As such, it is hypothesized that:

H1 There is a positive significant relationship between transformational leadership and learning organization dimensions

<u>Methodology</u>

A survey research design was employed in this study. Questionnaires were distributed to the middle manager of each manufacturing organization in order to collect primary information from the respondents. The selection of middle managers as key respondents for this study was based upon their adequate level of involvement with regard to the issues under investigation. The unit analysis for the study is the organization. A number of approaches were used to ensure response quality and to enhance the response rate. The questionnaire underwent a pilot test with managers from three manufacturing organizations. After some minor modifications, the questionnaires were then ready to be distributed. Using a random sampling method, 547 organizations were contacted but only 154 organizations agreed to participate in the study. Questionnaires were then mailed to the respective participating organizations. Upon completion, the questionnaires were then mailed using the provided self-address envelopes provided.

The questionnaires comprised of 41 items. Measures for transformational leadership were adapted from Bass and Avolio's (1995) Multifactor Leadership Questionnaire (MLQ-5x), originally constructed by Bass (1985) and expanded by Bass and Avolio (1995). MLQ is one of the widely used and tested measures for transformational leadership (Amitay et al., 2005; Zagorsek et. al., 2009). Twenty items were used to measure four dimensions of transformational leadership, namely idealized influence, inspirational motivation, intellectual stimulation, and individual consideration. Learning organization was measured using Dimensions of Learning Organization Questionnaire (DLOQ) developed by Watkins and Marsick (1996; 2003). Previous research (Yang, 2003) has established sufficient reliability levels for all scales, and both the content and construct validity of the DLOQ have been confirmed. The questionnaire consisted of 21 items on the practices of learning organization. All items were presented using Seven-Point Likert Scale from scale ranging from 1 = "Strongly disagree" to 7 = "Strongly agree".

Findings

A total of 150 questionnaires were returned and deemed usable, with a response rate of 27.42 percent. This rate is considered favourable compared other studies in Malaysia (eg., Normala & Zainal, 2005) given the low rate of response associated with mail surveys. The data was statistically analyzed using the Statistical Package for Social Sciences (SPSS) Version 12. The samples selected for this study comprised of manufacturing organizations from all over Malaysia. In terms of size, half of the participating organizations (57.3%) have less than 500 full time employees. Most of the participating organizations were in the electric and electronics industry which accounted for 28 percent. There were also more males (68.7%) than females respondents in this study. Finally, the respondents were diverse in terms of ethnicity with the highest number of respondents were Malays at 66.7 percent.

Descriptive statistics and inter-correlation of the study's variables are shown in Table 2. Among the independent variables, idealized influence of transformational leadership shows the highest mean 5.28. The standard deviation for independent variables ranges from .83 (inspirational motivation) to 1.04 (idealized influence). The mean scores for learning organization dimensions range from 4.23 (continuous learning) to 5.09 (leadership support). The standard deviation for dependent variables ranges from .83 (inspirational motivation) to 1.04 (idealized influence). The Cronbach's alpha reliability of the variables studied ranges from .59 to .87. Nunnally (1967) has argued that reliability estimates of .5 to .6 are sufficient for basic research. The magnitude of the correlation for variables measures ranges from (*r*) = .04 to (*r*) = .61. Every variable is significantly correlated with each other. Intellectual stimulation has the highest significant correlation with team learning and inquiry; and embedded system and empowerment.

All variables were subjected to factor analysis. A three factor solution emerged for transformational leadership. The first factor is defined by five items and named intellectual stimulation. The second named inspirational motivation and was represented by six items. The third factor which was represented by two items was named as idealized influence. Principal component analysis conducted on 21 items of learning organization dimensions resulted in five factors. The first factor was represented by six items and was named team learning and inquiry. The second factor was represented by four items mainly concerned with respondents' perceptions of the leaders' support on learning . Therefore factor 2 was named leadership support. Factor 3 was labeled embedded system and empowerment and defined by three items. The fourth factor consists of four items and named systems connection.

Table 3

Descriptive Statistics, Cronbach's Alpha, and Zero-order Correlations of All Study Variables

	Variables	1	2	3	4	5	6	7	8
	Transformational leadership								
1.	Intellectual Stimulation	**.86**							
2.	Inspirational Motivation	.42**	**.78**						
3.	Idealized Influence	.39**	.25**	**.71**					
	Learning Organization								
4.	Team Learning and Inquiry	.34**	.29*	.13	**.87**				
5	Leadership Support	.28*	.23**	.20*	.57*	**.78**			
6	Embedded system and empowerment	.33**	.28**	.04	.61**	.44**	**.69**		
7	Systems Connection	.28**	.28**	.11	.58**	.50**	.46**	**.75**	
8	Continuous Learning	.07	.04	.17*	.32**	.34**	.22**	.18*	**.59**
	Mean	5.05	5.20	5.28	4.67	5.09	4.84	4.88	4.23
	SD	.93	.83	1.04	1.04	.90	.95	.94	1.32
	Number of items	5	6	2	6	4	3	4	2

(*N=150*)

Note: Diagonal entries indicate Cronbach's Alpha values
** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

In investigating the relationship between independent variables (intellectual stimulation, inspirational motivation) the dependent variables (team learning and inquiry, leadership support, embedded system and empowerment, systems connection and continuous learning), the multiple regression model showed significant relationship between transformational leadership style and learning organization dimensions (*p*<.05, *p*<0.01). As shown in Table 4, four regressions were found to be significant : team learning and inquiry, R^2 = .12; leadership support, R^2 = .08; embedded system and empowerment, R^2 = .13 and system connection, R^2 = .09. Continuous learning was found not significant towards any of the dimension under transformational leadership. The transformational leadership model (intellectual stimulation, inspirational motivation and idealized influence) explained 12 percent of the variance in team learning and inquiry; 8 percent of the variance in leadership support; 13 percent of the variance in embedded system and empowerment, 9 percent of the variance in systems connection and 1 percent of the variance in continuous learning. Hypothesis 1 is thus supported.

Table 4

Multiple Regression for Transformational Leadership and Learning Organization

Variables	Team Learning and Inquiry Std B	Leadership Support Std B	Embedded system and empowerment Std B	Systems Connection Std B	Continuous Learning Std B
Intellectual Stimulation	.30**	.19*	.31**	.21*	.01
Inspirational Motivation	.23*	.13	.19*	.20*	-.01
Idealized Influence	-.03	.01	-.13	-.02	.17
R^2	.12	.08	.13	.09	.01
F	7.9**	5.5**	8.46**	6.04**	1.43

Discussion and Implications

In this respect, the findings provide initial empirical support on the importance of transformational leaders in promoting the learning organization concept. As indicated by Viitala (2004), transformational leaders generate development and change in an organization. Hence, leadership styles that are characterized by participative behaviour, mutual trust, and respect for subordinates' ideas and feelings tend to generate an organization that continuously learns compared to the leadership styles that are characterized by task oriented and autocratic behaviours. This study reveals that respondents that belong to organizations with transformational leaders, are most likely to perceive their organizations as moving towards learning organizations. The above findings support studies by Amitay et al. (2005), Aragon-Correa et al. (2007), Coad and Berry (1998), Politis (2002) and Zagorsek et al. (2009) that transformational leadership is necessary to facilitate learning in the organization.

The contributions of this study are of importance, firstly, due to the fact that this is an empirical work. As mentioned by Popper and Lipshitz (2000), Zagorsek et al. (2009), most of the writing on learning organization are conceptual. From a theoretical point of view, this study integrates two disparate fields of learning organization and leadership from an empirical perspective. Secondly, this study empirically proves that leadership that are characterized by leaders that inspire the morale and motivation of their subordinates i.e., transformational leadership is crucial in developing learning organization. Finally, the study filled the gap of scarce empirical work on the topic in the context of manufacturing organization in Malaysia. The present study suggests some implications for human resource managers and the top management on the important role of leaders in promoting learning at all levels and to create opportunities for people in their organization to learn. Transformational leaders are needed to motivate and direct the organizational members to learn to adapt to the changes of the environment.

The result of this study raise several issues that should be pursued in future research. First, the sample was from the manufacturing industry and it can only be generalized within that context only. Further expansion of the research to other industry would significantly contribute to better understanding of the link between leadership and learning. The second key limitation is the cross-sectional nature of the study. A longitudinal treatment of data might yield additional insights in the impact of transformational leadership and learning organization. Finally, this study is limited to the direct effect of transformational leadership on learning organization. Future study should include moderating or mediating variables to get better understanding of the link between transformational leadership and learning organization.

Conclusion

Leaders play an important role in the development of an organization. In a learning context, leadership is crucial to generate learning in the organization. The emphasis of leadership to promote learning in the organization is established in the literature. However, little has been said on which leadership style best supports the development of learning organizations. The findings obtained in this study provide empirical evidence on transformational leadership as a predictor of learning organization.

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When Building Strength Is Not Enough: An Exploration of Derailment Potential and Leadership Strength

Yi Zhang *
Department of Management
Lingnan University
Tuen Mun, Hong Kong
yizhang@ln.edu.hk
Phone: +852 2616 8313
Fax: +852 2467 0982

Anand Chandrasekar
Center for Creative Leadership
238A Thomson Road, #16-06/08
Novena Square Tower A
Singapore 307684
chandrasekara@ccl.org
Phone: +65 6854 6016
Fax: +65 6854 6001

Abstract

This paper examines the notion that derailment factors and leadership strengths are different, albeit related facets of leadership development. Using data from 2670 managers from five countries, the authors argue that managers need to pay attention to both aspects - developing leadership strength and guarding against derailment in order to be effective at the workplace. Implications of this finding for talent management theory and practice are discussed.

Keywords: derailment, leadership development, talent management

Introduction

Leader development is a vital component of the talent management strategy of any company. Leader development is viewed as the expansion of a person's capacity to be effective in leadership roles and processes (McCauley & Van Velsor, 2004: 4). Kaiser & Craig (2004) however point out that the behaviors related to effectiveness are seen as being profoundly distinguished across different levels of management.

Over the last decade, academicians have written numerous papers identifying the competencies of effective leaders and leadership models (Gentry & Kuhnert, 2006; Keys & Wolfe, 1988; McCall, 1998; McCall, Lombardo, & Morrison, 1998; Wexley & Baldwin, 1986). These authors have largely ignored ineffective or problem behaviors. Instead, it appears they have assumed that ineffective leadership is simply the absence of effective leadership. Commenting on the "more is better" approach of the maximizing leadership strengths outlined by proponents of strengths-based development approaches, Kaiser (2009: 6) terms it a *great folly* (emphasis added). Researchers have suggested that ineffective leadership may be the result of problem behaviors (Hogan & Kaiser, 2005), otherwise termed derailment factors or derailment characteristics. Human Resource managers and others responsible for talent management understand the importance of examining derailment potential within the managerial ranks. According to Lombardo & Eichinger (1989), 30% to 50% of high-potential managers and executives derail at some time during their career.

The small but growing scholarship on managerial and executive derailment (Bunker, Kram, & Ting, 2002; Conger & Nadler, 2004; Kovach, 1986; McCartney & Campbell, 2006; Robie, Brown, & Bly, 2008; Van Velsor & Leslie, 1995) continues to point out that 'effective' leaders do fail and their failure can affect not only themselves, but also their subordinates and their companies. Executive derailment therefore is a major cause of concern in the process of talent management and has implications in the talent development strategies of companies.

In this study, we empirically test the validity of the notion that managers need to guard against derailment in addition to developing leadership capacity. If this were true, talent management strategies need to have a dual focus – ensure development by building on leadership skills and ensure survival by reducing the potential for derailment.

Derailment

In past three decades, derailment has been studied by many scholars and institutes. The first published study of derailment explored the causes of senior executives' promotions or dismissals (McCall & Lombardo, 1983). This study was based on interviews with senior executives in three US-based industrial organizations. Major derailment themes associated with their failure were, insensitivity to others, poor performance, failing to build a team, and inability to adapt to a boss with a different style. This study used content analysis techniques to discover themes in the qualitative data. They derived fatal flaws or reasons for derailment from these data, and five themes were found (Leslie & Van Velsor, 1996; Lombardo & McCauley, 1988; McCall & Lombardo, 1983; Van Velsor & Leslie, 1995). The next study conducted by Bentz at Sears in the 1950's and 1960's (Bentz, 1985) concluded that derailed executives shared an overarching flaw that prevented them from successfully building a team.

Van Velsor & Leslie (1995) provided a definition of a derailed manager as one who, having reached the general manager level, finds that there is a little chance of future advancement due to a misfit between job requirement and personal skills and characteristics. They become plateaued at a lower level than expected, and then stalled, demoted or left the organizations either voluntarily and involuntarily (Lombardo & McCauley, 1988; McNally & Parry, 2002), although most unsuccessful managers leave the organization involuntarily.

Researchers who have examined the dark side of personality add to the list of undesirable attributes the undesirable of derailed managers: insensitivity, arrogance, selfishness, dishonesty, vindictiveness, abrasiveness, attention seeking, or untrustworthiness. Other personality traits that can derail leaders include ego-centered, intimidating, manipulating, micro-managing, and passive–aggressive (Robie et al., 2008).

Few researchers have looked at derailment over career stages (Kaiser & Craig, 2004; Kovach, 1986, 1989; Shipper & Dillard Jr, 2000). These studies are particularly important because, unlike the studies of already derailed managers, they offer suggestions to prevent derailment before it is too late. Shipper & Dillard (2000) found that managers who are derailing have lower skills profiles than successful managers at all career stages. Their research also showed differences in the skills required to succeed in early career stages compared to those required to succeed in latter career stages (Kovach, 1989).

The existing research on derailment, suffers from two major drawbacks. First, derailment and its related characteristics have been primarily examined in North American samples. It is only recently that researchers have examined derailment non-North American managers. (Gentry, Hannum, Ekelund, & de Jong, 2007a) studied European managers' rating differences on derailment characteristics, while (Van Velsor & Ascalon, 2008) examined the factors of derailment in English speaking European managers. However, we are not aware of any work on derailment done on Asian managers or in an Asian context. In pointing out the absence of research on derailment in Asia, we do not argue that the phenomenon of derailment is entirely absent or is constituted by different factors in Asia vis-à-vis North America.

Rather, we are more interested in extending the generalizability of the existing concept of derailment and the scales used to measure it, but examining it in an Asian sample of managers.

Second, existing studies on derailment have been a product of interviews conducted with senior executives by asking them to talk about examples of both successful and derailed managers (or CEOs) whom they have encountered in the course of their careers (c.f.Lombardo, Ruderman, & McCauley, 1988; Morrison, White, & Van Velsor, 1987; Van Velsor & Ascalon, 2008; Van Velsor & Leslie, 1995). This qualitative process has offered us the richness of context that surrounds the process of derailment. Recent studies on derailment have taken on a more empirical approach (Gentry et al., 2007a; Gentry, Mondore, & Cox, 2007b; Robie et al., 2008).

These and other empirical studies that we found during our search of the derailment literature build on the phenomenon of derailment, without empirically verifying the basic assumption that derailment is a factor distinct from leadership strength in influencing effectiveness. In fact, Lombardo & McCauley (1988; Lombardo et al., 1988) is the only empirical study that we found, which reports an empirical relationship between leadership strength and derailment factors in terms of correlations. Given that this study is dated and was primarily from a North American sample, it is important to verify this basic assumption that the derailment phenomenon is related and yet distinct from leadership strength.

In this paper, we attempt to address these two shortcomings in the derailment literature. To do this, we base our study on a predominantly Asian sample, and conduct analyses to verify this basic assumption that underlies the extant derailment research.

Derailment potential and leadership competency

One of the enduring themes that derailment research has attempted to portray is that of strengths turning into weaknesses, when managers are tasked with greater responsibilities as they move up the organizational ladder (Bunker et al., 2002; Kovach, 1986, 1989). Most of the available literature on derailment details how managers bank on technical strengths and how continued reliance on these strengths becomes a weakness at the point where more people oriented skills become necessary. They may become overconfident after a number of successes and reduce their focus of attention on new tasks (Grant, Rosen, & Onypchuk, 2008). This might cause them to miss out on learning from broad experiences increasing the variety of their leadership skills. Thus, the basic argument underlying the derailment phenomenon is the need to go beyond building leadership competency strength to guard against leadership weaknesses i.e., derailment.

Derailment is a survival factor for managers to stay in management positions, while increasing leadership competency level is a development factor. Successful managers view derailment as a learning opportunity and help themselves from their failure (Kovach, 1989). Derailment is the opposite of leadership competency. With increased awareness of derailment potential, managers will attempt to re-align their competency with the company's strategy, adapt to the environment and grow. Leadership competency answers questions of leadership skills and perspective, while derailment answers what potential pitfalls lie ahead. In other words, leadership competency and derailment potential are important, interrelated but distinct aspects of leadership development, leading to our first hypothesis:

Hypothesis 1 Leadership competency and derailment potential are different facets of leadership development.

One of the enduring themes that derailment research has attempted to portray is that of leadership competency strengths turning into weaknesses when managers are tasked with greater responsibilities as they move up the organizational ladder (Bunker et al., 2002; Kovach, 1986, 1989), leading to ineffective leadership. Since ineffective leadership is a result of either very low levels of leadership competency skill or a high level of leadership competency that is overused, one can expect that moderate levels of leadership competency strength and its usage in the right circumstances reduces ineffectiveness. Recent literature on the leadership gap indicates that although most managers do not apply the right skills sets at the right circumstances, the leadership competency strength is still at a moderate level, and that a gap exists to be bridged (Leslie & Chandrasekar, 2009). We therefore expect that the current strength of leadership competency would be negatively related to derailment. Thus, we hypothesize:

Hypothesis 2 Derailment potential is negatively associated with expressed current leadership competency level.

Leslie & Chandrasekar (2009) point out to the existence of a high degree of misalignment between managerial strengths and organizational needs. They specifically state "…Only five of the competencies rated as above average in importance … were also rated as above average in current skill level". In order to address this mismatch, managers participating in this study reported that they needed to increase their skills on all leadership competencies measured. This is typical of a "more is better" approach and can, in the long run, lead to ineffective leadership because managers continue to want to increase the strength of their already strong leadership competencies, unaware that the changing environment calls for different managerial skills. Certain kinds of leadership skills can make leader successful (Keys & Wolfe, 1988; McCall et al., 1998; McCartney & Campbell, 2006), and this success will prevent their derailment. However, it is not every skill that is important to a leader's position. Some skills may be over-invested in some positions (McCartney & Campbell, 2006). Over-confidence may lead to individual complacence in underestimating threats and weakness and avoiding learning and feedback-seeking (Grant et al., 2008). This would imply that continued emphasis to grow a set of leadership skills may not be sufficient to guard against derailment. We can therefore expect that as managers expressed need for higher levels of leadership competency is truly putting them on the path to derailment. Hence our third hypothesis:

Hypothesis 3 Derailment potential is positively associated with expressed needed leadership competency level.

Method

Sample

The sample consisted of a total of 2670 managers from five countries – Singapore, India, Japan, USA, and China (Hong Kong SAR). Detailed sample characteristics are provided in Table 1. The managers worked in 15 different companies in the IT and financial service sectors, were generally male (68%), of average age 41 years (SD=8.4). These managers had lived in their current countries for an average of 33 years (SD=16.0), which is lesser than their average age, since 525 managers indicated that they were working in countries that they did not consider as their home country. Managers had worked in their current positions for an average of six years (SD=6.7).

Insert Table 1 about here

Measures

Data for this study was collected by means of an online questionnaire as a part of a multi-country study on the extent and nature of leadership gap in companies. Since we were most interested in examining the leadership gap that existed at a group level, rather than at an individual level, we worded the questions to ask managers to rate their perception of their peers' current and needed skill competency on a list of leadership competencies, the potential to derail, and the importance of these leadership skills for one's success in the organization. The peer group was defined specifically as "managers at your organization and level and in their current jobs". In order to check the extent to which managers were knowledgeable about the reference group they were using, we asked them to rate the extent to which they knew the group they were rating. 97% of managers indicated that they knew the group *quite well* or *extremely well*. For purposes of this paper the importance of leadership skills will not be discussed. Age, job tenure, gender and managerial level were the four demographic variables recorded in the study.

Leadership Competencies.

Data was collected using a modified version of Benchmarks® (Lombardo, McCauley, McDonald-Mann and Leslie, 1999) a 360-degree tool that assesses the characteristics of successful executives. The modifications to Benchmarks included reducing the number of items and including additional leadership competencies from other sources that we deemed relevant to the context of global managers. In order to reduce the length of the assessment scales with multiple items were reduced to a single broadly worded item. The assessment was also modified from a 360-degree assessment to one that requested respondents to rate managers, in general, at a specific level (their own) rather than individual managers. These changes to the assessment were primarily made in order to decrease the burden on raters and thus increase the likelihood the assessment would be completed by more managers and thus increase the response rate.

Using a 9-point, Likert-type response format with the following anchors 1 = Extremely small amount and 9 = Extremely large amount, managers rated each competency on the following two questions: "What is the overall amount of skill that managers at my level are currently demonstrating?" and "What is the overall amount of skill that managers at my level need to demonstrate to be maximally effective?"

Table 2 lists the 16 leadership competencies used and their definitions. The number of items was significantly reduced in order to make the survey less burdensome for participants and increase the likelihood that the survey is completed.

Derailment potential.

The derailment factors assessed in this survey are also derived from BENCHMARKS® (Lombardo, McCauley, McDonald-Mann, & Leslie, 1999), with similar modifications as indicated above for the leadership competencies. Table 2 lists the five derailment factors and their definitions. Managers rated each derailment potential on the following question "What is the overall amount to which each of the following factors are problems for managers at my level?", using a 9-point Likert scale (1= Extremely small amount, 5= Moderate amount, and 9 = Extremely large amount).

Insert Table 2 about here

Data analyses

To verify the constructs' distinctiveness and the first hypothesis that leadership competency and derailment potential are different facets of leadership development, we performed an exploratory factor analysis. A total of 37 items (16 current leadership competency level, 16 needed leadership competency level, and 5 derailment factors) were subject to EFA with varimax rotation.

To verify the second and third hypothesis on the direction of relationship between current leadership competency level, needed leadership skill competency level, and derailment potential, we performed hierarchical regression analysis controlling for the effects of the demographic variables of age, gender, job tenure, country, and managerial level.

Results

The exploratory factor analysis revealed the presence of three factors as expected. Items representing the current skill competency formed the first factor. Items representing the needed skill competency formed the second factor and the items representing derailment potential the third factor. All items exhibited clean loadings (>0.40) on their respective factors, see Table 3. This indicates that the managers were able to clearly differentiate between current skill level, needed skill level and derailment potential, lending support to our first hypothesis that leadership competency and derailment potential are distinct yet related factors.

Insert Table 3 about here

The ratings of the items representing current skill level, needed skill level and derailment potential were separately averaged to obtain a composite index of current skill level, needed skill level and derailment potential. Table 4 reports the descriptive statistics and correlation among these variables. Analysis of the correlation between these factors indicates that current skill level is negatively related to derailment potential ($r = -0.50$, $p < 0.01$), while needed skill level is positively related to derailment potential ($r = 0.07$, $p < 0.01$).

Insert Table 4 about here

We then performed hierarchical regression analysis with derailment potential as the dependent variable. Since we used two different types of scales in our study, we standardized all variables, to make them comparable and normally distributed for regression analysis (Hair, Anderson, & Tatham, 1987). In the first step of the hierarchical regression, we entered demographic variables of age, gender, job tenure and managerial level. In the second step we entered current skill level and needed skill level. Current skill level was negatively related to derailment potential ($\beta = -0.65$, $p < 0.001$), while needed skill level was positively related to derailment potential ($\beta = 0.12$, $p < 0.001$). Among the control variables job tenure ($\beta = -0.01$, $p < 0.05$), gender ($\beta = -0.32$, $p < 0.001$) and managerial level ($\beta = 0.08$, $p < 0.05$) were significantly related to derailment potential. These results demonstrate that the relationship of derailment potential to leadership skills holds after controlling for demographic variables thus supporting Hypothesis 2 and 3, see Table 5.

Insert Table 5 about here

Discussion and conclusion

Global talent management posts a significant challenge to all managers today. Continued globalization and rapid change (both upward and downward) are seen as prime drivers contributing to fuelling the fire of global talent management. Leadership is an important component of the global talent management strategy of any company. Most companies recognize this and this recognition has led to a growth in the number, scope and variety of programs and interventions geared at preparing leaders and populating the talent pipeline. The focus of these interventions is generally towards building capabilities and developing the existing leadership in the company. In this paper, we demonstrated that leadership competencies and derailment factors are distinct, although related factors to leadership development. It is insufficient to build competency in leadership capabilities alone, it is equally important to guard against possible derailment factors. Managers going through a leadership development process and designers of leadership development programs need to ensure they balance the two aspects of development (building competency) and survival (avoiding derailment) in their curriculum in order to ensure an effective leadership pipeline.

This study contributes the literature on derailment in three ways. First, research on derailment has largely been done on North American managers. It is only recently that there has been study on European managers (Van Velsor & Leslie, 1995). In contrast, a major portion of the sample in our study comes from Asia. This serves to extend the study of derailment to currently understudied contexts.

Second, after Lombardo & McCauley (1988), it is possibly the only study that provides an empirical link between leadership competencies and derailment potential. The non-inclusion of a criterion variable in this study prevents us from predicting if derailment factors can explain the effectiveness of leadership over and above that explained by leadership competencies. We recognize the need of such studies and see a potential for introducing criterion variables like in-role performance, organizational citizenship behaviors and contextual performance.

Third, it differs from earlier empirical studies on derailment that rely on self assessments or a 360 assessment. Both these approaches involve rating of a single manager as an object of assessment, leading to possible rating biases. By asking managers to rate a specifically defined peer group, our study attempts to overcome some possible rating biases. This approach enables us to better claim that results refer to a more general group of managers as well as avoid cultural issues associated with the use of multi-rater assessments. In order to facilitate this, we used a modified version of BENCHMARKS®, reducing the length of the assessment scales by using a single broadly worded item in place of multiple items. Although this made the survey less burdensome for participants and increased the response rate, it came at the cost of exploring the relationships between distinct behaviors that constitute the leadership competencies and the derailment potential. We view studies on links between specific leadership behaviors and derailment behaviors as an important part of future research on this topic.

In conclusion, this paper extends the work on derailment to an Asian sample of managers, and provides evidence that talent management systems should not only consider leadership development in terms of growing leadership competency but should also help in reducing possible derailment potential, contributing to enhanced leader effectiveness.

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Table 1 Sample characteristics (Total N= 2670)

Country	**N**	**%**
Singapore	953	35.7
USA	805	30.1
India	442	16.6
Japan	249	9.3
Hongkong	221	8.3
Industry	**N**	**%**
Finance	1862	69.7
IT	810	30.3
Gender (42 participants did not report gender data)		
Male	1835	69.8%
Female	793	30.2%
Management level	**N**	**%**
Middle (have groups reporting to me, but I report to function head)	1400	52.4
Upper middle (heads of functions or departments)	731	27.4
Senior (oversee multiple departments/units, or highest level)	320	12.0
Top (responsible for entire business; e.g., CXO, CFO, COO, CEO)	124	4.6
	Mean	**SD**
Age (years)	41.01	8.43
Time in the current country of residence (years)	33.09	15.80
Time as manager in the current organization (years)	6.11	6.70
Familiarity with the group being rated (1-Hardly at all familiar, 4- Extremely Well)	2.69	0.72

Table 2 Definitions of leadership competencies and derailment factors

Competency	Definition
Balancing personal life & work	Balancing work priorities with personal life so that neither is neglected
Being a quick learner	Quickly learning new technical or business knowledge
Building & mending relationships	Responding to co-workers and external parties diplomatically
Compassion & sensitivity	Showing understanding of human needs
Composed	Remaining calm during difficult times
Confronting people	Acting resolutely when dealing with problems
Decisiveness	Preferring doing or acting over thinking about the situation
Doing whatever it takes	Persevering under adverse conditions
Leading people	Directing and motivating people
Managing change	Using effective strategies to facilitate organizational change
Managing one's career	Using professional relationships (such as networking, coaching, and mentoring) to promote one's career
Participative management	Involving others (such as listening, communicating, informing) in critical initiatives
Putting people at ease	Displaying warmth and using humor appropriately
Resourceful	Working effectively with top management
Respecting individuals' differences	Effectively working with and treating people of varying backgrounds (culture, gender, age, educational background) and perspectives fairly
Self-awareness	Recognizing personal limits and strengths
Derailment Factor	**Definition**
Difficulty building and leading a team	unable to select and build a team
Difficulty changing or adapting	unable to respond effectively to changing events in the business environment
Failing to meet business objectives	unable to complete a job
Problems with relationships	unable to interact with and respond to others in a way that creates positive relationships
Too narrow managerial experience	unable to manage outside of one's current function

Table 3 Results of exploratory factor analysis

	Factor 1	Factor 2	Factor 3
Leading people-CURRENT	.85		
Building and mending relationships -CURRENT	.85		
Managing one's career-CURRENT	.74		
Managing change-CURRENT	.84		
Compassion and sensitivity-CURRENT	.86		
Confronting people-CURRENT	.80		
Decisiveness-CURRENT	.82		
Respecting individuals' differences-CURRENT	.87		
Doing whatever it takes-CURRENT	.87		
Balancing personal life and work-CURRENT	.82		
Participative management-CURRENT	.88		
Putting people at ease-CURRENT	.86		
Being a quick learner-CURRENT	.87		
Resourceful-CURRENT	.88		
Self-awareness-CURRENT	.87		
Composed-CURRENT	.87		
Leading people -NEEDED		.79	
Building and mending relationships -NEEDED		.77	
Managing one's career-NEEDED		.68	
Managing change-NEEDED		.75	
Compassion and sensitivity-NEEDED		.75	
Confronting people-NEEDED		.71	
Decisiveness-NEEDED		.75	
Respecting individuals' differences-NEEDED		.74	
Doing whatever it takes-NEEDED		.72	
Balancing personal life and work-NEEDED		.59	
Participative management-NEEDED		.78	
Putting people at ease-NEEDED		.78	
Being a quick learner-NEEDED		.73	
Resourceful-NEEDED		.74	
Self-awareness-NEEDED		.76	
Composed-NEEDED		.72	
Difficulty building and leading a team			.75
Difficulty changing or adapting			.83
Failing to meet business objectives			.78
Problems with relationships			.76
Too narrow managerial experience			.76
Cumulative variance %	**31.45**	**58.54**	**64.70**

Table 4 Results of Descriptive Statistics and Correlations

	N/2670	M/SD	RL	AGE	JT	GN	ML	Country	CS	NS
AGE	2567	41.0/8.4		1						
JT	2629	6.1/6.7		0.53**	1					
GN	2630	1.3/0.5		-0.14**	-0.14**	1				
ML	2575	3.7/0.9		0.27**	0.27**	-0.16**	1			
Country	2670	2.63/1.29		0.11*	0.11	-0.04*	0.11**	1		
CS	2267	5.9/1.3	0.95	-0.03	-0.03	-0.01	0.01	-0.07 *	1	
NS	2265	7.1/1.4	0.97	0.13**	0.14**	-0.03	0.13**	0.04	0.06**	1
DRMT	2651	4.0/1.7	0.88	0.01	0.01	-0.08**	0.06**	0.06 **	-0.50**	0.07**

Note: M = Mean, SD= Standard Deviations, JT=Job Tenure, GN=Gender (1=Male, 2=Female), ML= Managerial level, Country: 1= USA, 2=Japan, 3=Singapore, 4=India, 5=Hong Kong; RL=Reliability, CS=Current Strength, NS=Needed Strength, DRMT=Derailment potential, N is sample size, **p<.01; *p<.05.

Table 5 Results of Multiple Hierarchical Regression Analyses

	DRMT	DRMT
	Step 1	Step 2
AGE	0.01	-0.01
JT	-0.01	-0.01^{*}
GN	-0.27^{***}	-0.32^{***}
ML	0.07	0.08^{*}
Country	0.03	-0.01
CS		-0.65^{***}
NS		0.12^{***}
F-value	4.09	105.89
Adjusted R^2	0.01	0.25
ΔR^2		0.24

Note: N= 2103; JT=Job Tenure, GN=Gender, ML= Managerial level, CS=Current strength level, NS=Needed strength level, DRMT=Derailment potential, $^{***}p<.001$; $^{*}p<.05$.

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Title of Article: Factors Contributing to the Increasing Demand for Skilled Workers: A Comparative Study of Firms' Measures in Malaysian-based MNCs

Author: Iberahim, Hadijah

Affiliations: Universiti Teknologi MARA, Shah Alam, Selangor, MALAYSIA

Contact Information: ihadijah@hotmail.com

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Factors Contributing to the Increasing Demand for Skilled Workers: A Comparative Study of Firms' Measures in Malaysian-based MNCs

Iberahim, Hadijah
UiTM, Malaysia

Abstract

Identifying reasons and needs for skilled workforce is an imperative managerial issue for multinational companies (MNCs) operating in foreign countries. This study examines mechanism that stimulated demand for skilled workers in relation to distinctive business environment factors such as labour markets, technological development and firms' measures. The issue is important and urgent in the case of Malaysia, whereby the supply of skilled workers is critically insufficient. As an attempt to provide an insight into the issue of increasing demand for skilled workers, a comparative study on two Malaysian-based Japanese MNCs was undertaken. This exploratory study takes a qualitative approach to collect data covering the period from 1980 to 2009. Findings show that besides the needs for technological change and constraints in labour markets, differences in firm measures have stimulated increasing demand for skilled workers. These findings have significant theoretical and practical implications to international human resource management studies. The study enhances understanding on the impact of MNCs activities on human capital.

Keywords: Skilled workers, technological change, labour markets and MNCs

1. Introduction

There is mounting interest in the study of international human resources management and development of workforce at multinational companies (MNCs) (Welch; 1994; Morishima, 1998; Muta et al., 2003; Rojvithee, 2006; Shiraki, 2007, Iberahim, 2008). The existing literature on MNCs provides mixed interpretations on the effect of international business activities on human capital (Lall, 1999; Ritchie, 2002). While some literature asserts that MNCs rarely upgrade their local workforce because of the alternative of getting expatriates from their home country (Welch, 1994), others claim that it is one of the important contributors (Gamble, 2007; Iberahim, 2008). Failing to upgrade the local workforce is widely criticized as unwise (Gamble, 2007). Thus, it is necessary to clarify whether or not MNCs develop technical and managerial skills and knowledge of their locally hired workers.

The concern is important in developing countries which face intricate issues such as shortages of skilled workers and mismatches in the labour markets, as a result of accelerated economic transition under rapid industrialization (World Bank, 1986; Muta et al., 2003). Given the complexity of bridging the cultural, social and economic gaps between the geographically dispersed subsidiaries of MNCs, attracting, upgrading, and retaining adequate stock of competent workforce that is capable of understanding the complexity/diversity of the emerging markets becomes a daunting task. In particular, in the case of Malaysian manufacturing industry, the development of skilled workers is one of the most pressing issues (World Bank, various years).

Considering the role of MNCs and their importance as a driving force behind the Malaysian manufacturing industry (Ariff, 1991, 2003), the objective of this paper is to examine how Malaysian-based MNCs have effectively attracted, upgraded and retained their local skilled workers. This paper poses a question on factors that stimulate the demand for skilled workers. In this study, skilled workers are defined as engineers, technical managers, technicians and supervisors in the middle and top management level. This study focuses on the change in the proportion of skilled workers at middle and top management levels.

This paper is organized as follows. To begin with, the next section presents a review of past research on the factors that stimulate demand for higher manufacturing skill. Next, the data collection method and cases selected for this study are explained. Section 4 briefs the companies' background and outlines the change in the proportion of expatriates group which is an important indicator to assess the level of participation as result of increasing demand for local skilled workers (Welch; 1994; Shiraki, 2007). The fifth section discusses firms' measures in response to the two determinants. The final section concludes with a discussion on the findings.

2. Studies on Factors and Mechanism that Stimulate Demand for Skilled Workers

Several bodies of literature are relevant to explain the factors and mechanisms that stimulate demand for skilled workers. For instance, the literature on technology transfer argues that MNCs increase skilled workers due to rapid progress of technology transfer from parent companies to subsidiaries. Slaughter (2002) proposes that the higher level of technology within MNCs create demand for skilled workers. McKendrick et al. (2000) noted that hard disk drive companies took advantage of low-wage unskilled but highly trainable human resources. Over time, rising levels of process and product technologies increased the demand for higher skilled workers. Similar dynamics were also discernible across the East Asian region in optics, precision engineering (tool and die), automobiles, rubber, palm oil and micro chips (Rasiah, 1999; Ritchie 2002).

In contrast, studies on technological development in the South East Asia region posit some distinct technological effect. In contrast to Singapore or Penang (Salleh, 1995; Ariffin and Bell, 1999; McKendrick, 2000; Ritchie, 2002), other developing countries such as Philippines, Thailand and Indonesia were less likely to experience such path-dependent processes. MNCs were said to be under-investing in training. Deyo (1989) shows that literate and trainable labour with basic skills appears to have been sufficient to attract FDI, at least in low-end manufacturing. Subsequently, Pangestu (1997) and Salleh (1995) consistently claim that the provision of training was only enough to fulfill the existing required level but insufficient for the firm to extend operation into higher value added activities or the acquisition of concomitant skill in product design and development. Tan and Batra (1995) noted that only large MNCs which involved in export manufacturing and high technology, receive training remuneration, support and incentives from government would train. These studies suggest that the investment on human skills and knowledge is interrelated with the characteristics of the MNCs'.

However, one aspect overlooked by the present studies is the impact of distinctive business environment factors on subsidiary's workforce. In particular, very little is known about the extent to which labour markets in relation to the need for technological development influence MNCs subsidiaries in their business environment. On this account, it is relevant to investigate the change in the increasing number of skilled workers in the subsidiary and the effect of technological change on the increasing needs for higher manufacturing skills. There is still little research documenting MNCs' human resource development (HRD) and management (HRM) practices in respect of its distinctive business environment factor, especially the nature of labour supply. This paper justifies the way MNCs have responded to these factors and its consequences on the locally hired skilled workers.

3. Method

This paper takes a qualitative and exploratory approach in identifying underlying relationships between firms' measures in response to factors that contributed to increasing demand for local skilled workers. During the fieldwork, semi-structured interviews were conducted with eleven staff members that represent the Japanese expatriates group, local skilled workers group and managers of the human resources department. Observations and follow-up interviews took a period of more than five years starting in 2001. Secondary data is based on various sources such as local newspapers, companies' record, research papers, surveys and information recorded. This study covers from 1980 to 2006 as the time frame as it reflects the operations and changes in business environment that involved the two cases.

4. Change in Participation of Expatriates and Skilled Workers in Managerial Positions

This two cases represent two large groups of well-established Japanese multinational companies (JMNCs) in the worldwide market for color television (CTV) and possess a high market share in the US and Japan; Sony EMCS/Technology (Malaysia) Company Limited (hereafter STM) and Hitachi Consumer Product (Malaysia) Company Limited (hereafter HCP). The cases are chosen for some relevant attributes such as the remarkable achievement of locally hired skilled workers in top management positions, beside other characteristics of the MNCs which are interesting.

4. 1 The Case of Sony Technology (M) Company Limited (STM)

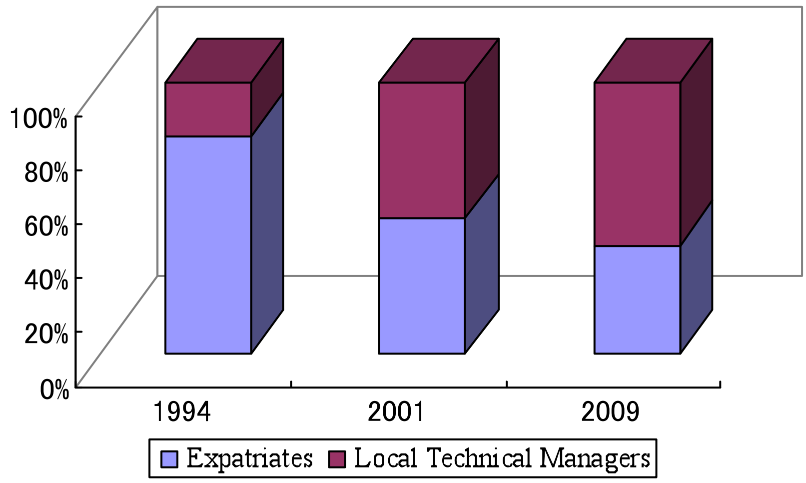
At STM, the ratio of expatriates to total employees decreased from 2.1% in 1994 to 0.7% in 2009. According to the General Manager, in 2001, out of 86 Japanese expatriates 60 of them were engineers of production, R&D and product design sections. In 2009, although the number of expatriates to total employees declined, Japanese engineers retained important positions in production, quality control, production control and maintenance. On the other hand, the number of engineers, technicians and technical managers to total employees increased from 1,300 in 1994 to 2,500 in 2008. Overall, the ratio of technical managers increased gradually throughout 20 operating years. Table 1.2 shows the reduction in the number of expatriates and the increase in the number of skilled workers to total employees.

Table 1.2: Change in Number and Ratio of Expatriates and Skilled Workers at STM

	1994	2001	2008
Number of Expatriates to Total Employees (Percentage)	163/8000 (2.1%)	86/6000 (1.4%)	60/8000 (0.7%)
Number of Skilled Workers to Total Employees (Percentage)	1300/8024 (16.2%)	1600/6000 (26%)	2500/8000 (31%)

Source: Author's firm study.

Figure 5.1: Expatriates and Technical Managers in Manageria Positions at STM



Source: Author's fieldwork.

As shown in Table 1.2, expatriates in managerial positions were in inverse proportion to skilled workers at STM. In 2001, out of the total number of 86 expatriates, 26 Japanese technical managers were head of production departments. In 2009, with the exception of managing director and general manager of the production department which are permanent posts for Japanese managers. Most of the Japanese technical managers were appointed as coordinators and advisors. Local technical managers accounted for 80% of managerial positions such as engineers, managers, senior managers, deputy general managers and general managers. According to the Japanese director interviewed at STM, the changing proportion of expatriates and skilled workers was an unplanned but favorable change.

4.2 The Case of Hitachi Consumer Products (M) Company Limited (HCP)

At HCP, the percentage of expatriates to total employees declined from 1.7% in 1997 to only 0.2% in 2007. In 2001, the ratio of expatriates at HCP was 0.5% of total employees with 11 Japanese expatriates holding several key positions at production and managerial levels. Other than 3 Japanese Directors, 9 Japanese engineers were assigned to production, R&D, maintenance and product development sections which needed expertise to cater to urgent response for tailor-made products. However, the number was reduced to only 2 positions in 2007: a managing director and a general manager for the production department.

Table 1.3: Change in Number and Ratio of Expatriates and Skilled Workers at HCP

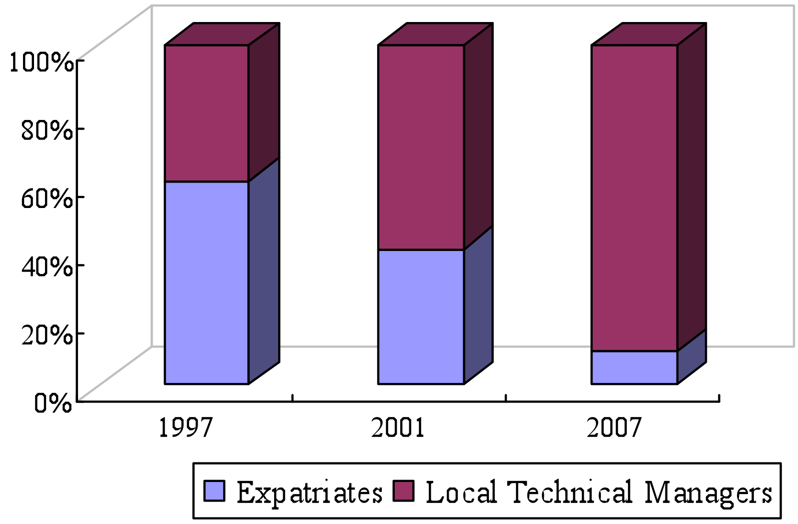
	1997	2001	2007
Number of Expatriates to Total Employees (percentage)	40/2280 (1.7%)	11/1917 (0.5%)	2/796 (0.2%)
Number of Skilled Workers to Total Employees (percentage)	350/2280 (15%)	400/1917 (20%)	380/796 (48%)

Source: Author's firm study.

The percentage of engineers to total employees increased from 15% in 1997 to 48% in 2007, although during the same time period there was a drastic reduction in total employees from 2,280 workers to 796. Even though the total number of skilled workers slightly declined from 400 to 380 engineers, the proportion in percentage shows an increment from 20% in 2001 to 48% in 2007. Table 1.3 shows the change in number and percentage of the expatriates and skilled workers.

At HCP, expatriates in managerial positions are in inverse proportion to skilled workers. In 1997, out of 40 expatriates, 20 Japanese expatriates were managers. In 2007, the majority of Japanese expatriates were coordinators and advisors to local technical managers. Local technical managers accounted for 90% of managerial positions as shown in Table 1.3. According to a Japanese Director interviewed at HCP, the changing proportion of expatriates to skilled workers has been desired since the beginning. One of the Hitachi's corporate objectives was to transfer CRT technology and delegate the production management to local technical managers in order for Japanese mother plant to venture into advanced display technology such as TFT-LCD.

Figure 5.2: Expatriates and Technical Managers in Managerial Positions at HCP



Source: Author's fieldwork.

5. Firm Measures in Response to Labour Markets and Technological Change

In order to understand what factors affect the increasing demand for skilled workers and how the two MNCs responded to the Malaysian business environment, interviews were conducted with personnel of human resource (HR) departments. From the interviews, there are four types of business environmental pressures related to technology and labour supply that act as factors influencing employment practices: 1) shortages of human resources in the Malaysian labour market, particularly the unskilled and skilled workers in the early 1990s, 2) technological change as a result of the shift of product technology from analogue to digital in the early 1990s, 3) technological change as a result of dissemination of information and communication technology (ICT) in the late 1990s, and 4) technological change as a result of new emerging technology such as Flat Panel Display in the early 2000s.

5.1 STM's Measures in Response to Labour Markets and Technological Change

STM addressed the problem of technological change and shortages of workers with employment measures corresponding to the long-term target of establishing a high quality and cutting-edge product. STM adopted HR measure that enabled technical staff to develop and upgrade their skills related to advanced display technology in order to meet the needs of improving and developing products such as High Definition (HD) Flat CRT TV and Liquid Crystal Display (LCD) TV. To date, STM is producing 6 series of HD Flat Cathode Ray Tube (CRT) TV model and 5 models of BRAVIA 32” and 46” V-series, 37” and 40” S-series and 40” W-series which are the leading LCD TV model for Japan and the Asian market.

The first of these employment measures was in response to shortage of skilled workers in local labour market. It involved STM employing a large portion of its unskilled workforce through contract practice. In the early 1990s, STM recruited nearly a thousand of female operators from Batam, Indonesia, on a contract basis for one to two years. The reason for this measure was to ensure that HR department could flexibly adjust production workforce in line with production activities. The Malaysian operators were trained to manage production and testing machines as line leaders and supervisors.

Meanwhile, STM annually recruited about six to ten fresh graduates in engineering from local and foreign universities. The graduates were trained at Sony headquarters in Japan under a three-month-long young management trainee program. The Sony headquarters assigned engineers to a two week induction course in order to familiarize them with Sony’s policy, organization structure and corporate strategy. In the following two and half months, engineers were transferred to their designated sections for on-the-job training in which Japanese engineers would guide 2 to 3 engineers in groups. Technical training covered the latest technology that would be transferred to STM, Malaysia including LCD and HD CRT Flat CTV.

In the early 1990s, technological change that entailed the shift in product and process technology from analogue to digital had shortened product life cycles. With the introduction of digital products, the life cycle of the old-styles bulky CRT TVs ended within 6 months to one year after its introduction such as the case of Trinitron. In due course, STM started its television design centre for digital TV in 1992 to keep pace with product remodeling speed. Trinitron models from 13 to 36 inch were produced in small lots for a short duration from three to six months. In 2001, Sony introduced its Flat Trinitron CRT-based as High Definition TV (HDTV) WEGA models to sustain its CRT technology. Consequently, by 1994, STM employed 500 engineers of whom 30 are assigned to R&D department and 800 technicians, constituting 16.2% of total workforce to handle the shift in technological change. However, in March 2008, STM stopped the production of old models Trinitron due to the shrinking market share and sales.

In response to technological change due to the dissemination of ICT in the late 1990s, STM purchased a package of knowledge management solution from Microsoft in 2000, to streamline the work flows and reengineer business processes. Along with the utilization of advance paperless data processing tools, STM conducted intensive in-house information technology courses to train managers and engineers. With the new system, STM reduced production cost related to overtime allowance and indirect operating cost, such as clerical workers to control the flows of management information and engineering data. The IT competence built up among the skilled workforce was reported to save total operating costs of about MR 80,000 per month. In conjunction with implementing the knowledge management solution, STM set up its IT department in 1999 employing about 20 IT engineers to monitor and find solutions to upgrade the IT integration between functions.

In response to the global competition in new emerging technology of flat panel display, in 2002, STM established its R&D department for product reengineering and product design to upgrade the spherical CTV to HD Flat TV. The renewed models are produced with lead-free materials. STM employed engineers from various fields of specialization including electrical engineering, mechanical engineering, material and chemical engineering as well as IT engineering for value engineering. At the same time, STM built laboratories with clean rooms to facilitate product testing activities. STM trained about 2000 engineers and technicians to utilize automated testing machines.

STM sent a group of 30 selected technical staff to undergo technical training at Sony Kisarazu, Japan, prior to the transfer from Japan of LCD technology needed for the manufacture BRAVIA model of LCD TV and Projection TV. The technical training was conducted in three main areas: 1) assembly technology with the usage of conveyor belts; 2) production technology; and 3) quality control. It took 6 months before the first production machineries were installed at STM. In 2003, the production line for LCD TV deployed about 200 engineers and technicians to operate two fully automated lines with advanced test machines.

5.2 HCP's Measures in Response to Labour Markets and Technological Change

HCP addressed the problem of shortages and technological change with employment and development measures that corresponded to its short-term target which was to sustain the cost performance of mass production. For example, HCP's production cost to produce a unit of Deflection Yoke was about US$40 in 1990 which was reduced to an average of US$30 upon the establishment of second plant in rural area in 1992. The cost was much lower than that of competitors' average production cost at about US$50 per unit in the 1995.

In response to the shortage of unskilled labour in the early 1990s, HCP recruited female operators from remote rural areas in Kelantan, instead of contracting foreign workers. HCP recruited Malaysians to ensure a continuously trainable workforce. HCP tried to avoid the high hiring cost of temporary foreign workers which included agency cost, visa application, medical insurance, travelling and accommodation. However, as the shortages of unskilled workers became serious in the mid 1990s, HCP reduced the number of female operators with the automation of assembly technology and utilization of labour saving technology such as robotics and computer integrated manufacturing systems (CIM). As the new manufacturing system requires more technicians and engineers, HCP recruited experienced skilled workers on immediate vacancies throughout the year. As a result, experienced engineers made up more than half of its skilled workforce while fresh graduates were rarely recruited.

In the early 1990s, the shift from analogue to digital product technology has affected HCP product lines badly. As HCP was mainly producing key components for analogue CRT TV, it chose a more moderate measure to stay competitive in the shrinking CRT TV market by reducing labour costs. HCP upgraded its automated manufacturing lines with in-house designed NC machineries and advanced processing systems, and reduced 15% of its total production workforce gradually from 2,280 in 1997 to 796 in 2001.

In response to the rapid product life cycles, HCP widened and deepened its main product lines to produce variety in DY and FBT models. HCP shifted its manufacturing focus from cost reduction on labour cost to prompt product delivery. HCP attempted to maintain the merit of economy of scale and scope so that the company can reduce the operating cost. As HCP localized CRT product and process engineering in Malaysia, it employed experienced engineers in product and manufacturing equipment design activities. These skilled staff number about 200 by 1997.

In response to technological change due to the introduction to ICT in the late 1990s, HCP trained engineers and technicians to use design software such as Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM) without integrating its administration system with its production system. From my observation during the visit to the HCP in 2005, the HCP IT system was less extensive compared to STM in terms of its implications for costing and effectiveness in integrating administrative and production functions. The HR manager claimed that though the mailing system is extensively utilized, they were yet to administer management enquiries online or digitalize engineering data because most of the data could not be codified due to its complexity and specificity. IT training for about 300 engineers was conducted at production departments that required the utilization of CAD and CAM to execute tasks.

In response to the emergence of Flat Panel Display technology, HCP strengthened its production with the aim of dominating the CRT key components market. In 2000, HCP obtained International Purchasing Centre (IPC) status from the Malaysian government to act as a material and parts procurement centre for its group companies in the East Asian region, while its sales departments had been strategically operating since 1992. HCP became a profit centre replacing the mother plants for CRT analogue parts and components. HCP maintained the capacity to produce 1410 kpcs of parts and components per month in 2002, a record during the peak time, and marked an accumulated number of 200 million pieces of components in 2004 (Hitachi, 2002). In line with the expansion, HCP recruited experienced engineers and technicians with expertise in process engineering while terminating contracts workers attached to production lines that had closed.

6. Conclusions

From the case study, first, it was ascertained that the two MNCs increased the proportion of their skilled workers such as engineers, technicians and technical managers, over the years. Eventually the proportion of expatriates became small as the management delegated administrative and technical tasks at medium and top managerial level to local skilled workers.

Second, this paper suggests the proportion of the skilled workers increased because of the needs to cater to new technological change and the shortage of workers in local labour markets. Despite different measures taken by STM and HCP in response to business environmental factors the proportion of skilled workers was increased in both firms as shown by Table 1.2 and Table 1.3.

Table 5.4: Firms' Measures in Response to Labour Markets and Technological Change

Company Measures & Target / **Business Environment Factors**	**STM** Long Term: Establishing Firm-specific Skills for High Quality & Cutting-edge Products	**HCP** Short Term: Engaging Experts as Immediate Solution for Low Cost Mass Products
1. Shortages of Workers in Local Labour Market	Recruited foreign workers from Indonesia on contract basis. Recruited fresh graduates.	Recruited women operators from rural areas on permanent basis Recruited experienced workers
2. Technological change as a result of product/process technology shift from analogue to digital	Upgrade skills of production workers for product design and product engineering	Installed NC machines. Recruited experienced workers for machine design and production engineering
3. Technical change as a result of information and communication technology (ICT)	Upgraded in-house communication technology tool and network with affiliates. Purchase communication solution from software provider; Microsoft.	Upgraded in-house communication tool.
4. Technical change as a result of new technology such as Flat Panel Display	Reallocated workers to new production lines. Upgraded skills and increase training for engineers at all level.	Terminated excessive production workforce of closed production lines. Recruited experienced workers for design department.

Source: Author's compilation from fieldwork.

Third, Table 1.4 summarizes the HR measures taken by STM and HCP. This study classified the firm's behavior into two types of responses: first, a long term HR measure of STM and then a short term HR measure of HCP. The identification of two types of measures is based on the subsidiaries manufacturing strategy. First, STM tended to produce high technology products such as HDTV and LCD which were new and the skills for their development and production were rarely found in Malaysia. The emphasis on high-tech products at STM is reflected in the recruitment of fresh graduates with strong foundation in engineering, to undergo technical training for new products in Sony Japan. In the case of HCP that produced mature analogue products such as DY and FBT, the manufacturing technology was widely disseminated in Malaysia in the 1990s. To achieve cost competitive advantage, HCP needs experienced engineers who have expertise in production processes to find alternative in cost reduction strategy and could perform tasks immediately.

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A COMPARATIVE STUDY OF VALUES OF CHINESE AND US BUSINESS STUDENTS

Thomas Ruble and Christine Lentz
Department of Management and Human Resources
Rider University
2083 Lawrenceville Road Lawrenceville, NJ 08648 USA
ruble@rider.edu or lentzc@rider.edu

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Thomas Ruble and Christine Lentz
Department of Management and Human Resources
Rider University

INTRODUCTION

Cross cultural differences affect behavior in all realms of human interaction. In the field of business management, Hofstede's (1980) seminal research on cultural orientations is probably the most widely cited study about cultural differences. Hofstede suggested that there are 5 key cultural value orientations: Power Distance; Individualism/Collectivism; Masculinity/Femininity; Uncertainty Avoidance; and Time Orientation (Long-term/Short-term). For example, many Western cultures tend to emphasize individualistic values, while Eastern cultures tend to emphasize collectivist values. People in the West tend to believe that individuals can control their environment through ability and hard work. People from the East tend to believe that individuals need to find harmony with their environment. Opportunity in the USA is viewed as the result of personal risk taking. Opportunity in China is often the result of guanxi or a network of relationships. For an up-to-date comparison of the USA and China, we consulted the Hofstede web site (www.geert-hofstede.com). Table One shows the index scores on the five value dimensions for the USA and China compared to the average index score for all nations included in the current data set (approximately 56 countries and regions). Note the two major differences reflect an Individual Orientation for the US (91) versus Collective Orientation for China (20) and a Long-term Orientation for China (118) versus a Short-term Orientation for the USA (29). Clearly, the two cultures have differences documented by the Hofstede's research.

TABLE ONE

DIMENSION	USA	CHINA	WORLD AVERAGE
Power Distance	40	80	55
Individuality	91	20	43
Masculinity	62	50	50
Uncertainty Avoidance	46	38	64
Long-term Orientation	29	118	45

We must note that the bulk of Hofstede's data was collected in the late 1960s and early 1970s. However, national cultures evolve, producing shared values, beliefs, and attitudes about how people should interpret their experiences, should behave towards others, and should interact with family, close friends, and strangers. Culture determines priorities and expectations. While cultural values may be steeped in tradition and at times seem intractable, societies adopt new values, updating their belief systems and helping members cope with an ever changing reality. Thomas Friedman's, The World is Flat (2005), gained popularity because he articulated what many people observed, e.g., information technology has transformed people and societies more than perhaps any other event or innovation since the Industrial Revolution and, in so doing, has made cultural values more similar around the globe.

China and the USA are two countries and cultures which seem very different from each other, yet have a lot of investment in and curiosity about each other. China is proud of its 5000+ year history and its Confucian beliefs and values. Yet as it expands its economic and political presence, its urban youth seem to embrace modernity. For example, Shanghai's young professionals dress like Western young professionals, congregate at Starbucks, shop at Carrefour or Wal-Mart, listen to western music, are tethered to their cell phones and many want to either work for foreign MNCs or start their own business (Arora, 2005).

By contrast, the United States has a comparatively short history and its values are based in Judeo-Christian beliefs. Entrepreneurial spirit is prized. Children believe that anything is possible as long as they work hard and have the ability. Americans can be fiercely independent, are considered aggressive in the market place, and value career success. American young professionals ages 20 - 30, are willing to work hard, but they are unwilling to be "married" to their jobs. While their careers are important, family and friends are more important. They expect a balance between work and life from the beginning of their careers.

China's Generation Y

The most recent group of Chinese students are labeled Gen Y or "Millennials", born between 1980 – 2000. They are distinctive from previous generations for 3 main reasons. First, they are the social product of China's one child policy (adopted in 1979). These young people are often referred as "xiao huangdi" or little emperors because they have grown up under the careful supervision of doting parents and grandparents. Secondly, they grew up during unprecedented economic prosperity and optimism in China. Thirdly, they grew up with cell phones, the internet, and email. Knowledge and use of information technologies are second nature to Gen Ys around the globe.

There is increased attention towards better understanding China's Gen Y from a policy and a human resource perspective. There are approximately 240-250 million Chinese Gen Ys in or about to enter the workforce. They will represent the largest group of employees in China. They are tomorrow's leaders. Based on a recent survey in China (Arora, 2005), it was reported that "China's "Gen Y" bucks tradition" rejecting Chinese traditional collectivist values and adopting western values such as self-actualization. Based on these results, Arora suggested that China's Gen Ys tend to aspire to a comfortable life. Yet, a survey conducted by Lynton and Thogersen (2010) found that they still hold on to traditional family values. When asked what is really important, 45% said Family, with Friends following at 17% . Career trailed at 12%.

A unique study by an American Gen Y student, Michael Stanat (2006), takes an in-depth look at China's emerging urban Gen Y youth. In 2004, Stanat met with four focus groups, each with eight Chinese Gen Y individuals from Shanghai ranging in age from 15 - 19 (birth dates from 1985 - 1990). These sessions were followed up with in-depth interviews with 15 additional Chinese youth and a period of living in Shanghai with a Chinese family that included a "home stay brother" of similar age. While it is difficult to summarize the extent of his findings, one reviewer noted that Stanat "… has captured China Gen Y's zest for technology, entrepreneurship, and capitalism" (Klein, quoted in Stanat, 2006). And, Stanat notes that China's Gen Y is unlike any of it's predecessors, increasingly sharing some of the same ideas as Western youth". Clearly, today's China is a dynamic country with changes in culture and values intertwined with changes in business, politics, and technology. In the middle of this turbulence is China's Gen Y.

Comparison of Gen Y Values: China versus USA

In addition to excellent cyber skills, China's Gen Ys and American Gen Ys share other similarities. Both have become of age in a child focused world. Both groups are optimistic, confident and see themselves as valued and wanted. Their world has been comparatively peaceful and economically prosperous. They are very close to their parents, from whom they seek personal and professional advice. Both groups feel pressured to succeed. They are multi-taskers, having the ability to listen to music, while doing their homework or their job, while talking on their cell phone with friends or family, while searching the internet, etc. They expect to receive frequent, positive feedback about their job performance. They expect to be promoted quickly. They expect their employers to provide training. They are motivated to learn to reduce stress and increase their marketability (IBM, Universum, & Zehnder, 2008).

Recent research suggests that change in values might be underway. For example, Egri and Ralston (2004) found that even generations preceding Gen Y were more open to change than generations that had grown up during China's "closed door" policy. Using the Chinese Value Survey developed by Bond (1991), Matthews (2000) examined the extent to which Chinese traditional values co-existed with Western ways of thinking among international students studying at 3 Australian universities. Her results suggested that Chinese international students held traditional Confucian values which easily co-existed with Western values. Agreeing with Bond (1988), she posited that these new values represent transcultural values and that it is common for international students to adopt the values of their host country in order to assimilate into their new environment. Other researchers suggest that Chinese Gen Ys balance traditional Confucian values (family, relationships, achievement, endurance, and sacrifice of one's self for the group) with Western values, arguing that "Chinese Gen Y's modernize, not Westernize" (Lynton and Thogersen, 2010)

An earlier study of Chinese and US students by our colleagues at Rider, (Zao and Newman, 2005) reported a possible "homogenizing" trend on some value dimensions. Zao and Newman (2005) used 16 items from the Self-construal scale (Triandis and Gelfand, 1995) to assess one's individual versus collective orientation (independence versus interdependence). The students differed on only 5 of the 16 items. In addition, they included an open-ended question asking each student to indicate the most important values/things in their life. For both Chinese and US students, Relationships were mentioned most often. These results were interpreted as reflecting a convergence of Chinese and US cultures.`

The Present Study

Our study examines the values of today's urban Chinese Gen Ys in comparison to a relatively urban sample of Gen Ys in the USA. Compared to the research by Zao and Newman (2005), we are sampling the same urban setting (Shanghai) but using a different measure of human values, the Rokeach Value Survey (RVS). The RVS consists of two sets of values: terminal and instrumental. Terminal Values (TVs) refer to desirable end-states of existence. These are goals that individuals would like to achieve during their lifetime. Instrumental Values (IVs) refer to preferred modes of behavior. These are viewed as ways to achieve the terminal values. Thus, instrumental values reflect short-term means to achieve the longer-term ends. The RVS consists of two questionnaires with 18 items per scale. Sample items are included the Appendix. The RVS will provide a different perspective to complement the research by Zao and Newman.

METHOD

The RVS was administered in 2008-2009 to 121 Chinese students attending a university in Shanghai, PRC and an equivalent sample of 100 students in the USA. For both samples, the ages ranged from 18 - 22 years. The Chinese sample consisted of 82 females and 39 males while the US sample consisted of 62 males and 38 females. All students were enrolled in the same class, Fundamentals of Management and Organizational Behavior. The class in Shanghai was taught by a visiting US professor in English. Thus, the Chinese students completed the same English version of the RVS as the students in the US.

RESULTS

The ranks of TVS and IVs for China, the USA, and the total sample are presented in Table 2. Overall, there is a strong to moderate correlation of the rank orders for Chinese and US respondents. For the TVs, the Spearman correlation coefficient was .79 ($p < .001$) while for the IVs, the correlation coefficient was .64 ($p < .005$). This suggests a good deal of value correspondence between Chinese and US Gen Y students.

TABLE 2
AGGREGATE RANK ORDER OF VALUES BASED ON PERCENT MENTIONED BY STUDENTS FOR THEIR PERSONAL TOP FIVE *

RANK	TERMINAL VALUES	TOTAL (n=221)	CHINA (n=121)	USA (n=100)
1	**FAMILY SECURITY**	**65**	65	64
2	**HAPPINESS**	**52**	50	53
3	**TRUE FRIENDSHIP**	**51**	49	53
4	**A COMFORTABLE LIFE**	**48**	41	55
5	**FREEDOM**	**37**	41	33
6	MATURE LOVE	32	31	33
7	PLEASURE	31	22	40
8	WISDOM	30	39	20
9	AN EXCITING LIFE	28	19	36
10	A SENSE OF ACCOMPLISHMENT	26	16	35
11	SELF-RESPECT	25	27	23
12	A WORLD AT PEACE	20	30	9
13	SOCIAL RECOGNITION	14	17	11
14	A WORLD OF BEAUTY	11	16	6
15	EQUALITY	10	13	7
16	INNER HARMONY	9	9	9
17	SALVATION	8	7	8
18	NATIONAL SECURITY	6	7	4

RANK	INSTRUMENTAL VALUES	TOTAL	CHINA	USA
1	**AMBITIOUS**	**57**	51	62
2	**HONEST**	**51**	50	51
3	**RESPONSIBLE**	**49**	43	55
4	**LOVING**	**45**	44	46
5	**INDEPENDENT**	**35**	33	36
6**	COURAGEOUS	29	25	33
6**	INTELLECTUAL	29	30	27
8	CHEERFUL	25	26	23
9	BROADMINDED	23	28	18
10	POLITE	23	17	28
11	SELF-CONTROLLED	22	31	12
12	CAPABLE	20	27	13
13	HELPFUL	19	16	22
14	FORGIVING	18	24	11
15	LOGICAL	18	15	20
16	IMAGINATIVE	17	15	19
17	CLEAN	16	21	11
18	OBEDIENT	7	6	8

* = Top Five for Total Sample indicated by Bold Type
** = tied rank

Before considering the TVs and IVs separately, we first want to look at the overall pattern of results. For both TVs and IVs, there was one value that topped the list with a clear distance between that value and the next cluster of values. For both TVs and IVs, the second cluster consisted of three closely ranked values. For TVs, the second group was followed by a third cluster of four values mentioned by at least 30% of the students. For IVs, the third cluster consisted of three closely ranked values endorsed by at least 29% of the students. Thus, for both TVs and IVs, there were four values that were ranked at the top followed by clusters of four and three respectively. Thus, to narrow our analysis, we focused on the top eight TVs and top seven IVs. This is not to suggest that the remaining 10 or 11 values are unimportant. However, we would expect that the top ranked values for individuals would have the greatest impact on behavior.

Male versus Female Rankings

Because we did not have approximately equal numbers of males and females within the Chinese and US samples, we wanted to check gender differences. Basically, the Chinese sample was predominantly female while the US sample was predominantly male. If there are gender differences, a comparison of Chinese versus US value rankings would be questionable due to possible confounds. To examine possible confounds, we looked at gender differences for the eight top ranked TVs and seven top ranked IVs. For the eight TVs, significant gender differences were obtained for only two values -- fifth ranked "Freedom" and seventh ranked "Pleasure". The phi coefficients of correlation were very low (.14 and .15, respectively, both at $p < .05$). Thus, even the two statistically significant differences would have little effect on the overall results. For the seven IVs, significant gender differences also were obtained for only two values -- third ranked "Responsible" and fifth ranked "Independent". Again, the phi coefficients of correlation were very low (.15 for both at $p < .05$). Overall, only four out of 15 comparisons yielded statistically significant gender differences. And, to put this gender effect in perspective for these four values, approximately 2% of the scores can be attributed to gender (approximate phi = .15, phi squared = .0225). Thus, we conclude that gender confounds are not a threat to interpreting our results as similarities or differences due to culture (i.e., China versus USA).

Terminal Values: China and USA

For the TVs, "Family" was top ranked for both Chinese and US Gen Y students and, in the aggregate rankings, finished 13% points ahead of the next value. The next cluster of three closely ranked TVs for the total sample included "Happiness", "True Friendship", and "A Comfortable Life". These values finished in the top four for both Chinese and US students. Outside the top four TVs, there were some additional similarities but also some notable differences. Similarities included both Chinese and US including "Freedom" and "Mature Love" in their top eight (these were tied for 8^{th} place by the US students). Differences were observed for "Wisdom" and "World at Peace" (both ranked in the top 8 by Chinese and outside the top eight by US) along with "Pleasure", "An Exciting Life", and "A Sense of Accomplishment" (ranked 5-6-7 by US and not included in top eight by Chinese). Overall, of the top eight TVs based on the aggregate rankings, both Chinese students and US students included seven. Thus, for the most important TVs, we conclude that the similarities far outweigh the differences between the Chinese and US Gen Y students.

Instrumental Values: China versus USA

For the IVs, "Ambitious" was top ranked for both Chinese and US Gen Y students but the next clusters were closer for this set of values. Of the seven top ranked IVs for the total sample, Chinese and US students agreed on the first five. Along with "Ambitious" at number one, both Chinese and US students included "Honest", Responsible", "Loving", and "Independent" in the top five. The Chinese completed their top seven with "Intellectual" and "Broadminded" while the US included "Courageous" and "Polite". For us, the striking finding for IVs was the complete agreement on the top five values for both Chinese and US Gen Y students.

DISCUSSION

In this study, samples of Chinese and US Gen Y students were asked to indicate their top five values from a set of 18 Terminal Values and 18 Instrumental Values. In the end, they agreed on four of the top five Terminal Values and all of the top five Instrumental Values. And, the top value of all was "Family Security". Certainly we were surprised at the similarity in values, particularly since both of us have taught Chinese students in Shanghai on multiple occasions. Clearly, today's behavioral patterns of Chinese and US students are different. However, we are looking to the future and many indicators suggest that we are experiencing unprecedented rapid change (probably every generation has and will make the same declaration).

We don't want to make more of these findings than meets the eye. The data were collected from 121 Gen Y students in Shanghai, hardly a large sample of the estimated 250 million urban and rural Chinese who make up China's Gen Y. And, the questionnaire was presented in English, not their first language. The US Gen Y sample of 100 students came from a private university in the eastern region of the country. Again, we cannot assume these 100 students speak for all of America's Gen Y. However, this small study contributes to the overall aggregation of information emerging about the young citizens of these two countries as they face the 21st century.

Our results are consistent with those of Zao and Newman (2005) who found that relationships were the highest rated value for both Chinese and US students. They interpreted their results as suggesting a convergence of cultural values. However, Ralston and his colleagues (Egri and Ralston, 2004; Ralston, 2008; Ralston, et. al., 1993; Ralston, et. al., 1997) have contrasted the process of convergence with a phenomenon they identify as "crossvergence". Basically, convergence refers to a process of homogenizing cultural values based on some common environmental forces affecting everyone (i.e., the globalization of technology and business). In its extreme, convergence would result in uniform global values. However, crossvergence recognizes the role of within-culture forces for stability and connections with the past (Ralston, 2008). Thus, crossvergence views the development of "new" cultural patterns as emerging from the dynamic interaction of "external" forces (technology and business ideology) and "internal" forces (traditional values reflecting the history within a culture). Thus, each culture will adapt to "modernization" in a unique manner based on their past. The rather theoretical perspective advanced by Ralston and his colleagues was echoed by the Gen Y teenager, Michael Stanat (2006), in his book on China's Gen Y. Stanat commented that "Caught up in globalization, the (Chinese) youth are trying to find a synthesis between modern and traditional culture (Stanat, 2006, p. 124). Indeed, this conclusion probably extends to all Gen Yers, regardless of country origin.

APPENDIX

SAMPLES OF WORDING OF THE RVS VALUES

(Only the Top Ten Choices of the Students are Included as Examples)

DESIRABLE LIFE-GOALS OR "TERMINAL VALUES"

FAMILY SECURITY (taking care of loved ones)
HAPPINESS (contentedness)
TRUE FRIENDSHIP (close companionship)
A COMFORTABLE LIFE (a prosperous life)
FREEDOM (independence, free choice)
MATURE LOVE (sexual and spiritual intimacy)
PLEASURE (an enjoyable, leisurely life)
WISDOM (a mature understanding of life)
AN EXCITING LIFE (a stimulating, active life)
A SENSE OF ACCOMPLISHMENT (lasting contribution)

DESIRABLE MODES OF BEHAVIOR OR "INSTRUMENTAL VALUES"

AMBITIOUS .. (hard-working, aspiring)
HONEST .. (sincere, truthful)
RESPONSIBLE .. (dependable, reliable)
LOVING .. (affectionate, tender)
INDEPENDENT .. (self-reliant, self-sufficient)
COURAGEOUS .. (standing up for your beliefs)
INTELLECTUAL .. (intelligent, reflective)
CHEERFUL .. (lighthearted, joyful)
BROADMINDED .. (open-minded)
POLITE .. (courteous, well-mannered)

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Trading and Investment Behavior of Retail Investors: Bullish versus Bearish Periods

Ming-Ming Lai
Multimedia University
mmlai@mmu.edu.my
Tel: 603- 8312 5722
Fax: 603-83125590

Siow-Hooi Tan
Multimedia University
shtan@mmu.edu.my
Tel: 603- 8312 5658
Fax: 603-83125590

Lee-Lee Chong
Multimedia University
llchong@mmu.edu.my
Tel: 603- 8312 5647
Fax: 603-83125590

Trading and Investment Behavior of Retail Investors: Bullish versus Bearish Periods

Ming-Ming Lai
Multimedia University

Siow-Hooi Tan
Multimedia University

Lee-Lee Chong
Multimedia University

Abstract

This paper examines the trading and behavioral characteristics of retail investors in Malaysian stock market during bullish and bearish periods. About 200 retail investors were participated in the survey. The survey results revealed that investors demonstrated improved signs of rationality than previously believed. They exhibited self-control and confident. They were not driven by herd behavior when making investment decisions either in bullish or bearish periods. In general, the retail investors prefer liquidity and have the tendency to invest if the volume traded is high. Interestingly, the liquidity preference was more pronounced during bullish than bearish periods.

During the bullish period, the Malaysian retail investors emphasized on local political events followed by government policies. Fundamental analysis is not as important as found under the bearish period. It is viewed that the economic fundamentals are strong during the bullish period and hence, investors have confident with the stock market performance. Instead, investors would pay more attention to the political influences during bearish period. The retail investors used simple technical trading tools of volume analysis and moving average to trace any profitable trading strategy during both bullish and bearish periods. In a nutshell, the survey results concluded that the retail investors do not exhibit much significant differences in investment behavior between bullish and bearish periods except liquidity preference.

Keywords: investor behavior, bullish, bearish, investment, Malayisa

JEL Code: G01, G11, G14

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1.0 Introduction

Identifying bear and bull periods as well as understanding the investors behaviors are of important in both investment community and academia. Although the importance of bear and bull periods are well-established in developed countries, identifying the stock market cycles in emerging stock markets are less being emphasized. Yet, many researchers and practitioners argued that the bear and bull markets are more prominent in emerging market countries due to the increase in the number of retail as well as institutional investors trading on stock markets. While some researchers argue that the investors' sentiments destabilize stock prices, others shown support against it. The U.S. sub-prime crisis of 2007 that evolved into the global financial crisis in 2008 had led to renewed interest in stock market cycles and investor behavior. In particular, there is a widespread view that the investors tend to react asymmetrically when dealing with good and bad news and the investors sentiments are more pronounced during bear periods.

In testing if investors react asymmetrically during bear and bull periods, this study first examine if the bear and bull periods can be identified in the Malaysian stock market. In financial literature, periods with persistent stock prices increase and decrease are termed bull and bear periods respectively. By utilizing the Bry and Boschan (BB, 1971) algorithm, eight bull and seven bear periods were observed for the Bursa Malaysia from January 1985 to December 2009. The bear and bull periods are presented in Figure 1. It is worth noting that most of the important events that affected the Malaysian stock market, including the 1997 Asian financial crisis and the recent 2008 global crisis, are well identified under bear periods.

Hence, this paper is motivated to examine the trading and behavior characteristics of retail investors in Malaysia during bullish and bearish markets via survey method. The paper provides evidence on how Malaysian retail investors behave during bullish and bearish markets. How do these investors make investment decisions? What are the fundamental and technical analyses tools that used by the retail investors? The survey findings of the study contributed additional evidence to the finance literature and improve our understanding of retail behavior during both bullish and bearish periods.

2.0 Literature Review

Nagy and Obenberger (1994) carried out a survey on the factors influencing individual investor investment behavior by employing the factor analysis in their study. They embarked on a survey study to outline the relative important factors in individual investment decision making process. The identified factors cover a number of variables include neutral information, accounting information, firm image, traditional factors, social factors, recommendations and personal factors. For neutral information, it covers the news/information as well as past stock prices while accounting information include the financial statements and annual reports. Firm image comprises of the reputation, its perceived ethics and status of the company and its products/services. The traditional factors include the dividend yield, affordable prices, tax effect and also risk diversification. Meanwhile, social factors cover the local, international and environment concern and recommendations from stockbroking firms, analyst/specialist and also peers. Lastly, personal needs are also important in which financial, timing and the need to diversify the risk.

Based on the prediction of overconfidence models, Barber and Odean (2002) analyzed trading volume and performance of a group of 1,600 investors who switched from phone-based to online trading in the U.S. They found that trading volume increases and performance decreases for those who switch to online trading. In particular, while those traders who opted for internet trading initially beat the market by about 2% prior to going online, their performance decreased afterwards, resulting in performance 3% below the market. They therefore confirmed the prediction that high returns in the past make investors overconfident and trade actively.

Analyzing on the Jakarta Stock Exchange (JSX) data, Bowe and Domuta (2004) found evidence of different herding behavior before, during, and after the 1997 Asian crisis. In particular, their results suggest that foreign investors herd more than local investors over the pre- to the post-crisis period. The tendency of local investors remains fairly constant and in fact the measure of herding reduces after the crisis period. Furthermore, their findings provided some evidence that domestic herding is related to firm size while foreign herding is negatively related to the market capitalization.

Kim and Nofsinger (2007) conducted a study on the Japanese individual investors' behavior under bullish and bearish periods ranging from 1984 to 1999. They investigated the investors' perception toward risk, book-to-market ratio and past stock return with stock investment for both different market sentiments. Their findings indicate that the investors' preferences seem to be different under different market outlook. The Japanese investors prefer stock with higher risk during bearish period and they show interest to stocks with high book-to market ratio during bullish period.

Maditinos et al. (2007) examined how both institutional and individual investors making investment decision in Athens Stock Exchange covering the periods from 2003 to 2004. A questionnaire survey was carried out to assess the relative importance of the identified factors. Their findings suggest that fundamental and technical analyses are important for institutional investors but not for individual investors. Individual investors are relatively influenced by the news/media, noise in the market and their own gut feeling or experience which lead to losses. Among the types of fundamental analysis, price-earnings ratio, earnings per share, net operating profit and return on equity are highly noted by the investors while the technical indicators are preferred than chart analysis for the technical analysis.

Utilizing monthly data from October 1988 to April 2003 together with two measurements of market participants' sentiments – individual investor sentiments and institutional investor sentiments, Verma and Verma (2008) found that both the institutional and individual investor sentiments are driven by the rational risk factors. In particular, while inflation, excess market return and dividend yield are found to have significant effects on both types of sentiments, the risk factors such as term spread and HML have greater effects on institutional investor sentiment suggesting that expectations of institutional investors are more rational than those of the individuals.

Goodfellow et al. (2009) examined the presence of the herding for both institutional and individual investors on the Warsaw Stock Exchange utilizing data from July 1996 to November 2000. Their study provided evidence that that the individual investors herd during market downswings and, to a lesser extent, during market upswings. On the other hand, institutions investors do not appear to exhibit herd behavior, regardless of the state of the market. Their findings further proposed that, across the sample period, individual are prone to sentiment-driven investment decisions when the market returns declines.

Hsu and Shiu (2010) investigated the investment returns of 6993 investors in 77 discriminatory IPO auctions in the Taiwan stock market between January 1996 and April 2000, and find that the returns for the average infrequent bidders are 9.36%, while the returns for the average frequent bidder are 4.48%. This lower performance of frequent bidders was pervasive for both institutional and individual investors. The conclusion remained unchanged for individual investors after controlling for the amount of investment capital per auction; investor type; gender and multiple bids, suggesting that individual investors may be more prone to overconfidence than institutional investors. Their findings further suggested that overconfidence causes frequent bidders to bid too aggressively and evaluate the IPO firms too optimistically, thereby lowering their investment performance.

3.0 Data and Method

We used a survey method via convenience sampling. The data collected were deemed to be personal and confidential. The respondents were from 200 retail investors in the Malaysian financial market. They were made up of 77 from Kuala Lumpur, 43 central region, 50 northern region, and 30 southern region. Retail investors were approached by research assistants who ascertain whether the retail investors have invested in stock market or not before they participated in the survey. The pre-tested questionnaire was done in July 2009 while the actual survey was carried out in August 2007. Overall, there were 200 completed questionnaires used in the survey.

The first section of the questionnaire concerned the demographic of the individual investor. The demographic information are such as gender, race, age, marital status, educational level, the number of year in investment, annual personal income, method of trading, estimated portfolio value, average duration stock held, investment horizon etc.

The second section has eight (8) sub-parts ranging from part A to part I. The part A to part I asked respondents on their opinions during bullish and bearish markets on the following investor behavior categories: price anchoring, overconfidence, prospect theory (loss aversion), representativeness, control, herd behavior, risk attitude and liquidity. In part I of section 2 are asked respondents to indicate his or her preferred types of stock investments. All these 8 sub-parts in section 2 asked for the responses of respondents by indicating his or her agreement with each statement on a 5-point scale range from 1 (strongly disagree) to 5 (strongly agree).

Section three (3) of the questionnaire asked on equity fundamental analysis. In part A, respondents were asked to indicate the importance of the analysis and events to investment decisions. Subsequently, in part B respondents were asked to indicate the closely watched indicator and technical analysis. The fundamental analysis indicators range from market capitalization to dividend yield. The technical indicators are from simple price and volume chart to relative strength index. The respondents were asked to evaluate the importance of each fundamental and technical indicator on 5-point scale with 1(very unimportant) to 5(very important) during bullish and bearish market. In part D, respondents were asked to indicate his or her responses on the influential external factors to equity transactions. The external factors include current economic indicators and political factors.

Prior to the reliability tests, we conducted face validity with the items in the questionnaire with those who are experienced and familiar with investments. They serve as panels of content experts and their comments and judgments are taken into consideration to establish face validity.

4.0 Analyses and Discussions

Profile of respondents

Table 1 shows the results of our survey obtained from 200 individual investors. 35.5 percent of the respondents are from Kuala Lumpur, while 25, 19 and 10 percents of them are from Penang, Melaka and Muar, respectively. The rest of them are either from Johor Bahru, Putrajaya or Seremban. 52.5 per cent of the respondents were males and 47.5 per cent were females. Majority of the respondents (68 per cent) were in the age group 25-45 years old. 76 per cent of the total respondents were Chinese, followed by Malay (19 per cent). Only 4 per cent was Indian investors.

The two main categories of the respondents under study were from executive (45.2 percent, and self-employed (21.6 per cent). The majority of the respondents are well-educated in which nearly 70 per cent of the respondents in the sample hold either a diploma or degree. It is worth noting that 69.9 per cent of the respondents involved in stock market earned an annual income of less than RM60,000.

Nearly 40 per cent of the investors had involved in the field of investment for less than three years and 28.5 per cent had more than 12 years of experience. Less than one-fifth (19 per cent) of respondents agree that they were equipped with good investment skills and knowledge while nearly one-fourth of them admitted to have a limited amount of investment skills and knowledge. 57.5 per cent of them are with average investment knowledge and skills. Thus, it is not surprised that 75.8 per cent of them hold less than RM60,000 for the portfolio and 81.5 percent hold either long-term or a combination of long- and short-term portfolio. Furthermore, 67.9 per cent of the respondents hold less than 5 stocks in their portfolio. Interestingly, while 63.1 percent of the respondents conducted their trading solely via remisiers or dealers, 33.8 percent of them chose to trade using online services.

Results also showed that a majority of the individual investors (49.2 per cent) monitored their stock daily. However, 30 per cent recorded an average buying-selling time of more than 1 year and almost 18 per cent of them held their stocks less than a month.

Reliability testing

All responses, excluding prospect theory, representativeness, risk attitude and price anchoring (bullish period only), are deemed reliable since the scores are more than 0.70 during bullish and bearish periods. In particular, the Cronbach's alpha (α) during bullish (bearish) periods were (0.70), 0.84(0.77), 0.92(0.89), 0.85(0.85), and 0.82(0.77) for 'price anchoring', 'overconfidence', 'self control', 'herd behavior' and 'liquidity preference' respectively. Those scales with α lower than 0.7, in particular, prospect theory, representativeness, risk attitude and price anchoring, are considered to be unreliable and were excluded from the analysis.

Behavioral characteristics

Self control was exhibited by mean value of 3.64 during bull market and was the most prominent behavior among all (see Table 2). The respondents found themselves more comfortable and confident with the information they collected themselves. Most of them spend considerable effort and check their investment performance very frequently. The individual investors state that they are more likely to act only after spending long time collecting the information on the investment. Most of them agree that they can control better if they have immediate access to their investment. In a nutshell, investors are found to exhibit self-control given that all the mean values ranging from 3.52 to 3.83. The similar conclusion is also found for bearish periods.

Liquidity preference also featured prominently by the mean value of 3.35 and 3.26 during bull and bear market respectively. Regardless bull or bear periods, the majority of the individual investors agreed that they felt less comfortable to invest if the price is volatile. Investors consider the number of trade size, trading volume and number of transactions before trading stocks. They have high tendency to invest when the trading volume is high. Interestingly, the liquidity preference was more pronounced during bullish as compared to bearish periods.
Apart from the self control and liquidity preference, the price anchoring was exhibited by a majority of respondents during bearish period but not bullish period. Furthermore, anchoring featured quite prominently in comparing the current stock prices to last year price level to justify their buying-selling decision.

On the other hand, most of the investors had more confident in their own investment opinions over opinions of financial analysts, advisors, friends or colleagues. They believed that they were experienced investors who could beat the stock market with their knowledge and skill. Interestingly, investors did agree to exhibit this behavior during bearish period as well. The overall mean values of overconfidence were 3.21 and 3.18 during bullish and bearish periods, respectively.

It was also note that most of the individual investors disagreed that they were driven by herd behavior when making investment decisions during both bullish and bearish periods. The investors seldom followed the crowd and they disagreed that a large group could not be wrong. Furthermore, they disagreed that group pressures made them to avoid feeling left behind.

Mean-differences of these behavioral characteristics during bullish and bearish periods are examined to find out whether the investors behave differently (see Table 2). By comparing mean differences during bullish and bearish periods, it is worth noting that there was no obvious difference in investment behaviors except for liquidity preference. Meanwhile, the investors have more intention to react to price anchoring during bearish period.

Preference types of investments and trading frequency during bullish and bearish periods

Respondents were asked to choose their preference types of stocks during bullish and bearish periods. As shown in Table 3, investors responded that growth and blue-chip stocks are the most popular during bullish and bearish. While investors were interested in growth stocks to reap a greater capital gain during the bullish markets, blue-chip stocks were of their interest in order to earn stable income during the bearish market.

Respondents were also asked to estimate their stock trading frequency per month. As shown in Table 3, about 70 per cent of the total respondents (during both bullish and bearish periods) trade not more than 10 times per month. On the other hand, there were only 10 percent of respondents reported that their trading frequency is larger than 16 times, regardless the bullish or bearish periods. Thus, one can conclude that the individual investors in Malaysia exhibit a moderate degree of trading frequency during both bullish and bearish periods.

The important factors in making investment decision during bullish and bearish periods

In this study, the respondents were also asked to evaluate the importance of fundamental analysis, technical analysis, portfolio analysis, media influences, gut feeling, foreign bourses performance, their experience, specialist's recommendation, rumour as well as internal and external political events in investment decision making process. Table 4 reports the important factors of investment decision during bullish and bearish periods. During the bullish period, the Malaysian retail investors emphasized on local political events followed by government policies with the mean values of 3.79 and 3.78 respectively. Fundamental analysis is not as important as found under the bearish period. It is rational that the economic fundamentals are strong during the bullish period and investors have confident that the market will grow in general. Therefore, investors would pay more attention to the political influences. The investors are also influenced the least by rumours which is ranked the lowest, recommendation by brokers which is ranked the second lowest and also gut feeling which is ranked the third lowest. Overall, Malaysian retail investors are not much influenced by rumours and their own gut of feeling.

While during the bearish period, investors are still sceptical and they will conduct certain level of fundamental analysis before investing with the highest mean of 3.80. However, they are still influenced by the political events and government policies as the consistent findings observed under the bullish period with the means values of 3.77 and 3.72. Consistently with findings found during the bullish period, the investors are least influenced by rumours and their gut feeling when investing.

The closely watched indicator of fundamental analysis

For the closely watched indicator of fundamental analysis, investors show great attention to the dividend yield no matter under what market conditions (Table 5). Dividend yield is ranked the highest among all the monitor fundamental indicators with the mean values of 3.85 and 3.80 for both bullish and bearish periods. One interesting point found during the bullish period is that investors believe that leverage effect is significant in company performance. They pay attention to this indicator and it is ranked the second highest mean value of 3.83. Investors also look at the profit margin earned by the companies as well as its price-earnings ratio (PE) before investing.

Under the bearish period, investors are more concern about their return from investment. Both dividend yield and profit margin are the most two important indictors monitored by investors with the mean values of 3.80 and 3.73 respectively. Investors seem to be sceptical during this period as they monitor closely the return made by the companies as compared to the bullish period. Consistent results are also found for size effect, book-to-market ratio and beta whereby they are viewed unimportant among all fundamental indicators for both bullish and bearish periods.

Technical tools used in technical analysis

Table 6 presents the technical tool used in technical analysis by the Malaysian investors. The findings show that the Malaysian investors are only able or willing to conduct a simple technical analysis on their investment making decision. Trend analysis is used very often to assess the investment performance for both bullish and bearish periods with the highest mean value of 3.65 and 3.61. The Malaysian individual investors are also employing volume analysis and moving average to trace any profitable trading strategy for their investment.

Those advanced technical tools seem to be unimportant to the investors and they seldom evaluate their investment by using candlesticks, stochastic indicators and relative strength index. This finding is consistently found for both bullish and bearish periods.

<u>The influential of external factors to equity transaction</u>

The Malaysian individual investors view the stability of the political condition of a country as the most important factor before making investment decision under both bullish and bearish market sentiments as shown in Table 7. The political stability is having the highest mean values of 4.03 and 3.88 for both periods. The policy of government intervention will also influence the investor's investment decision and this factor is consistently ranked as second for both periods. Those other political related factors of bad governance and election are also ranked high at the range of three to five respectively under both periods. Consistently, the world stock market performance are also viewed as the influential factors for investors as it is ranked as third and fourth under bullish and bearish market conditions. The least influential factor is trade surplus/deficit for bullish period and employment rate for bearish period respectively. Generally, the Malaysian investors show great concern on the political factors before making any equity transaction.

Conclusions

Overall, the survey results showed that the retail investors were more rational than previously believed. They exhibited self-control and confident with the information they collected themselves. They seldom followed the crowd and disagreed that a large group could not be wrong. Regardless bull or bear periods, most of the individual investors felt less comfortable to invest if the price is volatile. Liquidity measures of number of trade size, trading volume and number of transactions are taking into account in decision making process. On the other hand, the survey also revealed that the Malaysian investors showed great concern on the political factors before making any equity transaction. The investors were least influenced by rumours, followed by recommendation by brokers and gut feeling.

Dividend yield is the most important barometer for investors before making investment in both bullish and bearish periods which suggest that investors prefer current income with certainty. Given average investment knowledge of investor which was revealed by them, the survey showed that the Malaysian investors were only able or willing to conduct simple technical analyses in searching profit opportunities.

The results of investment behavior would improve our understanding of decision making process of individual investor with regard to equity investment and management. Further investor research is necessary and can be conducted in an in-depth personal interview with retail investors on why and how the investment decisions are made in order to gauge further insights. Comparative analysis of investment approaches of investors would be the interest of future research.

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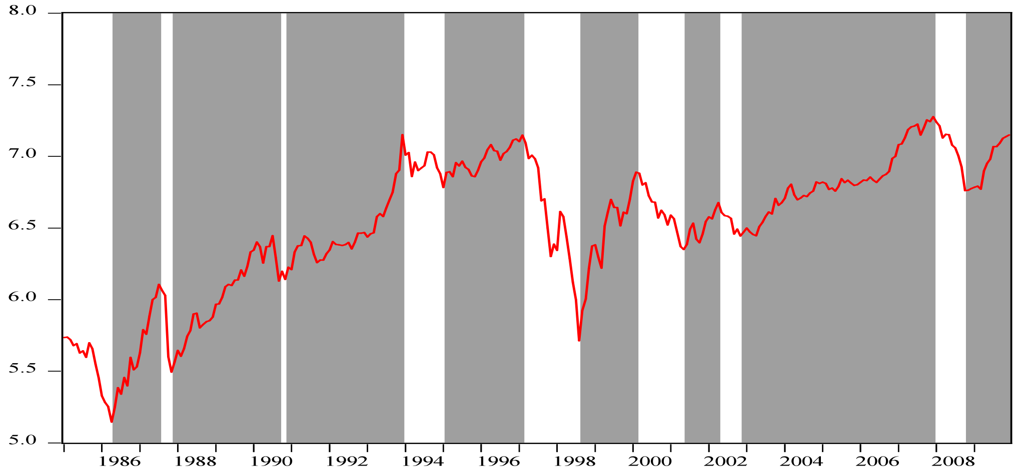
Figure 1: Bear and Bull Periods of the Malaysian Stock Market from 1985:01 to 2009:12



Note: Shaded areas correspond to bullish periods. The first and last cycles are incomplete.

Table 1: Demographic characteristics of retail investors

Characteristics	Percent (%)	Characteristics	Percent (%)
Location		**Age Group**	
KL	35.5	Below 25 Years	9.5
Melaka	19.0	25 - 35 Years	37.7
Johor Bahru	5.0	35.01 - 45 Years	30.7
Muar	10.0	45.01 - 55 Years	15.6
Putrajaya	3.0	Above 55 Years	6.5
Seremban	2.5		
Penang	25.0		
Gender		**Race**	
Male	52.5	Malay	19.0
Female	47.5	Chinese	76.0
		Indian	4.0
		Other - please specify	1.0
Annual Personal Income		**Educational Level**	
Less than RM30,000	34.7	Primary school	.5
RM30,001-RM60,000	35.2	Secondary school	10.5
RM60,001-RM90,000	18.1	Certificate	6.0
RM90,001-RM120,000	6.5	Diploma	20.5
More than RM120,000	5.5	Degree/ Professional degree	52.5
		Master	8.5
		PhD	.5
		Others - please specify	1.0
Occupational Status			
Top management	4.5		
Executive (Middle management)	45.2		
Non-executive	14.1		
Self-employed	21.6		
Retired	2.5		
Housewife / houseman	3.0		
Others = Please specify	9.0		

Note: Number of retail investors is 200.

Table 1: Demographic characteristics of retail investors (Continued…)

Characteristics	Percent (%)	Characteristics	Percent (%)
Experience in Investment Field		**Investment Skills and Knowledge**	
less than 1 year	19.0	Very poor	8.0
1 to 3 years	19.5	Poor	15.5
3.01 to 5 years	15.0	Average	57.5
5.01 to 10 years	18.0	Good	18.0
more than 10 years	28.5	Very good	1.0
Investment Horizon		**Value of the Portfolio**	
Short term (<1 year)	18.6	Less than RM30,000	48.0
Long term (>1 year)	30.2	RM30,001-RM60,000	27.8
Both 1 & 2	51.3	RM60,001-RM90,000	9.6
		RM90,001-RM120,000	3.5
		More than RM120,000	11.1
Method of Trading		**Average Duration between Buy-Sell**	
Telephone with remisier/dealer	38.4	Less than one month	17.8
Internet (online)	33.8	1 to 3 months	17.8
In person with remisier/dealer	24.7	3.01 to 6 months	22.8
1 and 2	2.0	6.01 to 12 months	14.2
1 and 3	.5	1 to 2 years	12.7
1 and 2 and 3	.5	2 years or more	14.7
Number of different stocks held		**Mode of Monitoring**	
1 - 2 stocks	31.7	Daily	49.2
3 - 5 stocks	36.2	Weekly	19.6
6 - 10 stocks	21.6	Monthly	10.1
11 - 12 stocks	8.5	Quarterly	6.5
21 or more stocks	2.0	Yearly	3.0
		Never monitored	11.6

Note: Number of retail investors is 200.

Table 2: Investor behaviors during bullish and bearish periods

	Bullish*			Bearish*			
	α	**Mean**	**S.D.**	**α**	**Mean**	**S.D.**	**T- statistics for Mean-Difference**
A: Price Anchoring	**-**	**-**	**-**	**0.70**	**3.33[a]**	**0.64**	**NA**
1. I compare the current stock prices with their recent 52-week high / low price to justify my stock purchase.					3.47[a]	0.87	
2 I am likely to sell my stock after the price hits recent 52-week high.					3.33[a]	1.04	
5 I see the stock price as high if the price has increased to 52-week high.					3.31[a]	0.88	
6 The position of 52-week high / low determines the current stock price movement range.					3.12	0.79	
B: Overconfidence	**0.84**	**3.21[a]**	**0.70**	**0.77**	**3.18[a]**	**0.61**	**0.66**
1. I am an experienced investor.		2.95	1.03		2.98	1.01	-0.76
2. On average, I feel that my overall investments perform better than the stock market index.		3.02	0.97		2.98	0.91	0.58
3. When I purchase a winning investment, I feel that my actions and knowledge, and not purely luck affected the result.		3.32[a]	0.90		3.31[a]	0.87	-0.28
4. I expect my investments to perform better than the stock market index.		3.43[a]	0.87		3.39[a]	0.85	0.65
5. I feel more confident in my own investment opinions over opinions of financial analysts and advisors.		3.19	0.96		3.13	0.91	0.33
6. I feel more confident in my own investment opinions over opinions of friends and colleagues.		3.34[a]	0.90		3.26[a]	0.87	1.46
C: Herd Behavior	**0.92**	**2.64[a]**	**0.79**	**0.89**	**2.61[a]**	**0.75**	**0.80**
1. I feel more comfortable to follow the crowd.		2.74[a]	0.96		2.72[a]	0.96	0.28
2. I follow others to make my investment decision.		2.56[a]	0.92		2.54[a]	0.94	0.59
3. I like to act together.		2.67[a]	1.01		2.60[a]	0.94	1.53
4. I have tendency to mimic the actions of a large group.		2.66[a]	0.98		2.68[a]	0.90	-0.48
5. It is unlikely that a large group could be wrong.		2.63[a]	0.97		2.63[a]	0.95	-0.58
6. I feel group pressure makes me to avoid feeling left behind from the group		2.56[a]	0.98		2.51[a]	0.92	1.06
D. Control	**0.85**	**3.64[a]**	**0.64**	**0.85**	**3.59[a]**	**0.65**	**2.03**
1. I feel more comfortable in the validity of information that I collect myself.		3.64[a]	0.79		3.61[a]	0.79	0.59
2. The more information I collect on my investment, the more confident I feel.		3.83[a]	0.82		3.74[a]	0.88	1.63
3. I spend considerable effort researching my investment.		3.53[a]	0.83		3.48[a]	0.84	1.45
4. I check the performance of my investments very frequently.		3.52[a]	0.91		3.45[a]	0.93	0.93
5. After I have spent a long time researching an investment, I am more likely to act on this information (buy or sell).		3.66[a]	0.87		3.59[a]	0.88	1.55
6. I feel more confident when I have immediate access to my investment.		3.67[a]	0.84		3.63[a]	0.86	1.07

Table 2: Continued…

	Bullish*			Bearish*			
	α	Mean	S.D.	α	Mean	S.D.	t statistics for Mean-Difference
E: Liquidity	**0.82**	**3.35[a]**	**0.69**	**0.77**	**3.26[a]**	**0.60**	**2.20[b]**
1. I feel less comfortable to invest if the price is volatile		3.43[a]	0.97		3.33[a]	0.87	1.81
2. I refer to the number of transactions (trading frequency) before buying or selling stocks.		3.41[a]	0.90		3.31[a]	0.86	1.51
3. I prefer to invest in stocks with low bid-ask spread		3.24[a]	0.92		3.15	0.85	1.59
4. The volume traded of a stock influences my investment decisions.		3.39[a]	0.97		3.30[a]	0.94	2.08
5. The number of trade size (or ticket size) affects my investment decisions.		3.25[a]	0.93		3.19[a]	0.92	0.96
6. I feel more comfortable to invest when the trading volume is high.		3.36[a]	0.99		3.30[a]	0.87	1.78

Notes: * Respondents evaluated the importance of the above factor in investment decision making on a scale of 1 (strongly disagree) to 5 (strongly agree). [a] indicates significant at 5 per cent level from mean of 3. [b] indicates significant difference between bullish and bearish periods at 5 per cent level. S.D. refers to standard deviation.

Table 3: Types of preferred investments and trading frequency during bullish and bearish periods

	Bullish		Bearish		
Types of Investments	**Mean**	**Ranking**	**Mean**	**Ranking**	**t statistics for Mean-Difference**
1. Blue-chip stocks	3.68	2	3.65	1	0.62
2. Growth stocks	3.70	1	3.53	2	3.38[b]
3. Cyclical stocks	3.23	5	3.16	5	1.25
4. Defensive stocks	3.35	4	3.34	3	-0.29
5. Penny stocks	3.07	6	3.06	6	0.10
6. Value stock	3.35	3	3.25	4	1.95[b]
Trading Frequency per month	**Bullish (%)**		**Bearish (%)**		
1. Less than 6 times	46.9		52.7		
2. 6 to 10 times	24.5		19.4		
3. 11 to 15 times	17.9		18.3		
4. 16 to 20 times	5.6		4.8		
5. More than 20 times	5.1		4.8		

Note: [b] indicates significant difference between bullish and bearish periods at 5 per cent level.

Table 4: The degree of importance of the following to investment decision during bullish and bearish periods

	Bullish*			Bearish*		
	Mean	S.D.	Ranking	Mean	S.D.	Ranking
1.Fundamental analysis	3.76	0.91	3	3.80	0.90	1
2.Technical analysis	3.60	0.91	8	3.54	0.86	8
3.Portfolio analysis	3.62	0.82	6	3.55	0.80	7
4.Newspapers/media	3.46	0.80	9	3.47	0.80	9
5.Instinct (gut feeling) of investor	3.25	0.89	11	3.17	0.90	12
6.Performance of Dow Jones Industrial Average (DJIA) in US	3.68	0.74	5	3.64	0.76	4
7.Performance of Hang Seng Index in Hong Kong	3.44	0.83	10	3.38	0.89	10
8.Policy and decisions made by government	3.78	0.81	2	3.72	0.80	3
9. Investment experience of investor	3.60	0.81	7	3.55	0.80	6
10. Remisier (broker)'s recommendation for buying and selling stocks	3.24	0.86	12	3.26	0.89	11
11.Rumours/tips pertaining stocks in Bursa Malaysia	3.10	1.01	13	3.13	0.95	13
12.Important local political events	3.79	0.79	1	3.77	0.81	2
13. Important international (foreign) political events	3.71	0.81	4	3.64	0.86	5

Note:* Respondents evaluated the importance of the above factors in investment decision making on a scale of 1 (very unimportant) to 5 (very important). S.D. indicates standard deviation.

Table 5: The closely watched indicator of fundamental analysis

	Bullish*			Bearish*		
	Mean	S.D.	Ranking	Mean	S.D.	Ranking
Market capitalization (Size effect)	3.55	0.80	9	3.52	0.79	9
Volume	3.71	0.80	6	3.60	0.74	6
Price Earnings (PE) ratio	3.74	0.73	4	3.64	0.71	5
Earning per share (EPS)	3.71	0.79	7	3.71	0.78	3
Debt equity ratio (Leverage effect)	3.83	3.18	2	3.53	0.81	8
Book-to-market ratio	3.45	0.81	10	3.44	0.78	10
Beta (systematic risk)	3.44	0.82	11	3.39	0.76	11
Return on equity (ROE)	3.72	0.78	5	3.67	0.74	4
Return on assets (ROA)	3.60	0.82	8	3.57	0.79	7
Profit margin	3.81	0.77	3	3.73	0.76	2
Dividend yield	3.85	0.81	1	3.80	0.79	1

Note:* Respondents evaluated the importance of the above factors in investment decision making on a scale of 1 (very unimportant) to 5 (very important). S.D. indicates standard deviation.

Table 6: Technical tools used in technical analysis

	Bullish*			Bearish*		
	Mean	**S.D.**	**Ranking**	**Mean**	**S.D.**	**Ranking**
Simple price and volume chart	3.55	0.90	4	3.57	0.85	2
Trend analysis	3.65	0.84	1	3.61	0.81	1
Moving averages	3.56	0.82	3	3.57	0.78	3
Volume studies	3.58	0.79	2	3.55	0.77	4
Stochastic Indicators	3.38	0.84	7	3.43	0.81	5
Candlesticks	3.45	0.89	6	3.36	0.86	7
Relative strength index	3.51	0.88	5	3.38	0.88	6
Never used technical indicator tools	2.97	1.13	8	2.98	1.15	8

Note:* Respondents evaluated the technical indicator/tools used in technical analysis on a scale of 1 (very unimportant) to 5 (very important). S.D. indicates standard deviation.

Table 7: The influential of external factors to equity transaction

	Bullish*			Bearish*		
	Mean	**S.D.**	**Ranking**	**Mean**	**S. D.**	**Ranking**
World stock market performance	3.95	0.71	3	3.88	0.73	4
Current economic indicators :						
(a) Business cycle	3.77	0.76	6	3.73	0.76	6
(b) Inflation pressure	3.64	0.80	10	3.61	0.79	9
(c) Interest rate movement	3.68	0.79	7	3.65	0.76	7
(d) Fuel hike	3.68	0.75	8	3.63	0.75	8
(e) Employment rate	3.56	0.80	12	3.41	0.82	14
(f) Trade surplus/deficit	3.52	0.80	14	3.47	0.79	12
(g) Gross domestic product	3.59	0.82	11	3.53	0.76	11
(h) Foreign reserve	3.54	0.87	13	3.46	0.82	13
(i) Money Flow	3.66	0.80	9	3.53	0.85	10
Political factors :						
(a) Government political intervention	3.95	0.81	2	3.88	0.84	2
(b) Bad governance	3.89	0.81	5	3.88	0.81	3
(c) Election	3.91	0.83	4	3.81	0.84	5
(d) Political stability	4.03	0.80	1	3.88	0.87	1

Note:* Respondents evaluated the influential external factors to equity transactions a scale of 1 (very unimportant) to 5 (very important). S.D. indicates standard deviation.

Economic Freedom and Banking Development: The Experiences of Selected East Asian Countries**

Soo-Wah Low [a, *]
Noor Azlan Ghazali[b]
Shamshubaridah Ramlee[c]
Rasidah Mohd Said[d]

Universiti Kebangsaan Malaysia
(National University of Malaysia)
43600 UKM Bangi Selangor
MALAYSIA

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[a] Associate Professor of Finance, Graduate School of Business, Universiti Kebangsaan Malaysia.
[b] Professor of Economics, Graduate School of Business, Universiti Kebangsaan Malaysia.
[c] Associate Professor of Finance, School of Business Management, Faculty of Economics and Business, Universiti Kebangsaan Malaysia.
[d] Associate Professor of Finance, Graduate School of Business, Universiti Kebangsaan Malaysia.

*Corresponding author. E-mail: swlow@ukm.my

Economic Freedom and Banking Development: The Experiences of Selected East Asian Countries

Abstract

This paper investigates the role of economic freedom in banking sector development using a panel data set for the period 1975-2006 in six East Asian countries, namely Singapore, Malaysia, Indonesia, Thailand, South Korea and the Philippines. We find a direct positive link between economic freedom and banking sector development for the benchmark country, Singapore and the effects of economic freedom on banking development are not common to all countries. Differential effects are observed for Malaysia and Thailand indicating that specific country factors are at work. To establish a firmer link between economic freedom and banking development, we decompose the economic freedom index into its various sub-components. We find that legal quality is the only sub-component that is positively and robustly related to all measures of banking development that we employ and that the effect for Malaysia is different from that in Singapore. This suggests that, protection of property rights and effective enforcement of contracts are critical elements in promoting banking development. A country's legal system needs to be strengthened if banking sector is to function well. However, the extent to which legal systems need improvement differs across countries with different institutional framework.

Keywords: economic freedom, banking sector development, economic growth
JEL classification: H00; G20; O40

Economic Freedom and Banking Development: The Experiences of Selected East Asian Countries

1. Introduction

Is economic freedom vital for the development of banking sector? Which categories of economic freedom should be prioritized by developing nations in promoting efficient domestic banking system within an increasingly globalised economy? Economic freedom or in short the *absence of government coercion or constraint* is often argued to be a critical element for economic development. It forms as vital ingredient for economic efficiency that optimally allocates nation's resources. Theoretically argued, economic freedom motivates competitive environment that leads to the establishment of efficient financial system, innovative ideas and productive capacities. Nevertheless, understanding of the links between economic freedom and financial activities remains vague.

A well-developed banking sector often represents a major element of economic development. Theoretical explanations suggest that banking activities exert real effect by resolving various market imperfection-type problems. Banks act as efficient monitoring agent, provider of liquidity, efficient risk smoother, provider of research function and incentive for good governance and corporate control. With less fiction, greater intermediation takes place, igniting real activities. Studies by King and Levine (1993a), Rajan and Zingales (1998), and Beck et al. (2000) are among those that point toward growth-enhancing role of banks. Accordingly, being bank-dependent nations, it is critical for these economies to systematically design the development of their banking systems.

Many studies on financial development examine the various conditions that influence the pattern of financial development which include legal framework, liberalization, openness, culture, and macro economic conditions (examples are La-Porta et al. (1998), Levine (2002), Rajan and Zingales (2003), Stultz and Williamson (2003), Beck et al. (2003), and Hung (2003). In particular, empirical investigations of 1997/1998 financial crisis have alerted that the inefficiency of the East Asian banking system was mostly due to various forms of government interferences. Much of these arguments center on the ineffective incentive mechanisms (moral hazards) and weak governance that surround region's banking operations (McKinnon and Phil (1998), Krugman (1998), and Mishkin (1999). In short, less freedom is available in these economies due to various government interventions. Nevertheless, existing development policies while retaining the role of market, also recognizes the critical function of the government in the promotion of a sound banking system, a key to achieving a sustainable economic growth.

Our study examines the role of economic freedom (in various definitions) on the development of banking sector in selected bank-dependent East Asian nations, defined here to include the five Association of Southeast Asian Nations (ASEAN) countries - Singapore, Malaysia, Indonesia, Thailand, the Philippines plus South Korea. We employ the overall economic freedom index as well as the components of the index to identify the categories of economic freedom that contributes most directly to the promotion of a sound banking system which is vital for sustainable economic growth. This study employs the economic freedom measure sourced from the Fraser Institute and provides greater insights into the link of selected categories of economic freedom and the banking sector development. It is hoped that the findings of this study will assist the region's policy makers in formulating banking policies within an increasingly globalised economies. Our study is presented as follows. Section 2 provides a discussion of the literature review. This is followed by data and methodology descriptions in Section 3. Section 4 discusses the results and Section 5 concludes the study.

2. Literature Review

Economists have long recognized that minimum government intervention in economic activities will lead to economic growth. There is an extensive literature that highlight the importance of various institutional and policy variables in promoting economic growth. See for example, Torstensson (1994), Knack and Keefer (1995) and Barro (1996). More specifically, this growth literature points out that stable and predictable rule of law, good enforcement of contracts, protection of individual and property rights, sound money, etc. are the keys to economic progress. According to Gwartney and Lawson (2003a, 2003b), the Economic Freedom of the World (EFW) Index captures many of the institutional and policy related areas of a country and thus can be used as a proxy for institutional and policy framework of a country.

The empirical literature that link economic freedom and economic growth is relatively recent and only a few studies were available until the late 1990s. Many of these studies use a measure of economic growth as a dependent variable and an aggregate measure or the underlying components of economic freedom as part of a set of explanatory variables. For examples, Dawson (1998), Ayal and Karras (1998), Gwartney et al. (1999), de Hann and Sturm (2000), Carlson and Lundstrom (2002), Gaunder (2002) and Karabegovic et al. (2003) among others. More recently, Doucouliagos and Ulubasoglu (2006) offer a quantitative review of the empirical literature on the link between economic freedom and economic growth. Collectively, these empirical studies generally find an overall positive relationship between economic freedom and economic growth.

In the financial development literature, the century-old idea that real economic activities are benefited by the progress on the financial sector can be traced back to Bagehot (1873) and Schumpeter (1912). Both emphasized the important role of banking sector in promoting economic growth and pointed out that economic hegemonic is largely tied to the presence of liquid financial sector that pumps society's savings into their best uses. Collectively, the available theoretical literature generally suggests a positive link between financial development and economic growth. Financial intermediaries or generally termed as banks, act as unique agents that resolve various market imperfections-type problems that prohibit efficient allocation of resources.[1] For examples, banks are proposed, among others, to act as efficient monitoring agent (Diamond (1984), Ramakrisnan and Thakor (1984), Boyd and Prescott (1986)); efficiently smoothed risk intertemporally (Allen and Gale (1997); provide research function that channels capital to earn highest return.[2]

At the empirical studies, both macro and micro-based cross-sectional evidence that focus on financial intermediation, generally provide significant evidence pointing toward growth-enhancing role of banks. Studies on the relationship between banking development and economic growth is mostly encapsulated in the financial development literature. For examples, King and Levine (1993a, 1993b), Jayaratne and Strahan (1996), Rajan and Zingales (1998), Beck et al. (2000), Demirguc-Kunt and Maksimovic (2002) among others. A well developed financial system normally

[1] A broader theme of the finance-growth literature covers advancement in both financial intermediaries (bank-based financial system) and financial markets (market-based financial system).

[2] However, Lucas (1988) argues in favor of a reverse causation chain, i.e. it is banks that benefited from real economic growth and not the other way around. In other words, banking sector reacts to the growing demand for financial products and services that arise from real activities.

includes a well functioning banks and equity markets and there has been substantial research on the various determinants of financial development. More generally, empirical literatures have shown that stable macroeconomic policies contribute to well functioning financial systems. That is, countries with lower and more stable inflation rates are likely to have larger and more active banking and equity sectors. For examples, Boyd et al. (2001), Bencivenga and Smith (1992), Huybens and Smith (1999), Demirguc-Kunt and Detragiahe (1998, 2005), among others. Djankor et al. (2005) find that the volume of credit to private sector is higher in countries that have better credit protection. Similarly, empirical results of Beck et al. (2005) also indicate that legal systems with effective conflict resolutions and contract enforcement increases firms' access to financing. Empirical work has also supported the view that a country's capital account openness and its openness to international trade have positive effects on financial sector development. Examples are, Chinn and Ito (2005), Huang and Temple (2005), Do and Levchenko (2004), among others.

So far, empirical research on the major determinants of financial development i.e. banks and equity markets has employ many factors that represent various institutional and policy variables without relating to economic freedom index. Given that the selection of variables used in past studies can never be exhaustive, this may raise concern over the robustness of existing findings. Our study shed additional light by examining the link between economic freedom and banking development. The index of economic freedom is constructed using forty-two variables that reflect different policy areas of a country. The summary index is made up of several sub-components that measure the degree of freedom in five broad areas. Appendix 1 provides detailed description of variables included in the following five broad areas: (i) size of government; (ii) legal structure and security of property rights; (iii) access to sound money; (iv) freedom to trade internationally; and (v) regulation of credit, labor and business. Such grouping of variables in the economic freedom index has the advantage of mitigating arbitrary selection of variables to be used in a regression. Additionally, with the grouping of variables into five broad areas, the index also provides a clearer picture of the relevant policy areas that should be prioritized and thus reveals greater understanding on the role of government in promoting banking success. Additionally, as pointed out King and Levine (1993a, 1993b), the degree of government intervention can exert important influences on a country's financial system and eventually on its economic outcomes as well. Financial repression policies such as excessive ruling on financial activities are considered anti-growth because they prohibit financial advancement. This reasoning forms a basis that calls for a freer market that either minimizes government interventions or a market that replaces government interventions with market determined variables as inputs for financial or banking decisions. Accordingly, the next logical question that follows is, what role does economic freedom play in influencing the development of banking sector? Since the index of economic freedom is composed of components that reflect major institutional and policy areas of a country, this clearly prescribe an important role for the government. However, it is important to note that government intervention beyond the minimal state will lead to inefficiency. If economic freedom is a key determinant for banking sector development, then government should not implement policies that severely limit economic freedom. In addition to examining the link between the overall economic freedom index and banking development, we also investigate which components of the economic freedom index should be prioritized in promoting banking sector development. Based on our findings, we hope to derive policy recommendations for the role of government in promoting sound banking system that is critical for sustainable economic development.

3. Data and Methodology

We employ a panel data analysis to examine the link between economic freedom and banking sector development. Our period of study is from 1975 through 2006 and the sample consists of a group of six selected East Asian countries that have complete information for the entire study period. They are Singapore, Malaysia, Indonesia, Thailand, South Korea and the Philippines. Data sets employed in this study are downloaded from World Development Indicators (WDI) of the World Bank, Database on Financial Development and Structure and the Fraser Institute. The data set on economic freedom is available from the Fraser Institute which reported the data at five-year intervals over the period 1970 through 1999 and on an annual basis starting from 2000 through 2006.[3] Many studies that investigate the link between economic freedom and economic growth argue that if the panel is composed of annual data instead of averages, it would be difficult to disentangle the long run effects of the variable of interest from the business cycle changes when interpreting the results (see Folster and Henrekson (2001)). For this reason, we used the five-year intervals data from 1975 through 2004 and for the remaining years of 2005 and 2006, data are averaged over a period of two years. We employ data starting from 1975 instead of 1970 due to some missing data for countries included in our sample. Based on the economic freedom definition provided by Gwartney et al. (1996), "individuals have economic freedom when: (a) property they acquire without the use of force, fraud, or

[3] Most empirical studies employ the economic freedom index of the Fraser Institute because the economic freedom index published by other sources such as the Heritage Foundation and the Wall Street Journal is available only since 1995.

theft is protected from physical invasions by others; and (b) they are free to use, exchange, or give their property to another as long as their actions do no violate the identical rights of others. On the basis of this definition, an index of economic freedom should measure the extent to which rightly acquired property is protected and individuals are free to engage in voluntary transactions." The economic freedom index and its sub-component are rated on a scale of 0-10 in which 0 means that a country is totally not free and 10 means that that it is totally free.

The panel estimation is performed using a one-way fixed model, which assumes constant slopes but different intercepts for each of the country examined. We account for the country effect by using i-1 dummy variables and the intercept for each country i, is then estimated. In examining the link between the economic freedom index and banking sector development, we employ both the summary economic freedom index as well as the five sub-components of the index to identify which component of the index is important for the promotion of banking sector. In the following Equation 1, we first relate the overall economic freedom index to banking sector development.

$$Y_{it} = \alpha_0 + \alpha_i \, Country_i + \beta_1 \, GDP_{it} + \beta_2 \, Freedom\ Index_{it} + \varepsilon_{it} \qquad (1)$$

Where, the subscripts i and t indicate country and time period respectively. Y represents variables that proxy for banking sector development; α_0 is the intercept for benchmark country which is Singapore[4]; $Country_i$ represents country dummies for the remaining countries, Malaysia, Indonesia, Thailand, South Korea and the Philippines and they are included to account for country-specific effects; GDP represents the real GDP percapita growth rate and it is included to control for the effects of economic

[4] Singapore is chosen as a benchmark county since it is widely recognized as a highly opened economy with a developed banking system. In 2008, the nation is ranked as the world's freest economy behind Hong Kong by the Canada's Fraser Institute, Gwartney et al. (2008), in the Economic Freedom of the World: 2008 Annual Report, available at www.freetheworld.com

performance on banking development; Freedom Index is the summary index for economic freedom; ε is the error term. To measure banking sector development, we employ three indicators that are commonly used in the literature and these indicators are obtained from the Database on Financial Development and Structure.[5] The first indicator is Private Sector Credit/GDP. Private sector credit is defined as the ratio of claim on private sector to GDP. This indicator is frequently used as a measure of depth for the banking system and it includes credit issued to the private sector only. Unlike loans of public sector, credit issued to private sectors is subjected to more stringent evaluation by professional managers who are capable of pooling risk and selecting viable projects. As noted by Levine (2004), the intuition in this variable is that, a high level of private sector credit suggests high mobilization of savings and that banks are actively engaged in monitoring and risk management activities which point to one of the criteria that characterize a well-developed banking sector. The second indicator is M2/GDP, defined as the ratio of M2 (money and quasi money) to GDP and this indicator captures the overall size of the banking sector and is also a typical indicator of financial depth. The third indicator is Liquid Liabilities/GDP. Liquid liabilities is defined as the total liquid liabilities (currency plus demand and interest bearing liabilities) of financial intermediaries divided by GDP and it measures the size and depth of financial intermediaries relative to the economy.

Next, to establish a firmer link between economic freedom and banking sector development, we decomposed the overall economic freedom index into its five sub-components as shown in Equation 2. This is to identify which categories of economic freedom that contributes mostly directly to the promotion of a sound banking system.

$$Y_{it} = \alpha_0 + \alpha_i \text{ Country}_i + \beta_1 \text{ GDP}_{it} + \beta_2 \text{ Government Size}_{it}$$

[5] See King and Levine (1993a, 1993b), Levine (1997, 2004), Beck et al. (2000) among others.

$$+ \beta_3 \text{ Legal Quality}_{it} + \beta_4 \text{ Sound Money}_{it} + \beta_5 \text{ International Trade}_{it}$$

$$+ \beta_6 \text{ Regulatory Quality}_{it} + \varepsilon_{it} \qquad (2)$$

where the subscripts i and t indicate country and time period respectively. Y represents variables that proxy for banking sector development; α_0 is the intercept for benchmark country which is Singapore; Country_i represents country dummies for the remaining countries, Malaysia, Indonesia, Thailand, South Korea and the Philippines and they are included to account for country-specific effects; GDP represents the real GDP percapita growth rate. The remaining independent variables are the economic freedom sub-components that measure the degree of freedom for country i in year t in the following five broad areas, size of government; legal structure and security of property rights; access to sound money; freedom to trade internationally; and regulation of credit, labor and business. Government Size measures the degree of government intervention in the economy through consumption spending, redistribution via transfers and subsidies and taxation; Legal Quality captures various aspects of legal systems such as judicial independence, impartiality of the courts, protection of property rights, legal enforcement of contracts, and military interferences in law and politics; Sound Money is an index which composed of indicators such as money growth rate, variability of inflation and the extent of monetary controls; International Trade measures a country's freedom to trade internationally and it reflects the size of the trade sector, barriers to trade and capital flows; Regulatory Quality measures the freedom from government's regulations and controls in the financial markets, labor market and the overall business environment. Please refer to the Appendix 1 for detailed description of the economic freedom sub-components.

4. Empirical Results

Table 1 presents summary statistics for variables used in the study. The three indicators of banking sector development (Private Sector Credit/GDP, M2/GDP and Liquid Liabilities/GDP) have average values that range from 62.8 percent to 72.3 percent. This is not surprising given the fact that the sample countries are considered bank-dependent nations. On average, the economic freedom index recorded a score of 6.58, with minimum and maximum values of 5.10 and 8.80 respectively. As reported, the sub-component of economic freedom that has the lowest average score of 5.54 is Legal Quality. A low score is an indication that the legal system of a country lacks the ability to provide for property rights protection and good enforcement of contracts. Additionally, the highest standard deviation value for Legal Quality suggests that there is a large variation in policy on legal systems across different countries.

Table 2 reports the average values of the economic freedom index and its sub-components over the years 1975-2006 for each of the six countries. As shown, Singapore has the best ranking in terms of both the overall economic freedom index as well as it sub-component indices. In terms of the overall index, Singapore earned the highest average score of 8.03 and Indonesia has the lowest score of 5.88. Singapore also ranked top in each of the five sub-components of the economic freedom index.

We report the nonparametric correlations for economic freedom indices in Table 3. As shown, the Spearman rank order correlation coefficients reported in Panel A are quite high for several pairs of the economic freedom subcomponents. The correlations between Legal Quality and both International Trade and Regulatory Quality are 0.69 and 0.61 respectively. International Trade has a correlation coefficient of 0.66 with Regulatory Quality. We report the Kendall Tau correlation coefficients in Panel B and they are similar to the Spearman coefficients. Legal Quality has correlations of 0.52 with International Trade and of 0.45 with Regulatory Quality. The correlation between International Trade and Regulatory Quality is 0.46. These high correlations could indicate potential problems of multicollinearity when the overall economic index is decomposed into its various sub-components.

Table 4 reports the results on the relationship between banking sector development and the overall economic freedom index. All the three models (models A, B and C) are significant and have adjusted R-square that range from 0.771 to 0.866. The results of the White's (1980) tests indicate that the regression models show no problem of heteroskedasticity and that the models' functional forms are correctly specified. As shown, the coefficients of the economic freedom index are positive and highly significant in all the three models. This coefficient provides the direct influence of economic freedom on bank development for the benchmark country, Singapore. The positive coefficient implies that higher level of economic freedom is associated with a more developed banking sector. The coefficients of country dummy α_i are the differential intercepts of the five remaining countries namely, Malaysia, Indonesia, Thailand, South Korea and the Philippines. Significant coefficients signify that the effect of economic freedom on banking sector development is not common to all countries. As reported, the intercept differential of Malaysia is significant across the three models. This suggests that the effect of economic freedom on bank development for Malaysia is different from that of Singapore. When the dependent variables used are M2/GDP and Liquid Liabilities/GDP, the intercept differentials for both Malaysia and Thailand are significant. This finding highlights the importance of the underlying country-specific factors in influencing the ultimate outcome of policies that promote the development of banking sector. That is, economic freedom leads to different level of banking progress for different countries. As for the real GDP per capita, interestingly the coefficients are consistently negative and significant across the three models. That means, high GDP per capita is associated with less developed banking sector. This finding is consistent with financial intermediation literature on financial system structure. i.e. bank-based versus market-based system. Collectively, research findings in this area have established that the structure of financial system changes during development and as countries develop, their financial systems become more market-based.[6] Additionally, it widely known that market-based financial system underlies developed countries with high GDP per capita. Having said that, this could possibly provide explanation for the inverse relation between GDP and banking sector development.

Table 5 presents the findings of the relationship between banking sector development and the five sub-components of the economic freedom index. The overall results are similar to those reported in Table 4. Models with all three dependent variables (models D, E and F) are significant and have adjusted R-square that range from 0.804 to 0.883. The White's (1980) test results also show no problems of heteroskedasticity and misspecification of the models' functional forms. Given the potential problems of multicollinearity among the economic freedom sub-components, we perform a diagnostic check using variance inflation factors (VIFs). The results show that none of the sub-components has a value greater than 10. Regression estimates of Equation 2 provides information on the direct influence of each of sub-component of economic freedom index on banking development for the benchmark country, Singapore. Similar to the findings reported in Table 4, the coefficients of real GDP per capita in all models are negative and significant. In model D, when Private

[6] Examples of studies include Demirguc-Kunt and Levine (1996, 2001), and Demirguc-Kunt (2006), among others.

Sector Credit/GDP is the dependent variable, the coefficients of Government Size, Legal Quality and intercept differential for Malaysia are positive and significant at the 0.05 level. Larger score on the government size index means less government intervention. The positive coefficient of government size suggests that increased freedom in terms of lower government consumptions, taxes and enterprises lead to a more developed banking sector. As argued by Demirguc-Kunt (2006), large financing requirement of government has the effect of crowding out private investment by increasing the required rate of return on government securities and absorbing a big portion of the savings mobilized by the financial system. In other words, lower government consumptions and financing requirements lead to higher level of private sector credit. Such argument is sensible given that the coefficient of Government Size is only significant in model D and not in model E and F. It is shown that the only sub-component of economic freedom index that is robustly related to banking sector development across the three models is Legal Quality. That is, a legal structure that clearly defines property rights and rightfully enforces contracts may prove essential for the promotion of banking sector. The significant coefficient of intercept differential suggests that the effect of economic freedom components on the bank development in Malaysia is different from that in Singapore. When the indicator for banking development is M2/GDP, the components of Legal Quality and International Trade are found to be important determinants of banking development. Increased freedom to trade with foreigners and policies that encourage international capital flows are likely to promote investment and may therefore contribute to the promotion of banking development if financing is sourced from banking institutions. The intercept differentials for both Malaysia and Thailand are positive and significant, suggesting that the effects of legal quality and international trade on banking development in these countries are different from that of the benchmark country. When Liquid Liabilities/GDP is employed as the indicator for banking development, we are able to identify three components of economic freedom index that have positive roles in promoting banking progress. They are Legal Quality, International Trade and Regulatory Quality. That is, clearly defined legal system, policies that promotes international trade and less restrictive regulatory system all contribute to the development of banking sector. On legal quality and international trade, previous explanation applies here. On Regulatory Quality, higher score means less regulatory restraints in the credit market, labor market and in the overall business environment. Accordingly, a country with high score on this component provides more incentives and better investment climate for businesses to flourish than a country that has low score on regulatory quality. Our findings also indicate that the effects of legal structure, international trade and regulatory quality on banking sector development in Singapore are different from those in Malaysia and Thailand. That is, all these three factors are essential for improving the size and depth of banking sector and more importantly, institutional factors do indeed matter and banking reform policies must therefore take into account these factors accordingly.

5. Conclusion

This paper examines the link between economic freedom and banking sector development using panel data analysis for the period 1975-2006 in six East Asian countries namely, Singapore, Malaysia, Indonesia, Thailand, South Korea and the Philippines. We find that economic freedom is positively and strongly related to all three measures of banking development that we employ. That is, economic freedom has a positive influence on banking development in the benchmark country, Singapore and our results also show significant different effects for Malaysia and Thailand, suggesting that effect of economic freedom on banking development in these countries are different from that in Singapore. Since a single measure of economic freedom makes it difficult to draw policy conclusion, we proceed to investigate which sub-components of the economic freedom are important for progress in banking sector. On balance, we find that lower government consumptions and transfers, increased freedom to trade internationally, fewer regulatory restrictions and a good legal structure are all essential requirements for banking development. However, not all of the index sub-components are significantly related to banking development indicators. The only sub-component that has positive and robust relation is Legal Quality. It seems clear that strong legal system that protects property rights and ensures effective enforcement of contracts is critical for a well functioning banking sector. This suggests that government should sharpen its policy focus on the improvement in legal system. However, it is important to note that due to differences in institutional factors, legal system that seems appropriate in one country may prove ineffective in other countries that have different institutional settings.

Appendix 1

The Areas and Components of the EFW Index		
Area 1: Size of Government: Expenditures, Texas, and Enterprises		
A	General government consumption spending as a percentage of total consumption	
B	Transfers and subsidies as a percentage of GDP	
C	Government enterprises and investment	
D	Top marginal tax rate	
i		Top marginal income tax rate
ii		Top marginal income and payroll tax rates
Area 2: Legal Structure and Security of Property Rights		
A	Judicial independence	
B	Impartial courts	
C	Protection of property rights	
D	Military interference in rule of law and the political process	
E	Integrity of the legal system	
F	Legal enforcement of contracts	
G	Regulatory restrictions on the sale of real property	
Area 3: Access to Sound Money		
A	Money growth	
B	Standard deviation of inflation	
C	Inflation: most recent year	
D	Freedom to own foreign currency bank accounts	
Area 4: Freedom to Trade Internationally		
A	Taxes on international trade	
i		Revenue from taxes on international trade as a percentage of exports and imports
ii		Mean tariff rate
iii		Standard deviation of tariff rates
B	Regulatory trade barriers	
i		Non-tariff trade barriers
ii		Compliance cost of importing and exporting
C	Size of the trade sector relative to expected	
D	Black-market exchange rates	
E	International capital market controls	
i		Foreign ownership/investment restrictions
ii		Capital controls
Area 5: Regulation of Credit, Labor, and Business		
A	Credit market regulations	
i		Ownership of banks
ii		Foreign bank competition
iii		Private sector credit
iv		Interest rate controls/negative real interest rates
B	Labor market regulations	
i		Minimum wage
ii		Hiring and firing regulations
iii		Centralized collective bargaining
iv		Mandated cost of hiring
v		Mandated cost of dismissing
vi		Conscription

C	Business regulations
i	Price controls
ii	Administrative requirements
iii	Bureaucracy costs
iv	Starting a business
v	Extra payments/bribes
vi	Licensing restrictions
vii	Cost of tax compliance

Source: www.fraserinstitute.org

Table 1
Descriptive statistics (1975-2006).

Variable	Mean	Std Dev	Minimum	Maximum
Private Sector Credit/GDP (%)	72.27	42.11	13.17	191.83
M2/GDP (%)	63.11	32.95	13.80	128.61
Liquid Liabilities/GDP (%)	62.82	32.37	14.60	123.32
Real per capita GDP Growth Rate (%)	4.05	2.17	-1.13	8.15
Economic Freedom Index	6.58	0.95	5.10	8.80
Government Size	6.72	0.89	4.84	8.39
Legal Quality	5.54	1.62	2.44	8.42
Sound Money	7.47	1.58	4.03	9.69
International Trade	7.28	1.17	5.00	9.60
Regulatory Quality	5.88	0.99	3.31	8.24

Table 2
Average values of Economic Freedom Index and its sub-components (1975-2006).

	Singapore	Malaysia	Indonesia	Thailand	South Korea	Philippines
Economic Freedom Index (EFI)	8.03	6.89	5.88	6.48	6.24	5.94
Sub-components of EFI						
Government Size	7.68	5.64	6.67	6.72	6.40	7.21
Legal Quality	7.76	6.31	3.92	5.86	5.74	3.65
Sound Money	8.47	8.02	7.68	7.17	6.70	6.56
International Trade	9.39	7.81	6.62	6.69	6.71	6.44
Regulatory Quality	6.84	6.56	4.61	5.95	5.40	5.89

Table 3
Nonparametric correlations for Economic Freedom Indices (significance levels in parentheses).

Panel A: Spearman rank-order correlation coefficients						
	Government Size	Legal Quality	Sound Money	International Trade	Regulatory Quality	Economic Freedom Index
Government Size		0.06 (0.72)	0.33 (0.03)	0.17 (0.28)	0.24 (0.12)	0.38 (0.01)
Legal Quality			0.47 (0.00)	0.69 (0.00)	0.61 (0.00)	0.81 (0.00)
Sound Money				0.55 (0.00)	0.43 (0.00)	0.78 (0.00)
International Trade					0.66 (0.00)	0.83 (0.00)
Regulatory Quality						0.75 (0.00)
Panel B: Kendall Tau b correlation coefficients						
	Government Size	Legal Quality	Sound Money	International Trade	Regulatory Quality	Economic Freedom Index
Government Size		0.02 (0.82)	0.24 (0.02)	0.11 (0.30)	0.19 (0.07)	0.27 (0.01)
Legal Quality			0.33 (0.00)	0.52 (0.00)	0.45 (0.00)	0.64 (0.00)
Sound Money				0.38 (0.00)	0.32 (0.00)	0.60 (0.00)
International Trade					0.46 (0.00)	0.66 (0.00)
Regulatory Quality						0.57 (0.00)

Table 4
Relationship between banking sector development and the overall economic freedom index.

	Dependent Variable					
Variable	Model A Private Sector Credit/GDP (%)		Model B M2/GDP (%)		Model C Liquid Liabilities /GDP (%)	
	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Constant	-74.159	-1.416	-89.045	-2.839**	-90.415	-2.784**
Economic Freedom Index	24.421	4.036**	23.443	6.470**	23.735	6.327**
Real GDP per Capita	-4.946	-2.344*	-2.843	-2.250*	-2.856	-2.183*
Malaysia	42.614	3.022**	40.943	4.848**	35.766	4.090**
Indonesia	-20.792	-1.157	-4.921	-0.457	-4.798	-0.431
Thailand	23.351	1.543	26.022	2.872**	26.475	2.822**
South Korea	18.689	1.174	2.650	0.278	3.333	0.338
Philippines	-29.015	-1.459	-7.948	-0.667	-8.814	-0.715
Adjusted R^2 N F(5,34) Prob>F	0.771 42 8.79 0.000		0.866 42 14.43 0.000		0.851 42 11.44 0.000	
White's (1980) Test of First and Second Moment Specification:						
Chi Square Prob>Chi Square	13.67 0.847		19.27 0.504		22.47 0.315	

Notes:

1. The above are LSDV regression estimates for Equation 1 with banking sector development indicators as dependent variable.
2. ** and * indicate significance at 1 percent and 5 percent respectively.
3. A F-test is conducted to examine the existence of fixed group effects. The null hypothesis is that all dummy coefficients except the benchmark country are zero. The robust model is LSDV and the efficient model is the pooled regression. It is concluded that the fixed group effect model is better than the pooled OLS model.

Table 5
Relationship between banking sector development and the sub-components of the economic freedom index.

	Dependent Variable					
Variable	Model D Private Sector Credit/GDP (%)		Model E M2/GDP (%)		Model F Liquid Liabilities /GDP (%)	
	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Constant	-69.660	-0.846	-166.443	-3.443**	-171.952	-3.512**
Government Size	16.417	2.268*	6.353	1.495	6.167	1.433
Legal Quality	12.094	2.152*	7.725	2.342*	7.667	2.296*
Sound Money	4.001	1.245	0.610	0.323	0.279	0.146
International Trade	-4.009	-0.524	10.303	2.293*	10.333	2.271*
Regulatory Quality	-3.828	-0.566	8.036	2.023*	9.602	2.387*
Real GDP per Capita	-4.620	-2.140*	-2.818	-2.225*	-2.794	-2.178*
Malaysia	60.671	2.543*	57.169	4.083**	51.568	3.637*
Indonesia	-26.310	-0.873	27.611	1.562	30.015	1.677
Thailand	15.256	0.631	46.112	3.249**	46.859	3.260**
South Korea	9.790	0.404	24.440	1.719	26.064	1.810
Philippines	-29.246	-0.937	17.064	0.932	16.328	0.880
Adjusted R^2 N F(5,30) Prob>F	0.804 42 5.02 0.002		0.849 42 7.59 0.000		0.883 42 6.70 0.000	
White's (1980) Test of First and Second Moment Specification:						
Chi Square Prob>Chi Square	41.02 0.641		33.43 0.877		32.36 0.882	

Notes:
1. The above are LSDV regression estimates for Equation 2 with banking sector development indicators as dependent variable.
2. ** and * indicate significance at 1 percent and 5 percent respectively.
3. A diagnostic measure for collinearity using the variance inflation factor (VIF) is employed to check for the presence of multicollinearity among the sub-components indices. None of the VIFs has values greater than 10.
4. A F-test is conducted to examine the existence of fixed group effects. The null hypothesis is that all dummy coefficients except the benchmark country are zero. The robust model is LSDV and the efficient model is the pooled regression. It is concluded that the fixed group effect model is better than the pooled OLS model.

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Getting Sentimental about Japanese Bear Markets

Kerry Pattenden
University of Sydney

and

Kathleen D Walsh*
Australian National University

Abstract

Sentiment indicators are used to quantify the levels of optimism or pessimism in equity markets. Some indicators employ a ratio of long and short positions in call markets while others aggregate newsletter or analyst forecasts. More recent measures of sentiment include the trends of Google searchers. Other measures of market sentiment include the aggregation of economic indicators. Several researcher have considered the predictor power of these indictors (see, for example, Fisher and Statman, 2000 and Alexander and Dimitriu, 2005) however to date researchers have only considered each indicator in isolation whereas we seek to use this information in an aggregate form. We reduce the set of indicators to their common variation and use this to predict bear market swings. The joint indicator is then used to capture the economic cycles of bull and bear markets in Japan. We test the success of this approach by employing a simple market timing strategy to analyse the degree of integration and the predictive power of the economic information in detecting future regime shifts. We find that the joint indicator can outperform a simple buy and hold strategy on a risk adjusted basis.

* Corresponding Author, The Australian National University, School of Finance, Actuarial Studies and Applied Statistics, Level 4 , College of Business and Economics Building 26C ACT 0200 Australia email: Kathy.walsh@mac.com

Getting Sentimental about Japanese Bear Markets

Kerry Pattenden
University of Sydney

and

Kathleen D Walsh*
Australian National University

1. Introduction

What drives bear markets? Is it economic fundamentals alone or can we consider the influence of market sentiment? Do the measures of sentiment help predict movements in stock markets or do they add unwanted noise and volatility. In this paper, we capture the common variation of sentiment from a number of generally accepted sentiment measures and combine this with measures of economic fundamentals to create an enhanced prediction indicator. The joint indicator is then used in a simple market timing strategy that allows an investor to participate in the equity market in times of growth but retreat to the safety of the bond market during declines.

Theoretically, the value of a firm is equal to the present value of expected future cash flows conditioned on investor information. In aggregate, the value of equity is measured by a broad market index such as the S&P500 and the Nikkei 225. Changes in the index levels are assumed to be driven by changes in economic fundamentals. If we relax the assumption of strict market efficiency then economic fundamentals may be useful in market timing strategies. That is, if we can observe a level or change in an economic fundamental today it could indicate the need to invest or divest in equity markets over the next period. A discussion of the various timing strategies is provided in Brooks, Katsaris and Persand (2006) and the economic significance is detailed in Marguering and Verbeek (2004).

However these measures are still somewhat noisy and therefore more recently researchers have broadened the set of economic information to include measures of market sentiment. Sentiment indicators are used to quantify the levels of optimism or pessimism in equity markets. Researchers and market practitioners have proposed a wide range of sentiment indicators including survey measures, volatility, option volume and measures of language.

Survey based measures include aggregated newsletter and analyst forecasts such as the Investors Intelligence Index. The Consumer Confidence Index published by the University of Michigan is a measure of market sentiment derived from telephonic household interviews. The Consumer Confidence Index (CCI) for Japan is a survey measure of personal expenditure and inflationary patterns. Details of how consumer confidence is measured and reported is provided by Ludvigson (2004)

Volatility Indices are considered a leading market indicator and have long been used by option traders to determine market direction. The index is calculated using the implied volatility in the options market. The volatility index of the CBOE (VIX) and the Nasdaq (VXN) are prominent examples. The VXJ measures how volatile the Japanese stock market is expected to be and is based on the Nikkei225 index options.

Put call ratios measure the volume of put contracts to the volume of call contracts on a broad based index. As a put is a contract to sell the index and a call is a contract to buy, an increase in the ratio of puts to calls is expected to be a bearish measure of market sentiment. The ISEE Sentiment Indicator is a ratio of long calls purchased to long puts purchased. A high level of ISEE is considered a bullish measure of market sentiment. Put call ratios are published for many broad indexes including the S&P500 and the Nikkei225.

How the language in the media affects market sentiment is explored by Tetlock (2007) who analyses the interactions between media content and stock market activity and rank the amount of pessimistic media content. A simpler measure of sentiment is proposed by Da, Engleberg and Gao (2010). They use Google trends data to track the prevalence of negative words in Google searches to reveal market level sentiment. They create a FEARS index that provides an empirical measure of investor sentiment that has some ability to predict returns and strong predictive power for volatility.

An important question remains as to whether the sentiment indexes detailed above contain reveal new price information that has not been impacted into price or whether they are uninformative. Tetlock, Saar-Tsechansky and Mackassy (2007) assesses content analysis from a popular Wall Street Journal column. He finds that high media pessimism predicts downward pressure on market prices however this is followed by a reversion to fundamentals. He therefore rejects the hypothesis that the media contains new information about fundamentals because the impact is short lived and suggests that the data is inconsistent with information theories of media. However others have found that the sentiment indicators have predictive power in traded markets (see, for example, Fisher and Statman, 2000 and Alexander and Dimitriu, 2005). Also DeLong et al (1990) suggest that low sentiment produces downward price pressure and is therefore a predictor of bear markets.

A major drawback of the research to date is that it considers sentiment measures in isolation and therefore ignores the potential complex information contained in complimentary measures. Our objective is to use these measures as indicators of bull and bear markets and consider the narrow univariate approach inadequate for our needs. In contrast we consider a cross section of economic indicators and sentiment indicators and in doing so, we capture a larger more informative set of variables. Out of sample timing strategies, assessed by a risk reward measure (Sharpe ratio) will determine whether the additional variables provide new information or merely add noise and volatility. We find that the wider set of information has more predictive power in detecting bull and bear markets.

The paper proceeds with Data detailed in section 2, Methods are outlined in Section 3, Results are presented in Section 4 and Conclusions are drawn in section 5.

2. Data

Recall that the focus of the paper is to use a combined set of economic and sentiment data to construct a simple market timing strategy between Japanese equity and bond markets. All data is sourced from Bloomberg and is collected quarterly for the period March 1994 to March 2010 unless stated otherwise.

The economic indicators of Japanese bull and bear markets used in this paper include GDP, Economic Leading Indicator (LI), Unemployment (UN) and the level of the 10 year Bond Yield (BY).

The sentiment measures for Japan utilise each stream of measurement including surveys, option volume, volatility and media language. The Japanese consumer confidence index (CCI) is a survey of Japanese consumers and reflects their opinions on inflation, consumption and market movements. The CCI measure is only available from 2004 so the data was augmented with the Investors Intelligence data from the United States to construct a complete time series. The Volatility measure used is the VJX which measures the implied volatility of the Nikkei225. The VJX is only available from Dec 1999 and no other comparable measure is available prior to that date. The option based measure is the put call ratio (PCR) on the Nikkei 225. No language based measure is available for Japan so we constructed a Google Trends (GT) time series using the methodology of Da, Engleberg and Gao (2010).

We use quarterly returns on the Nikkei225 to reflect equity market performance and quarterly returns on the 10 year bond rate to reflect bond market performance.

In order to align our indicators in one direction we invert any indicator that reflect a bullish market at high levels. Therefore, for each of the eight indicator variables (4 economic and 4 sentiment) a higher value indicates a more bearish outlook.

Table 1 presents the correlation matrix for all variables. Despite aligning all expectations as bear market indicators, the contemporaneous correlations with the Nikkei returns are not overwhelmingly negative and the only significant correlation is with Bond Yield (0.28). This is perhaps due to the long run negative returns on the Nikkei with a mean quarterly return over the sample period of -.0024.

The figures in bold represent correlations that are statistically significant. As expected there is a strong negative correlation between unemployment and GDP (-0.80) and between bond yield (-0.62), bond return (-0.62) and GDP. There is a positive association between unemployment and Google Trends and Volatility yet a negative correlation between unemployment and consumer confidence. Whilst these correlations provide some insight in to the mechanics of the data it does not represent a formal test or trading strategy.

3. Method

Our objective is to use a set of economic and sentiment indicators to determine market swings between bull and bear markets. These swings are then exploited using simple market timing strategies and performance compared using risk adjusted measures.

A simple way to consider the significance and direction of the indicator variables is to run a contemporaneous regression of the Nikkei225 quarterly returns on the set of economic and sentiment indicators. The estimated equation is

Equation 1

$$NKYR_t = \alpha + \beta_1 GDP_t + \beta_2 LI_t + \beta_3 UN_t + \beta_4 BY_t + \beta_5 CCI_t + \beta_6 VJX_t + \beta_7 PCR_t + \beta_8 GT_t + \varepsilon_t$$

Where: NKR is the return on the Nikkei225
GDP is the level of GDP
LI is the Leading Economic Indicator
UN is the level of unemployment
BY is the bond yield
CCI is the consumer confidence index
VJX is the implied volatility on the Nikkei225
PCR is the Put Call Ratio on the Nikkei 225
t is the time period in quarters
β_i is the estimated coefficient
And ε_t is the error term

We avoid complicating the analysis by trying to incorporate standard asset pricing models such at the CAPM or the Fama French three factor model. We are simply interested in whether any of the beta coefficients are significant and whether their sign is as expected. As each economic and sentiment indicator is bearish by design we expected the beta coefficients to be negative.

The next level of analysis considers the joint predictive power of the indicators in a regression setting. We therefore estimate equation 1 using lagged indicator variables:

Equation 2

$$NKYR_t = \alpha + \beta_1 GDP_{t-1} + \beta_2 LI_{t-1} + \beta_3 UN_{t-1} + \beta_4 BY_{t-1} + \beta_5 CCI_{t-1} + \beta_6 VJX_{t-1} + \beta_7 PCR_{t-1} + \beta_8 GT_{t-1} + \varepsilon_t$$

As with Equation 1 our expectation is that each beta coefficient will be negative.

A significant draw back of the prior research is that it only considers each sentiment indicator in isolation. In contrast we consider a range of economic and sentiment indicators and their relation with equity market returns. A simple way of assessing the common variation in the information set is to use a principal components analysis. This method takes the collection of data points and rotates it to find the axis with the maximum variability. The method is particularly useful in measuring the amount of redundancy in a large number of variables. If there is significant redundancy then the information can be reduced to a smaller number of artificial variables known as principal components that will account for most of the variation in the information set. For our purposes we employ the principal components analysis solely to consider the common variation in the information set and provide further evidence for the need to consider indicators jointly rather than in isolation. The limited number of data points and the embedded look ahead bias restrict its use in a more complex trading strategy such as the one employed by Guido, Pearl and Walsh (2010).

Finally we come to the construction of an out of sample trading strategy. We start with two base performance levels:

1. complete investment in the equity market earning the return on the Nikkei225 each quarter
2. complete investment in the bond market earning the bond rate each quarter

A trading strategy (3) is then formed based on observed economic or sentiment indicators at each time period. Returns are calculated for each of the indicators so we can observe changes in the indicators across quarters. If the return is positive then the signal is considered bearish (since it has increased) and the investor fully invests in the bond market and earns the return on the bond market in the following quarter. If the return is negative the signal is read as bullish and the investor moves to the equity market and earns the return on the Nikkei225 in the following quarter. To ensure that the trading strategy has no look ahead bias the indicator is measured from time t to t+1 and the equity or bond market return earned is from time t+1 to t+2. This allows us to implement the strategy for the entire sample period. There are 8 indicator variables comprising 4 economic and 4 sentiment indicators. Our trading strategy is structured so that if an investor observes a positive change in more than 4 of the 8 indicators then it is read as a bearish signal and all funds are moved to the bond market. If the investor observes 4 or less positive changes then all fund move to the equity market. In other words, if the majority of the signals are bearish you invest in the safe bond option, if not you invest in the equity market.

We then assess the mean returns for the stock investment (1), the bond investment (2) and the trading strategy (3). In order to rank the portfolios we measure the risk adjusted returns using a Sharpe ratio which equates to the mean portfolio return less the risk free rate all scaled by the standard deviation of the portfolio.

Equation 3

$$SR = \frac{\bar{r}_p - r_f}{\sigma_p}$$

Where SR is the Sharpe ratio
$\bar{r}_p$ is the mean return of the portfolio
r_f is the risk free rate
σ_p is the standard deviation of the portfolio

Assessing the relative performance of each portfolio will ascertain whether the joint sentiment and economic indicators add more information or simply create noise and volatility.

4. Results

The results of the contemporaneous regression are presented in Table 2. Despite constructing the variables to be bearish signals we find that the beta coefficients are not uniformly negative. This is consistent with the correlation matrix presented in Table 1.

The specification of equation 1 which measures contemporaneous associations has modest an R squared of 25.11% with a p value of 0.0329 and is therefore significant at the 5% level. This is expected as the relation is contemporaneous.

The lagged regression (equation 2) gives a clearer indication of the predictive power of the indicator variables. Only VJX, UN and LI have negative beta coefficients indicating that many of the variables may not forecast a bear market. The R squared is much lower at 11.79% and the P value of 0.5218 shows that the specification of this equation is not significant.

It is important to note here that the regression equation is estimating the association in terms of both direction and magnitude. In contrast, our trading strategy is not concerned with magnitude instead we are only interested in direction. If it is possible to predict a bear market we seek to shift our investment out of the equity market into the relative safety of the bond market. Therefore the results of the regression analysis do not necessarily indicate an ineffective trading strategy.

A major contribution of this paper is the use of several economic and sentiment indicators to establish bear market movements. We employ a principal components analysis to consider the common variation in the information set and provide further evidence for the need to consider indicators jointly rather than in isolation. The results of the Principal Components Analysis are reported in Table 3. The 1st Principal Component captures 96% of the variation in the data with the 2nd Principal component capturing 3%. This is a clear indication that the information contained in the complete set of variables needs to be assessed in aggregate rather than in isolation. As noted earlier the limited number of data points and the embedded lookahead bias restrict its use in a more complex trading strategy.

The primary aim of this paper is to construct a timing strategy that utilises a range of economic and sentiment indicators to predict bear swings in the equity market. The trading strategy measures the number of positive returns from Quarter 1 to Quarter 2 in the indicator variables. A positive return in these indicators is interpreted as a bearish signal. If more than four of the eight indicators are positive then the strategy invests entirely in the bond market earning the relatively safer return in Quarter 3. If four or fewer signals are positive then the strategy invests entirely in the equity market and earns the return on the Nikkei225 in Quarter 3. The mean, volatility and Sharpe ratios for this trading strategy are presented in Table 4. Also presented are the values for an all equity and all debt investment.

It is clear that the trading strategy dominates the other two investments with a quarterly return of 1.2% which equates to an annual excess return of 4.8%. Although this seems like a modest return for an equity strategy it is clearly dominant when compared to the bond return of 0.48% quarterly and the equity return of -0.24%. The investment strategy also has a lower volatility level than the equity only alternative. This is also reflected in the Sharpe ratio of 0.1048 which clearly exceeds the Sharpe ratios of the equity and bond strategies.

The relative outperformance of the strategy portfolio is a strong indication that the joint sentiment and economic indicators contain relevant information useful in the predication of bear market swings.

5. Conclusion

The investigation of market sentiment and equity pricing is an evolving area in Finance research. The literature has developed a range of indicators including measures of volatility, option market volume, survey data and media searches. More traditional indicators of market movement include economic indicators such as unemployment, GDP, Leading Economic Indicators and Interest Rate levels.

Several researcher have considered the predictor power of these indictors however to date researchers have only considered each indicator in isolation. In contrast we use this information in an aggregate form. Our initial contemporaneous regression results indicate a modest relation between the indicators and the return on the Nikkei225. However the use of lagged indicators in a predictive regression resulted in an insignificant specification.

The use of a Principal Components Analysis showed a considerable amount of variation in the first Principal Component. Therefore the use of indicators in joint form rather than in isolation has merit.

The trading strategy employing these indicators dominated both equity and bond portfolios in terms of absolute mean return and on a risk adjusted basis. We interpret the results to mean the joint sentiment and economic indicators contain relevant predictive information.

Future research will consider more complex trading strategies incorporating the principal components in the detection of out of sample regime shifts.

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Table 1 Correlation Matrix

This table reports the correlations for the 2 dependent variables of return on the Nikkei 225 (NKYR) and return on the bond market (BR), 4 economic indicators of GDP, Leading Economic Indicator (LI), Level of the Bond Yield (BY) and Unemployment (UN), 4 sentiment indicators of Consumer Confidence (CCI) Google Trends (GT) Put Call Ratio (PCR) and the volatility index (VJX). The series GDP, LI, UN and CCI have been inverted to reflect a bearish expectation. The values in bold are significant at the 5% level. The dataset covers the period March 1994 to March 2010.

	NKYR	*BR*	*GDP*	*LI*	*BY*	*UN*	*CCI*	*GT*	*PCR*	*VJX*
NKYR	1									
BR	0.026344	1								
GDP	-0.090803	-0.183662	1							
LI	0.056517	-0.114518	0.079702	1						
BY	**0.028607**	0.999872	-0.182823	-0.114606	1					
UN	0.083886	**-0.800003**	0.016292	0.284476	-0.799265	1				
CCI	-0.254492	**0.077101**	0.016094	**-0.076135**	0.07683	**-0.197395**	1			
GT	0.05074	**-0.292407**	0.141624	0.022898	**-0.293394**	**0.060231**	0.577886	1		
PCR	0.034888	-0.183819	0.063667	0.040409	-0.184418	0.140424	0.096754	**0.306693**	1	
VJX	-0.192748	**-0.621551**	0.068345	0.095551	**-0.619384**	**0.668354**	**0.353875**	**0.389623**	0.125346	1

Table 2 Regression Analysis

This table reports the beta coefficients and significance for the contemporaneous and lagged regression. The dependent variable in in each specification is the quarterly return on the Nikkei225. The independent variables comprise the 4 economic indicators of GDP, Leading Economic Indicator (LI), Level of the Bond Yield (BY) and Unemployment (UN) and the 4 sentiment indicators of Consumer Confidence (CCI) Google Trends (GT) Put Call Ratio (PCR) and the volatility index (VJX). The series GDP, LI, UN and CCI have been inverted to reflect a bearish expectation. The dataset covers the period March 1994 to March 2010.

	Contemporaneous	Lagged
Intercept	-0.3602	-0.2492
GDP	-0.0018	0.0059
LI	-0.0141	-0.0375
BY	-5.9170	3.1365
UN	0.0537	-0.0122
CCI	0.0966	0.0603
GT	0.0008	0.0001
PCR	-0.0134	0.0018
VJX	-0.0038	-0.0037
R squared	0.2511	0.1179
F stat	2.3055	0.9018
P Value	0.0329	0.5218

Table 3 Percentage of Variation explained by the Principal Components

This table shows how much variation of economic and sentiment indicators is explained by the relevant principal components. The set comprises GDP, Leading Economic Indicator (LI), Level of the Bond Yield (BY) and Unemployment (UN), 4 sentiment indicators of Consumer Confidence (CCI) Google Trends (GT) Put Call Ratio (PCR) and the volatility index (VJX). The series GDP, LI, UN and CCI have been inverted to reflect a bearish expectation. The dataset covers the period March 1994 to March 2010.

	All variables
1st PC	96.35%
2nd PC	0.0342%
3rd PC	0.0021%

Table 4 Comparison of Equity, Bond and Trading Strategy Performance

Three Portfolios were formed for (1) equity portfolio which earns the return on the Nikkei225 each quarter (2) bond portfolio which earns the bond rate each quarter and a trading strategy (3) based on observed economic or sentiment indicators at each time period. The trading strategy is structured so that if an investor observes a positive change in more than 4 of the 8 indicators then it is read as a bearish signal and all funds are moved to the bond market. If the investor observes 4 or less positive changes then all fund move to the equity market. The trading strategy is implemented over the period 1994 to 2010.

Measure	1. Equity	2. Bond	3. Strategy
Quarterly Return	-0.0024%	0.0048%	0.012%
Volatility	0.012	0.000004	0.0047
Sharpe	-0.0659	0.0138	0.1048

Evaluation of stock price from the theoretical stock price

Junji Nakayama[1], Yumi Asahi[2], Toshikazu Yamaguchi[3]

**[1]Department of Engineering, Management Science,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
nkym4a@ms.kagu.tus.ac.jp**

**[2]Department of Management Science,Faculty of Engineering,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
asahi@ms.kagu.tus.ac.jp**

**[3]Department of Management Science,Faculty of Engineering,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
yama@ms.kagu.tus.ac.jp**

Categories G - Financial Economics

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Junji Nakayama[1], Yumi Asahi[2], Toshikazu Yamaguchi[3]

[1]Department of Engineering, Management Science,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
nkym4a@ms.kagu.tus.ac.jp

[2]Department of Management Science,Faculty of Engineering,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
asahi@ms.kagu.tus.ac.jp

[3]Department of Management Science,Faculty of Engineering,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
yama@ms.kagu.tus.ac.jp

Abstract.

When investing in stocks, it is important to know the value of those stocks. There is the theoretical stock price (TSP) as the way of knowing its value. The TSP is proper stock price which is calculated from the results or financial situation based on the income from stock investment obtained in the future. By comparing the TSP with the actual stock price (ASP), it is possible to determine whether stocks are overvalued or undervalued. There are three major Calculation methods for the TSP, and there have been some studies considering the formulations. On the other hand, empirical studies are a few. Especially, the Dividend discount model (DDM) that is one of the calculation methods is not evidently any empirical studies. Herein, from the viewpoint of general investors, verify usefulness of the DDM by comparing the ASP. In this study, compare the TSP which is calculated from the DDM with ASP on targeting the electronics industry and the pharmaceutical industry which are listed on the Tokyo Stock Exchange First Section. And determine its suitability. Besides that, using regression analysis as analysis model, to verify that ASP can be predicted by the TSP and financial indicators. From this study, it is found that evaluations of stock price by the DDM and by regression analysis using financial indicators are difficult to apply to reality. However, if the TOPIX stock index is considered, there is a possibility that the stock price can be evaluated.

Keywords: Corporate value, Economic statistics, Financial engineering, Fundamental analysis

1 Research background and purpose

In recent years, developing of the communication infrastructure, especially with the Internet spread, a prompt grasp of the fluctuation in prices using online and the expansion of the trading hour become possible in stock trading. Along with this, the number of private investors to the stocks increases.

The stocks are securities issued so that the enterprise may raise the capital, and Right to obtain divvy and to participate in management and so on to the stockholder who bought this stocks. The investor who invests in the stocks expects two profits of the profit on sale and distribution. The profit on sale is a marginal profit that arises by buying and selling the stocks. The dividend is a profit that is obtained when the enterprise distributes the portion of the profits to the stockholder. It is important to evaluate whether present stock prices level is the time to buy or to sell, if investors hope to the profit on sale. In the present study, it pays attention to "Theoretical stock prices" enumerated as this judgment standard.

The theoretical stock prices are "Original stock prices" calculated from an achievement and a financial situation of the value of the stocks, based on the profit that will be obtained in the future by the stock investment. Whether the stocks are expensive or cheap can be judged by comparing it with actual stock prices. It has a merit to evaluate stock prices of the individual firm without needing the exclusive knowledge and is an easy evaluation method that the private investor can also treat. On the other hand, the evaluation by this method has the weak point that the evaluation might be difficult due to the lack of the data used to calculate and restriction in the calculation. Additionally, time and effort are needed to calculate each individual firm. In addition, a more useful evaluation approach that improves the weak point is hoped for. Moreover, although some investors request the profit by buying and selling of the stocks or the profit by the dividend, the investment judgment might mistake by breaking the investment rule not to put out the loss. Then, it is preferable that the judgment index that becomes an insufficient investment rule is composed for the individual investor.

Therefore, in the present study, the evaluation model of the stock price for the individual investor to use it is constructed. In this case, the model to be able to evaluate the stocks, when the investment judgment of the stocks is done, is constructed from two aspects ‘the financial index’ and ‘the market index’ that everyone can easily acquire, based on the evaluation of stocks price according to the theoretical stock prices.

2 Theoretical stock prices calculation model

In the present study, the constant growth dividend discount model (DDM) is used to calculate the theoretical stock prices (Sakurai 2002, Katori 2009). This model is made by applying the dividend discount model. The dividend discount model is a technique converting the value which divided the total of the dividend by the expected rate of return into the present value, and this present value is assumed to be a theoretical stock prices.

The sign used for the theoretical stock prices calculation is defined as follows.

Table 1: The sign used for the theory stock prices calculation

Ce	:	Cost of stockholder's equity	Rf	:	Risk free rate
Rp	:	Risk premium	β	:	Sensitivity to stock market
Cl	:	Cost of liability	P	:	Interests paid
D_0	:	Interest-bearing debt at this season	D_1	:	The first term interest-bearing debt
WACC	:	Weighted average capital cost	E	:	Amount of stockholders' equity
T	:	Corporation tax rate	G	:	Sustainable growth rate
ROE	:	Return-on-equity	I	:	Internal reserves rate
Div	:	Dividend	TSP	:	Theoretical stock prices

A risk free rate is a yield of a riskless product for financial investment, and the government bond yield of Japan where the period from the issue to the repayment is 10 years is used.

The risk premium is a difference between an expected rate of return and a risk free rate in the entire market, and it fixes on 4% and uses it.

2.1 Cost of stockholder's equity

Cost of stockholder's equity (Ce) is requested by the expression (2.1).

$$Ce=Rf+\beta\times Rp \qquad (2.1)$$

The stockholders' equity cost is a cost to the capital procured from the stockholder among costs demanded from the capital procured so that the enterprise may perform the business. In the present study, the risk premium is fixed to 4% and the Ce is requested (Arikawa, et al., 2006).

2.2 Cost of liability

Cost of liability (Cl) is requested by the expression (2.2).

$$Cl=P(D0+D1)/2 \qquad (2.2)$$

The cost of liability is a cost to the debt procured from the creditor among costs demanded from the capital procured so that the enterprise may perform the business.

However, when the interest-bearing debt at this season and the first term is not capitalized, the cost of liability is assumed to be 0.

2.3 Weighted average capital cost

Weighted average capital cost (WACC(is requested by the expression (2.3) by using the expression (2.1) and the expression (2.2).

$$WACC = E(E + D0) \times Ce + D0(1 - T)(E + D0) \times Cl$$

(2.3)

A weighted average capital cost is a numerical value that becomes the standard of the investment yield that the enterprise should achieve, and it is used when the investment matter in the enterprise is evaluated or when the acquisition and the valuation of the firm are done. Therefore, a weighted average capital cost is used as an expected rate of return that discounts the cash in the future to present value. The cost of liability discounts half of only the amount of the effective tax rate because the debt has the effect of tax avoidance.

2.4 Sustainable growth rate

Sustainable growth rate (G) is obtained by the expression (2.4).

$$G = ROE \_ I \qquad (2.4)$$

The sustainable growth rate in the DDM assumes return-on-equity and the internal reserves rate to be constant. Therefore, the sustainable growth rate is calculated by using each average of return-on-equity and of the internal reserves rate which are obtained from financial statements for 10 years of the individual firm.

2.5 Theoretical stock prices

Theoretical stock prices (TSP) by the DDM are requested by the expression (2.5) by using the expression (2.3) and the expression (2.4).

$$TSP = DivWACC - G$$

(2.5)

However, WACC should be larger than G as the limiting condition.

3 Analyses

3.1 Analysis object

In the present study, the object is squeezed to the electric equipment industry and the medicine type of business and the valuation modeling is constructed. The reason of this is to consider the difference and validity by thinking about the valuation modeling from two poles the industry in which an external factor like the business fluctuations is "received easily" and "not received easily".

The electric equipment industry targets 34 enterprises that are listed in first section of the Tokyo Stock Exchange and where financial statements from 2001 to 2008 exist and can calculate the financial indices and the market indices are targeted.

The pharmaceutical industry targets 26 enterprises that are listed in first section of the Tokyo Stock Exchange and where financial statements from 2004 to 2008 exist and can calculate the financial indices and the market indices are targeted because the population is few.

3.2 Flow of analysis

Perform analysis by the following flows.

1. Try the calculation of the theoretical stock prices to the object enterprise of each type of business, and divide the theoretical stock prices by actual stock prices of the day of announcement of account settlement for the enterprise that was able to calculate.
   The value obtained here is defined as the rate of divergence. The rate of divergence defines the case where it is larger than 100 as 'Purchase' and the case where it is smaller than 100 as 'Sales'
2. Conducted multiple linear regressions analysis by using the rate of divergence as dependent variable and using the financial indices and the market indices as the independent variable.
3. The above-mentioned 1 and 2 are done with Japanese annual accounting period from 2004 to 2008, and each regression model is considered and verified.
4. From a result above-mentioned 3, the regression model that may be used for the stock prices evaluation in the future is examined.

3.3 Independent variable

The independent variable used for the analysis is shown in Table 3.1 with the sign. The independent variables enumerated in Table 3.1 are indices that can calculate for 5 years from the financial indices and the market indices to which the security analyst pays attention in 1990 and that referred to business fluctuations and as main information in investment (Imakubo 2002).

Indices used as the independent variable are 26 pieces in total and those are divided into the item from (1) to (8). ‘Stock prices index’ described in the item of (2) bundles the indices that present stock prices level can indirectly judge to be expensive or cheap. ‘Risk index’ described in the item of (6) bundles the indices that shows the height of the risk when investing in a corporation. ‘Reference index’ described in the item of (8) bundles the indices that has been described as the main financial information on the integrated information site of the investment and money such as the yahoo finance.

Table 3.1: independent variable used for analysis

(1)Company size			(2)Stock price index		
CE	:	Capital Expenditure	DY	:	Dividend Yield
MC	:	Market Capitalization	PBR	:	Price Book-value Ratio
NAV	:	Net Asset Value	PCFR	:	Price Cash Flow Ratio
RD	:	Research and Development	ROA	:	Return On Asset
SA	:	Sales	ROE	:	Return On Equity
SC	:	Stated Capital		:	

(3)Safety			(4)Growth		
CAR	:	Capital ratio	CG	:	Capital Growth
CUR	:	Current ratio	MCG	:	Market Capitalization Growth
ICR	:	Instant coverage ratio	NIG	:	Net Income Growth
	:		SG	:	Sales Growth

(5)Productivity			(6)Risk index		
LER	:	Labor Equipment Ratio	B	:	Beta

(7)Business index			(8)Reference index		
CEOS	:	Capital Expenditure Of Seles	BPS	:	Book-value Per Share
RDOS	:	Research and Development Of Seles	EPS	:	Earnings Per Share
	:		IS	:	Issued stocks
	:		SUN	:	Stock Unit Number

4 Result

4.1 Multiple regression analysis concerning rate of divergence

To verify evaluation of the stocks from the financial indices and the market indices about the electric equipment industry and the pharmaceutical industry, conducted multiple linear regressions analysis by using the rate of divergence as dependent variable and using the financial indices and the market indices whose total are 26 indices as the independent variable.

The variable is selected by the decrease method. The result is shown for 5 years about the electric equipment industry and the pharmaceutical industry as follows.

4.2 The electric equipment industry

The result of the electric equipment industry became Table 4.1.

Table 4.1: Recurrence result in electric equipment industry

Fiscal year	CE	MC	NAV	RD	SA	SC		
2004								
2005								
2006								
2007								
2008								
	DY	PBR	PCFR	ROA	ROE	CAR	CUR	ICR
2004	98.04***							
2005	34.39***		0.729*					
2006	35.03**	23.63*						0.015***
2007		60.13**					0.419***	
2008	47.93***						0.074**	0.025*
	CG	MCG	NIG	SG	LER	β	CEOS	RDOS
2004					1.817			
2005					-1.023			
2006						-23.66*		
2007			0.038***			-47.75**		
2008								
	BPS	EPS	IS	SUN	Constant		R-squared	
2004		0.230***			-101.9***		0.672	
2005					-9.546		0.664	
2006			-8.271×10^{-9}		-17.43		0.702	
2007					-44.02		0.739	
2008					-51.96**		0.698	

Regression coefficients whose p-value is less than 0.1 attach and write “.”. Similarly, when p-value is less than 0.05, “*” is done. When p-value is less than 0.01, “**” is done. When p-value is less than 0.01, “***” is done.

The regression model was different according to the fiscal year of the analysis, and small bias appeared to the R-squared too. The valuation of stock is able to be expected in each age according to a financial index and the market index because the R-squared are about 0.7 in each year.

It can be judged that the dividend yield is adopted easily in the independent variable adopted for the regression model. In eight items used for independent variable, the item adopted easily is ‘stock prices index’ and ‘safety’. Oppositely the item not easily adopted is ‘company size’ and ‘business index’.

The result was not obtained though it was forecast that the regression model where business indicators were included was led because the existence of the reaction to an external factor such as business fluctuations is a feature of the electric equipment industry. Thus, it is guessed that a business fluctuation has already been included in a financial index in each year. Actually, because upward revisions and the downward revisions of the achievement are done by the change in business, by the indices calculated based on this, the change in an individual enterprise due to the economic fluctuation is caught enough.

Moreover, about the overall recurrence result, if the investing firm is decided by financial safety and the profit more than by the size of a company and the brand, it may be said that the valid result was obtained though the indices not adopted exists.

4.3 Pharmaceutical industry

The result of the pharmaceutical industry became Table 4.2.

Table 4.2: Recurrence result in pharmaceutical industry

Fiscal year	CE	MC	NAV	RD	SA	SC
2004		-9.900×10^{-13}***				
2005						
2006	-0.003*					
2007						
2008						

Fiscal year	DY	PBR	PCFR	ROA	ROE	CAR	CUR	ICR
2004								
2005	62.40*							
2006		-0.069*						
2007							0.238	
2008								

Fiscal year	CG	MCG	NIG	SG	LER	β	CEOS	RDOS
2004	-1.500***	0.896**				-154.9**	22.104***	5.017**
2005			-0.270*		-1.972**			
2006		1.148*						
2007		-1.447	-0.511					15.26*
2008	-1.108 .			7.974**	-9.953*			-21.09**

Fiscal year	BPS	EPS	IS	SUN	Constant	R-squared
2004					183.7**	0.883
2005					45.00	0.503
2006				-0.046	-0.457	0.583
2007	-0.076*				245.0 .	0.518
2008				-0.095 .	-84.94	0.779

Regression coefficients whose p-value is less than 0.1 attach and write “**.**”. Similarly, when p-value is less than 0.05, “*” is done. When p-value is less than 0.01, “**” is done. When p-value is less than 0.01, “***” is done.

The regression model was different according to the fiscal year of the analysis as well as the electric equipment industry. In addition, clear bias appeared to the R-squared. It may be said that the valuation of stock is possible according to a financial index and the market index because the R-squared is about 0.8 in 2004 and in 2008.

Although relativity is not seen in the entire fiscal year about the independent variable adopted for the regression model, it can be judged that there are items and indices adopted easily. In eight items used for independent variable, the item adopted easily is 'growth' and 'business index'. Oppositely the item not easily adopted is 'company size', 'stock prices index' and 'safety'. The adoption frequency of MCG and RDOS is the highest of 26 indices that are the independent variables. There was not adoption about four indices (PCFR, ICR, BPS, and EPS) and seven indices (NAV, RD, SA, SC, ROE, ROA, and CAR). As for seven indices, it is the same results as the electric equipment industry.

The feature of the pharmaceuticals market is that the ratio of 'research and development of sales' is large (Takahashi 2006). In this analysis, it can be said that the index is often built into the model, and it became a model by which the result of catching a feature of the industry is shown. The reason why the sales research and development spending ratio shows a negative coefficient in 2008 seems influence of finance crisis which was caused at that time.

About the overall recurrence result, because the pharmaceutical industry enters the class with high safety, when thinking about the investment for the pharmaceutical industry, the safety of the investing firm may not need to be considered. If this idea is correct, it may be said that the valid result was obtained.

From the above-mentioned paragraph 4.2 and paragraph 4.3, it understands that the evaluation of stock prices is different according to the industry, and it can be said that each industry should change the model.

5. Consideration

5.1 Consideration concerning model

Two matters are considered as follows.

I. Thinks about the reason why the indices not adopted for the independent variable is caused.

In paragraph 4.3, there were indices not adopted to the independent variable in both the electric equipment industry and the pharmaceutical industry. It is thought that the multicollinearity by the correlation with another index is a cause.

Indices not adopted are NAV, RD, SA, and SC of 'company size', ROA and ROE of "stock prices index" and CAR of 'safety'. Each index of 'company size' shows the scale of the enterprise, and the correlation coefficient mutually exceeds 0.8. As to two indices of 'stock prices index', the correlation coefficient of about 0.8 is mutually caused by the approximation of the calculation method. Additionally, the correlation with 'company size' and with DY and PBR in 'stock prices index' is strong. CAR has strong correlation with ROA, ROE, ‘safety’ and ‘growth’.

Therefore, it can be said that it was not adopted for the regression model because the meaning of the index is included in other indices that have the correlation.

II. Thinks about the reason why R-squared of the regression model each year is different.

From R-squared in Table 4.1 and Table 4.2, it is understood that a goodness of application of the regression model is different according to the industry. This is guessed that the economic fluctuation is a cause because a difference between the electric equipment industry and the pharmaceutical industry is differences of the influence degree by an external factor. Then, quote the price transition of Tokyo Stock Price Index (TOPIX) as an index to which the change in an external factor appears. Figure 5.1 shows the price transition of TOPIX from April 2002 to October 2010. From figure 5.1, table 5.1 is thought as a relation with the transition of TOPIX and the R-squared.

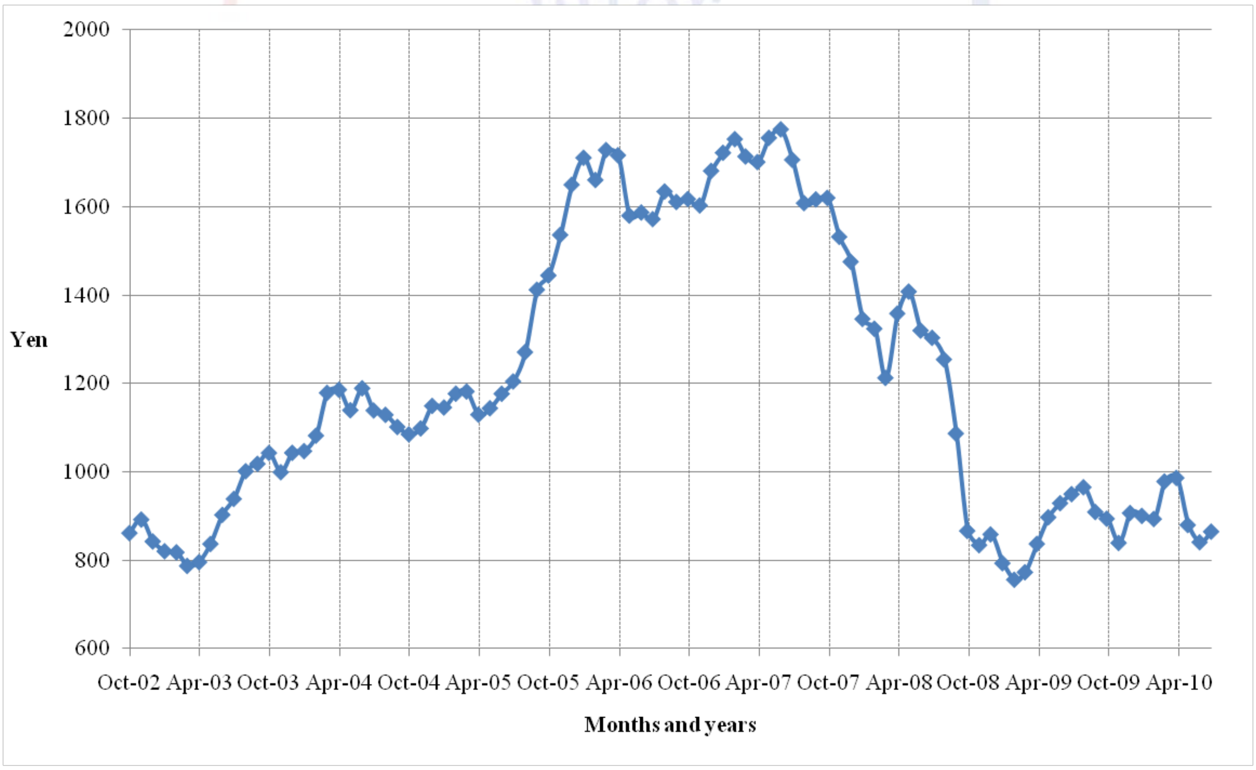

Figure 5.1: the price transition of TOPIX from April 2002 to October 2010

Table 5.1: a relation with the transition of TOPIX and the R-squared

		R-squared	
Fiscal year	Business phase	Electric	Pharmacy
2003	Recovery	-	-
2004	Stagnation	0.672	0.883
2005	Recovery	0.664	0.503
2006	Stagnation	0.702	0.583
2007	Retreat	0.739	0.518
2008	Retreat	0.698	0.779
2009	Recovery	-	-

Though the R-squared is high in the electric equipment industry regardless of the good or slump condition of business because the economic fluctuation is caught easily, R-squared indicates comparatively high value including the retreat period such as when the business phase moves from stagnation in 2006 to the retreat in 2007 and from the retreat in 2007 to the retreat in 2008.

On the other hand, though the pharmaceutical industry seems that the contribution rate lowers because the discrepancy is caused between business fluctuation and stability of the pharmaceutical industry when the economic fluctuation is large. However, R-squared indicates high value including the recovery period that stability is corresponding in directions as much as, such as when the business phase moves from stagnation in 2004 to the recovery in 2005 and from the retreat in 2008 to the recovery in 2009.

It is thought from the above-mentioned that the feature of the industry appears between the price transitions of TOPIX in fiscal year when the contribution rate is high.

5.2 Regression model that may be used and its condition

It seems that the stock prices evaluation in the future becomes possible by changing the use model by the price transition of TOPIX in consideration of Table 5.1. The comparison selection of the investing firm will be able to be done by using models though it is necessary to change the index in each model. However, the model for the contribution rate not to exceed 0.7 should refrain from use. Because the evaluation of the equity price by those regression models lacks accuracy, reliability is insufficient for use as the investment rule. When the stock price in the future is evaluated by using such a regression model, it is thought that the evaluation result stays in use as one judging material.

6 Summary and problem in the future

In the present study, the stock price based on the theoretical stock prices was evaluated from the multiple regression analysis by two aspects of the financial index and the market index, based on the data of the electric equipment industry and the pharmaceutical industry. As a result of deriving the regression model, and verifying the model and the contribution rate, it has understood that the regression model is different according to the industry and the fiscal year. Though a difference about R-squared is not seen by fiscal year in the electric equipment industry, a difference about R-squared appeared by fiscal year in the pharmaceutical industry. Therefore, it is difficult to select a single valuation modeling because the regression model is different in fiscal year and the industry. On the basis of these, it was able to be concluded that there are some regression models which may evaluate the stock price in the future if the price transition of TOPIX is considered as business fluctuations.

As future tasks, first of all, it is enumerated to increase the analyzed year. It seems that there are optimistic judgments and overlooked tendencies because only 5 years is analyzed in the present study. This improvement is requested most. It is hoped to be able to squeeze the model to one along with this improvement. Next, it is necessary to conduct accurate evaluation by analysis which is subdivided by type of business and which the target industry is changed to from increasing the corporate number used for the analysis. At the same time, it is necessary to verify Relation between contribution rate of regression model and price transition of TOPIX and condition of using it when the relation exists. In addition, it is necessary to increase the independent variable used for the regression analysis to make the model which is not received by the influence of TOPIX and to analyze it. Finally, it is necessary to consider the risk premium every year.

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A preliminary investigation of the links between non-traditional expatriate assignments and management levels

Noorziah Mohd Salleh

RMIT University

Noorziah.mohdsalleh@rmit.edu.au

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Noorziah Mohd Salleh

Background and research questions

In the international human resource literature, the importance and the advantages of non-traditional expatriate assignments have been highlighted. The most important criteria for these assignments is that they are executed within a short period of time, specifically less than one year (Collings et al., 2007, Mayerhofer et al., 2004). Although there are a few studies that focus on this new area of research, understanding of the issues around the assignments of non-traditional expatriates remains limited, and thus this area requires further investigation.

Past research shows that the assignments undertaken by non-traditional expatriates involve troubleshooting, controlling for a specific duration, conducting irregular specialised tasks, maintaining subsidiary operations and a personal touch with local managers, developing an organisation and completing international projects (Tahvanainen et al., 2005, Marschan et al., 1996, Collings et al., 2007). However, the usefulness of these studies is limited in that the data collected has primarily been secondary data.

A KPMG study based on its Global Assignment Policies and Practices Survey (2007) revealed that 80 per cent of companies are increasingly utilising short-term assignments (AccountingWEB, 2008). The high failure rate for traditional assignments has no doubt turned companies' attention towards identifying more beneficial forms of international assignment. Furthermore, recent studies which have highlighted the advantages of using non-traditional expatriates may also have influenced companies' decisions in managing their strategic international operations. These advantages include flexibility, simplicity, cost effectiveness and that non-traditional assignments can be less problematic compared to traditional assignments (Tahvanainen et al., 2005, Collings et al., 2007).

There are various terms used in the literature to refer to 'non-traditional', which are usually differentiated based on the nature of the main assignment and in line with various types of purposes. The more recently introduced terms include 'short term' (Bharadwaj, 2000), 'international commuter' (Tahvanainen et al., 2005, Minbaeva and Michailova, 2004), 'flexpatriate' (Collings et al., 2007), 'international business traveller' (Mayerhofer et al., 2004, McKenna and Richardson, 2007) or 'frequent flyer' (Welch et al., 2007), and 'boundary spanner' (Collings et al., 2007). These terms have a range of definitions and their inclusion has raised more questions about the nature of non-traditional assignments and the issues surrounding them.

In identifying the main assignments of non-traditional expatriates, the influence of top and middle management levels must be considered. A manager requires certain skills to perform his roles and responsibilities. According to Katz (1986), these skills can be categorised as conceptual, human or technical skills. All of these skills are important to managers, but certain skills are more important to certain management levels. Katz (1986) proposes that conceptual skills are more important for top management positions, while middle managers require more human and technical skills. Although all of these skills are important for the organisation as a whole, due to the varied and complex assignments of the various managers, the skills possessed by managers differ according to their management levels.

Knowledge transfer is an important element in the assignments of non-traditional expatriates (Bonache and Zarraga-Oberty, 2008, Hebert et al., 2005, Minbaeva and Michailova, 2004, Riusala and Suutari, 2004). A few studies have attempted to extend the definition by incorporating knowledge transfer into one of the traditional expatriate assignments: position filling (Harzing, 2001a, Harzing, 2001b, Hocking et al., 2004). This area will be further discussed in this paper in terms of the importance of this item to non-traditional managers' assignments.

This discussion has led the researcher to formulate the aims of this paper.

The aims of this study are, firstly, to identify the main assignments of non-traditional expatriates and, secondly, to investigate the influence of the senior and middle management levels on these assignments. Two main management levels are chosen for investigation because an expatriate normally occupies the role of middle or upper management rather than the lower management level.

Data collection method

A semi-structured interview was conducted using the convergent interviewing technique (Rao and Perry, 2003) to gather for detailed and in-depth information. The length of the interview was between one and two hours. This method is seen as suitable for exploratory research and provides an efficient mechanism for data analysis following each interview. It also offers a means of deciding when to stop collecting data (Rao and Perry, 2003). Furthermore, this technique has strengths for investigating under-researched areas.

The researcher selected the respondents from publicly available lists of relevant professional organisations in Singapore and Malaysia. These countries were selected for their unique cultural makeup: both Malaysia and Singapore are multiethnic, multicultural and multilingual societies.

Both countries promote foreign direct investment which encourages international business from foreign countries. These countries are socially, politically and economically stable unlike their neighbouring countries Indonesia, the Philippines and Thailand.

A limitation of this study, however, is that the researcher relied on the respondents' personal contacts in obtaining more respondents. Fortunately, many of the respondents readily provided the researcher with the contact details of some of their friends and colleagues. They also helped the researcher by contacting these potential respondents prior to the researcher making contact, which gave the respondents time to consider whether or not they were willing to participate. Largely this process was undertaken by informal conversations. As a result, the respondents felt at ease and were interviewed at a place and time convenient to them.

The researcher contacted 15 respondents, including 4 in Singapore and 11 in Malaysia. Nevertheless, only 12 agreed to be interviewed, and 1 respondent was unable to be interviewed face to face due to his busy schedule but agreed to answer the interview questions via email.

The respondents came from various industries, including consultancy, education, banking, energy and tourism, and importantly all were employed in upper level management. Table 1 presents a summary of the respondents' profiles. This paper is derived from a bigger exploratory research study. Thus, a bigger picture was gathered based on various industries, out of which a specific industry was chosen for further investigation.

Each of the respondents was asked to provide information about their assignments. The consensus and dissenting opinions expressed by respondents are presented in Table 2. Appendix 1 shows the structured interview questions used to gather the data. Although this study primarily used structured interview questions, occasionally the researcher asked unstructured questions in order to obtain more information depending on the respondent's responses or background.

SOUTH-SOUTH RELATIONS AND THE TRANSPLANTABILITY OF ORGANIZATIONAL PRACTICES: A CASE STUDY ON THE INSERTION OF CHINESE MULTINATIONALS INTO BRAZILIAN PRODUCTION CHAINS

The impact of Asian Economies on Global Business

Carlos Alberto Arruda – Fundação Dom Cabral, arruda@fdc.org.br

Marina Silva Araújo – Universidade Federal de Minas Gerais, Centro de Pós-graduação e Pesquisa em Administração (CEPEAD-UFMG) e Fundação Dom Cabral, marinasba@gmail.com

Flávio Pacheco Silveira – BM&FBOVESPA, flsilveira@bvmf.com.br

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Carlos Alberto Arruda – Fundação Dom Cabral, arruda@fdc.org.br

Marina Silva Araújo – Universidade Federal de Minas Gerais, Centro de Pós-graduação e Pesquisa em Administração (CEPEAD-UFMG) e Fundação Dom Cabral, marinasba@gmail.com

Flávio Pacheco Silveira – BM&FBOVESPA, flsilveira@bvmf.com

1 INTRODUCTION

The economic changes that entailed today's China as a promise for the future began in the 80's, with their "Open Door" policy that distributed income, developed domestic technological capabilities and abridged social inequalities. Most prominent is the growth process of Chinese companies in the world economic and political scenario. Overall, Chinese Outward Foreign Direct Investments (FDI) have increased substantially, notably those stemming toward emerging countries. More than merely an international investor, China's FDI harbingers a State strategy veered towards national development. The significance of Chinese advances as concerns their FDI was clearly seen in 2008, when global FDI dropped by 20% while Chinese FDI practically doubled – and amidst a financial crisis scenario that prevailed throughout that period.

Chinese companies differ from companies of other nationalities for their rapid growth capabilities (NOLAN, 2002) and for their strategies, deeply ingrained in the integration of their companies and chains, in the strong diversification of their production and in their commitment towards the globalization of their operations (ZHANMING, 2009). Basing on these concepts Arruda, Araújo and Silveira (2009) noted that the above-cited strategic positioning is operationalized by means of an organizational structure strongly veered towards their products' high quality and technology and by initiatives to perpetuate a Chinese organizational and management model in recipient economies. The authors understand this could herald an attempt to transplant the Chinese organizational model to recipient economies (ARRUDA; ARAÚJO; SILVEIRA, 2009).

For the purpose of analyzing the success in transferring organizational practices from a Chinese company to the context of Brazilian production chains, this paper proposes to identify and assess the factors prompting the effectiveness and success of such transfer under the light of the ideas proposed by Kostova (1999), which suggest that the success of organizational transplantability is related to the implementation and institutionalization of corporate strategic practices. Moreover, this paper purports to assess how a same Chinese subsidiary responds to institutional dualism to which it is subjected and how it effectively promotes the transplantability of its practices. For the purposes of analyzing the proposed goal, a case study involving a Chinese company operating in Brazil since 2001 will be the taken as the empirical basis for discussion.

Gree Electric Appliances established in 1991 is today an outstanding company in the production of consumer durables worldwide. At a high level of internationalization and having production units in places such as Lahore, Pakistan and Manaus, in Brazil, Gree yielded a turnover in excess of $3 billion. According to company executives, success was supported, from the very beginning, by prioritizing quality and technology as the foundations of their output.

2 THEORETICAL FRAMEWORK

For the interaction between the company and its subsidiary to be effective and efficient, the transfer of knowledge, organizational practices and technology between and among countries assumes relevance. The perspective of this paper is to discuss business internationalization as an ensemble of organizational practices, production modes and technologies that somehow overflow to other nations.

Granted the importance of knowledge, practices and technology transfers between and among nations for their economic development, an often-neglected issue in literature is whether the conditions of business and other national institutions will support such transfers. This proposal of this article is based upon this perspective. As Jones (1996) stated, organizational innovations are important for productivity enhancements and to accelerate MNC growth.

2.1 – Organizational Practice Transfer in the International Context

Organizational practices are a particular mode to conduct organization functions. They are influenced along time by history, by people, by interests and by corporate actions. Mainly, these organizational practices are characterized by their institutionalization in the company at hand (KOSTOVA, 1999). Kostova (1999) argues that the practices reflect a part of the knowledge and competences mustered by an organization and, to be effective, these practices should be accepted and approved by the employees and be seen as an effective manner of performing certain tasks. Szulanski (1996) defines organizational practices as the use of routine organizational knowledge. They normally comprise a tacit element, composed of individual skills and by collaborative social arrangements; that is, they concern knowledge and skills yielded by routine experience, shared by myriad actors while performing organizational tasks.

Multinational corporations (MNCs) adopt strategic organizational practices defined by headquarters as doming, crucial and/or critical to the achievement of subsidiary units' strategic missions (KOSTOVA, 1999). These are established during the development of the MNC and is within the roster of the company's differentiated skills to create practices in response to organizational strategies and as the result of competitive pressure – such as the need to coordinate and manage transborder operations, operating in different environments and operating under the demand for new techniques and technological models (NOLAN, 2002). Aiming at bringing their competitive advantages and superior knowledge to foreign markets (DUNNING, 1998), organizations promote among their units the transfer of what Kostova (1999) calls "business practices, i.e., the practices transferred from headquarters to subsidiaries in different countries. These practices reflect the core competences of the company and the already cited superior knowledge it created.

Kostova (1999) highlighted that the transfer of strategic practices does not occur in the presence of “social voids”, that is, of organizational vacuities requiring pervasion by a particular mode of producing or managing. Transfers occur, in fact, when the existence of a context is identified as inherent to the organization itself, requiring the application of practices strategically defined by headquarters as a differential factor of their production/management mode. In this sense, the author pinpoints the existence of three key promoting/facilitating contexts for the success of organizational practice transfer, to wit: the **social context**; the **organizational context**; and lastly the **relational context**.

Along this line, organizational transplantability can be taken and construed as the relationship between the parent company and its subsidiary, and deals with the degree of appropriation and autonomy enjoyed by such subsidiary vis-à-vis its parent (CHENG, 1996). Many scholars such as Djelic (1998) and Westney (1987) laid their wagers on this behavior and promoted extensive discussions concerning the transfer process in countries such as the United States and Japan. Kostova (1999) sustains that the consequence of a social, organizational and relational context adequate to organizational practice transfer would entail an effective practice institutionalization by the recipient unit. Institutionalization would be the process by which the practice will reach an evident level of credibility by the recipient unit while acquiring a symbolic significance to the recipient company’s employees (KOSTOVA, 1999). Therefore, the factors defining the transplantability process as successful would be related to the fact/moment when the parent company succeeds in conveying to its recipient units, besides superior knowledge, the values and meanings of these practices (KOSTOVA, 1999). In empirical terms, and according to the model sustained by Kostova (1999), the institutionalization of organizational practice involves two moments, to wit, practice implementation and its internationalization by part of the organization. These two processes will only happen, as noted elsewhere, when social, organizational and relational contexts become favorable to them.

Granted the importance of knowledge, practices and technology transfers between and among nations for their economic development, an often-neglected issue in literature is whether the conditions of business and other national institutions will support such transfers. The proposal of this article is based upon this perspective. As Jones (1996) stated, organizational innovations are important for productivity enhancements and to accelerate MNC growth besides positively contributing to the growth of recipient economies overall. This being the case, are the main agents involved in this process – business and institutions – able to promote such transfers of the highest relevance to economic development? More specifically concerning the issue discussed in this paper, are Chinese and Brazilian institutions, as well as business in these two countries, able to promote the referred-to transfers?

3 METHODOLOGICAL PROCEDURES

The research strategy pursued was the study of a single case, which according to Yin (2001) and Eisenhardt (1989) is valid when the focus is upon contemporary phenomena and inserted into some real life context. Specifically, the case study method consists of an intensive examination of one or more study objects, such as to provide the deepest and most complete understanding of such objects (GREENWOOD, 1973; SOY, 1997; GOODE, HATT, 1973), be they groups, or situations, people or organizations, their extant circumstances and the nature of the phenomena composing them. The case study technique is relevant mainly when events or phenomena still unknown or scarcely explored are studied (EISENHARDT, 1989). It is therefore a research strategy that affords understanding a contemporary phenomenon within its own context using multiple sources of evidence in detail and depth (EISENHARDT, 1989; YIN, 2005).

Research was done in three distinct phases: the first phase concerned a comprehensive bibliographic review on the theme, seeking especial knowledge about the Chinese business internationalization process and organizational practice transfer. The second phase involved research into secondary sources and also a preliminary exploratory investigation with the selected company's CEO. The idea at this stage was to promote an initial survey of the matter, and also to understand how the investigated company positioned itself within its production chain in the Brazilian industrial structure. This stage also included the survey and analysis of statistical data, as well as previous studies of Brazilian air-conditioning appliances and some of their operation modes in the international market. The third phase comprised a field research with interviews and analysis of collected data. In-depth interviews were conducted with unit senior officers, managers and coordinators in Manaus. Seeking triangulation and full data acquisition, the interviews were conducted at the Brazilian headquarters with executives inserted in the international operations process and in the Brazilian manufacturing process in itself. Finally, this stage also included data analysis from the transcribed interviews, business documentary analysis plus conclusions and positioning as regards the analyzed process, main study contributions and limitations.

Basing on the theoretical framework discussed above, this article proposes to analyze the variables listed in the table below:

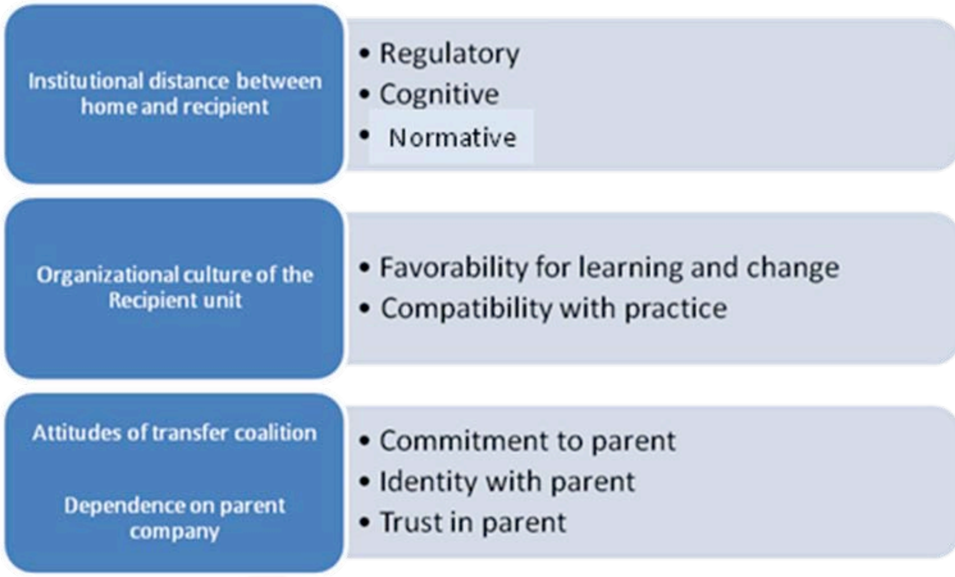

Table 1: Transnational Transfer of Organization and Knowledge practices
Author: KOSTOVA, 1999

Again, the purpose of this article is to analyze the success in transferring a Chinese company's organizational practices and knowledge to the context of Brazilian production chains. The Kostova (1999) model will be used to prompt the achievement of this objective, as the single theoretical reference source for such analysis. As indicated above, the model sustained in this paper is essentially composed of the same three analysis fields indicated in the table presented.

4 CASE DESCRIPTION AND ANALYSIS

Gree Electric Appliances was created in Zhuhai, China, in 1991, and ensued from a merger between Guanxiong Plastic Industrial Company and Zhuhai Haili Air Conditioning Factory. It took the company only 15 years to become the largest air conditioning maker in China and one of the largest in the world. Since 2001, the company has been ranked as one of Fortune magazine's "Top 100 Chinese Listed Companies", and in its country of origin the company is currently quite a well-known brand and it is strongly associated to the high quality of its products, as it has received several domestic and international awards and accreditations. For this, the company also has a large R&D center at its headquarters in Zhuhai, where some 1000 engineers work to develop the technologies used in the company's products, which are among the most modern in the world.

Gree began its internationalization process after having acquired control over the Chinese air conditioning domestic market. After testing its quality and securing several international accreditations, the company began to offer its products to over 180 countries and districts in places such as Europe, Asia and the Pacific Rim, the Americas and Africa. As it aimed to really become an international company, Gree invested US$20 million in its first factory outside its country of origin in 1999. This Brazilian factory greatly contributed to the brand's increasing international competitiveness. Its annual production runs to about

200,000 sets. However, the company's international steps were not limited to factories outside its domestic environment. It also began to set up R&D centers to improve development of products that would be adapted to the different conditions and characteristics of foreign markets. After investing over US$80 million to set up an R&D, technical and administrative center, Gree Electric Appliances became the number one company in the development of air conditioning appliances in the world.

The company currently has commercial offices throughout the world in places such as the United Arab Emirates, Spain, South Africa and the USA, and has not forgone the possibility of expanding its production processes even further. According to Dr. Yue Haiping, Gree's general manager for Brazil, "the company has enough money to invest in other factories throughout the world. All that is needed is that the commercial relationship between the company and these places should increase even more and that these places should come to be seen as strategic places for the brand, as happened in Brazil".

4.1 Brazilian Institutional Context

In the 70s and 80s, the emergency of competitiveness studies proposed a change in the manner of looking at the transfers of resources among countries. The cultural perspective yields space, and the idea evolves that institutions, as legal structures and regulatory frameworks, are the true agents promoting or restricting transfer movements among companies in different countries. It is now important to highlight that this paper does not intend to cast judgment upon the importance of the cultural factor to the process of transfer. The idea is to submit that not only this, but mainly all legal and regulatory framework factors are determinant of such movements. According to Sala-i-Marin *et al* (2009), a country's institutions are determined by the legal and administrative structure through which people, companies and governments interact to reach the economy's prime objective, that is, the creation or income and wealth. In this sense, the legal and regulatory structure offered by the institutions discussed here are represented, in most countries, by government which, in practice, absorb the role of defining many market rules, the bureaucratic pattern imposed upon society, judiciary behavior as well as labor market rules.

Politically and economically, Brazil is enjoying some of its best days since the political stabilization ensuing from the implementation of the Real plan. Seen not only as a large emerging country, Brazil has been successful in advancing its social and economic factors following years of restrictive macroeconomic policies. According to data from the 2009 Global Competitiveness Report (GCR) (a report on national competitiveness annually produced by the World Economic Forum), Brazil today ranks as the 56th most competitive country among more than 150 countries. In 2009, the country accumulated relative and absolute gains that entailed a leap of 17 positions since 2007.

Macroeconomic stability, besides social development and infrastructural projects could be nominated as the positive points of this country's institutional context. On the other hand, Brazil harbors institutional characteristics that have been harmful to business development and to the economy as a whole for a long time. Factors such as social security saturation, the heavy tax burden, the existence of an incoherent and morose regulatory framework and the prevalence of an excessively bureaucratic and harsh code of laws imposed upon business are issues recurrently indicated by theme scholars as hurdles against the smooth development of business activities in this country (MIA; AUSTIN; ARRUDA; ARAÚJO, 2009).

4.2 VARIABLE ANALYSIS

4.2.1 Social Context

As upheld by Kostova (1999), the cultural view of the social context does not suffice to provide a correct transplantability analysis of organizational practices. Like Scott (1995), Kostova (1999) sustains an institutional view of the social context of analyzed countries in a process of organizational practices transfer. In this sense, and still in line with Scott's (1995) perspective, three essential fields in the institutions involved in the organizational transfer process will be analyzed. The first concerns the regulatory issues among countries. It is the ambiance that reflects the laws and rules that promote certain behaviors and restrict others by the agents involved. The second field involves the cognitive factors inherent to society, and related to MNCs. The third factor addresses the normative issues of each country; more specifically, the values and rules as they relate to individuals.

Overall, the social context factors were indicated by Chinese and Brazilian executives as those most difficult to adapt, mainly as concerns adaptation to the Brazilian regulatory system. As concerns the latter, Chinese executives voiced adaptation difficulties ranging from the heavy tax burden through problems with labor law requirements. At this time, despite the previous accumulation of international experience, the company was evidently not prepared to handle the Brazilian institutional environment – as concerns legal and also cognitive factors. As indicated by the company's Officer, the Chinese institutional environment is much more conducive to business. For domestic and foreign companies both, there is a regulatory environment more favorable to investment and business development. Moreover, when dealing directly with the Brazilian regulatory environment, the Chinese executive began to question how could Brazilian companies "survive" without the support of the Brazilian government, absent in their conception.

To corroborate his remarks, the executive described a number of difficulties that his company faced in the Brazilian regulatory environment. At first he was surprised with the Brazilian tax structure which, in his understanding, is exceedingly harmful to business. According to company information in cost terms it is cheaper to import a container of parts from China do Brazil than haul the same container from Manaus to Sao Paulo (the company's national distribution center). Another situation is the difficulty for Brazilian companies such as Gree to speak to Brazilian government representatives or to industrial institutions. Another situation pinpointed as problematic for business concerned the Manaus Free Zone entry. Despite the tax benefits offered by the region, the imposition of rules such as the nationalization of part of the production, according to Chinese executives, did not favor the business of the Chinese subsidiary. From production cost increases through loss of much-prized quality, the imposition of nationalization of part of the production was not welcome by Chinese executives. In his statement, the corporate official reported that in China, independently of invested capital origin, business has latitude to negotiate with preferred suppliers and customers – which doesn't happen in the Manaus Free Zone.

Normative and cognitive factors, despite certain adaptation difficulties, were not indicated during the interviews with Brazilian and Chinese executives as those of the greatest difficulty. However, both voiced situations in which adaptation difficulties relating to these fields were found. Chinese executives spoke of skilled labor shortcomings as a serious difficulty. Moreover, they indicated the difficulty in dealing with the "lack of engagement" of Brazilian employees. The plant director was unable to understand why an employee, after having been trained and prepared to perform their jobs would resign and go work for another company. Excepting this, another adaptation difficulty as regards normative and cognitive characteristics concerns certain mutual mistrust – Brazilian employees vis-à-vis Chinese executives and vice-versa. One of the most outstanding incompatibilities in the interviews – and involving both cognitive and normative factors – was the different view of each one of the sides as concerns professional training. According to Brazilian executives, the Chinese are excessively distrustful. Chinese executives indicated the same factor. To them, it is difficult to win the trust and loyalty of a Brazilian employee obviously each of the sides voiced different factors that signaled the difficulties of adapting their cognitive and normative elements. Cognitive and normative factors as a rule were not reported as hurdles against the good relationship between different nationalities. However, the incompatibility of these societies' values and patters coexisting together prevent, as the Chinese executives put it, a good business development and the utilization of the company's full production capacity.

4.2.2 Organizational Context

Besides the social factors conducive to a better or worse adaptation of organizational practices as transferred from the Chinese headquarters to the Brazilian subsidiary, the corporate context within which these transfers occur is of the highest analytical relevance. As indicated by Kostova (1999) and Zander and Kogut (1995), the compatibility of organizational principles among group units is of the highest importance for the success of organizational practices transfer, mainly when these practices concern technological and innovation factors. Moreover, Kostova (1999) sustains that the proper practice transfer will be favored when the new knowledge transferred from headquarters to the subsidiary is communicated to and understood by the employees of the recipient unit. Kedia and Bhagat (1988) understand that this practice transfer in the organizational field will concern two main issues. The first addresses compatibility (in the sense of similarities found in the organization's negotiation rules of engagement, in structural conditions and established communication paths) of organizational culture among the different units analyzed and the recipient unit's absorption capacity (the unit's capacity to contribute towards the creation, adoption and diffusion of innovation).

The case analyzed under this paper mirrors a quite peculiar situation. For the external observer, cultural differences (in their broadest sense) between Chinese and Brazilian organizations are clear. However, despite the perceptible difference concerning aspects of the Chinese and Brazilian corporate culture, such fact would scarcely affect the transfer of technological organizational practices – except for their normative matters, as approached in the previous section. This conclusion is justified by the Chinese business behavior vis-à-vis the Brazilian subsidiary. First, the group's innovation and technology are not transferred to the Brazilian unit. Second, the subjection of the Brazilian unit to its Chinese parent is excessively heavy; the former has no maneuvering space as concerns technical and technological development. Third, Chinese executives also stated that the difference between the technical and technological standards used in Brazil for the production of air conditioning units and those used in China is substantial, which hinders the availability of Brazilian skilled labor to run their production lines. To abridge this gap, they resort to expatriation of headquarters employees.

More important than the incompatibility of organizational principles and the low absorption capacity of the recipient unit, the facts reported during the interviews indicate a lack of effective strategic orientation by the parent to transfer the already cited organizational practices (mainly those related to technology and innovation). Evidence of this is the non-existence of an R&D center in Brazil, the employment of Chinese labor to carry out strategic technical and technology-intensive activities and the strong relation of the subsidiary towards its parent. This ensemble of factors prevent the development of the much-commented organizational culture compatibility at the subsidiary, or the development of absorption capacity, entailing the development of labor capable of creating, adopting and disseminating innovation from or to the group.

4.2.3 Relational Context

The strength of social and organizational contexts notwithstanding, they do not suffice to provide a proper understanding of the organizational practice transplantability process and their consequent success. It is still important to asses the relational issues between the recipient unit and its parent. Resorting to foundations deeply anchored in the institutionary view of the relationship between parent and subsidiary, Kostova (1999) sustains that the transfer of organizational practices will only reach the desired success should this relationship be harmonious. Two main actors should be analyzed. The first is the subsidiary's basic employee group, i.e., the executives belonging to the recipient unit and responsible for the implementation of organizational practice. The second actor is the expert group responsible for the transference of practice and knowledge in areas relevant to the parent.

These groups of actors will be related such as to favor or hinder the transfer of organizational practices and technologies. Kostova (1999) understands this self-same relationship will develop in two specific arenas. The first concerns a transfer coalition involving factors such as the engagement between subsidiary and parent; executive identity towards the parent and towards the practice/technology transferred by it; and the confidence relationships built among the parties. The second relationship arena will depend and be developed according to the level of subsidiary dependence of the parent. The level of dependence between the parties will define this isomorphism level (DIMMAGGIO; POWELL, 2005) to which the subsidiary must conform. This fact imposes direct consequences, according to Kostova (1999), upon the degree of subsidiary dependence of its parent in terms of technology, capital, expertise and managerial practices, among others.

Addressing relational issues is an especially sensitive issue within the Chinese organization and its Brazilian subsidiary. First, by analyzing the subsidiary's organizational structure and its personnel make-up, we find that the two key groups for the analysis of this segment are essentially comprised of expatriated employees. Key executive positions as well as positions involving higher expertise complexity are predominantly taken by Chinese professionals. This fact favors the transfer of the already mentioned organizational practices and technologies given the group's high affinity towards the parent – mainly when the context of the transfer coalition is brought under the lens, and which depends on factors such as commitment, identity and confidence towards the parent. However, despite the good compatibility among the key groups in action under this transfer coalition block, the implementation of practice and its institutionalization in the remaining layers of the organization chart is quite frail and often hindered. The imposition of parent practices upon the subsidiary without the previous identity and confidence development process at the Chinese expert group and Brazilian executives, as reported by the latter, prevents the effective occurrence of the organization practice institutionalization, as sustained by Kostova (1999).

Another sensitive field of analysis, and one not enabling major extrapolations, is related to the second arena sustained by Kostova (1999), which addresses the level of subsidiary dependence of its parent. Despite an initial independence discourse, in practical terms such independence only became evident as concerns the manufacturing unit's practical and routine actions – such as, for example, decisions relating to amounts produced, latitude to negotiate with Brazilian customers, Brazilian market price formation, etc. However, in strategic and innovative terms, all decisions are directly under the baton of the group's senior executives, sitting at the Chinese headquarters. According to the general director's report, the subsidiary is entirely dependent upon HQ orientations, where the basic expert body is installed (from marketing to R&D), especially on concerns such as technology and design.

Extrapolating the facts, the discourse of Brazilian and Chinese executives alike signal towards the imposition of practices and orders stemming from the Chinese headquarters. The executive body, mainly composed of Chinese individuals, is much more intent upon seeking their managerial practice isomorphism to the Chinese group model rather than the Brazilian production model. The main signal of this conclusion is the constant debate promoted by Chinese executives in the sense of criticizing Brazilian practices and exalting Chinese practices. Nevertheless, this process, as voiced by the Chinese executives, was proven harmful to the success of the business as a whole in Brazil. Upon adopting the Chinese production mode in a Brazilian institutional environment, the problems of institutional duality become more intense, in which the subsidiary is incapable (by imposition of Brazilian institutions) of conforming to the Chinese management model and to the Brazilian production and management model. Basing on the explanations offered by DiMaggio and Powell (2005), the escalation of this conflict precludes the effective transfer of organizational practices and technology between the two countries and, moreover, prevents business success as a whole.

5 FINAL CONSIDERATIONS

Resorting to the empirical organizational practice transfer analytical model as sustained by Kostova (1999), this paper intended to analyze the institutional and transplantability process from a Chinese multinational to Brazil. As upheld by Kostova (1999), the success of organizational practice transfers will be effective only if social, organizational and relational contexts favor the implementation and internalization of organizational practice defined as strategic by the parent. Upon analyzing the case in point, the impossibility of the Chinese subsidiary being successful in transferring many of its strategic practices due to incompatibilities found in the key contexts considered becomes evident. That is, the attempt of conveying to Brazil the same managerial, technological, knowledge and market models as practiced in China and responsible for business success in the Chinese market is unfeasible to the Brazilian institutional profile. Both the implementation of different practices analyzed in this paper and their institutionalization, as sustained by Kostova (1999) are strongly hindered by the substantial differences found in the regulatory environment, by the incompatible social context and by the absence of a closer, more fruitful relationship between the Brazilian production platform and the Chinese subsidiary.

Deeper analysis unveils that the reasons prompting Gree to meet with initial failure in their internationalization process are quite germane to the forcefulness of the relationship between Chinese companies and their own institutions (parents, suppliers and government) and the scant international operations maturity they have amassed so far. The short international experience curve followed by Gree at the time of this investigation was considered by the researchers to be the most harmful factor to the effective transplantability of strategic organizational practices. This absence of international experience could be considered as an intensifying factor as concerns the difficulties found by the subsidiary in managing the conflicts of interest between the Chinese parent and the Brazilian institutions supportive of their operations in the recipient country.

Moreover, it is significant to bear in mind that this case study was written between 2008 and 2009, when Gree had only 6 years' experience in international operations. It is notable that, following field research the company prosecuted many structural changes seeking a better adequacy to international production, management and relationship standards. This is especially important when, in the past period, the unit's only concern was the quest for internal legitimacy at the parent company.

Despite the limitations imposed by single case studies comprising a low timeframe analytical capacity, this specific case is exceedingly relevant, as previously sustained, in situations where the phenomenon is recent, scarcely studied and whose variables are difficult to control. This paper seeks to collaborate with the literature on this theme precisely for the wealth of details under which the issue was handled. For the purpose of future studies, it is important that the same methodology be employed to other Chinese companies installed in Brazil and other emerging countries and, conversely, to business concerns from these countries installed in China for comparison purposes.

THEORETICAL FRAMEWORK

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Organizational culture in Russian and Chinese organizations

Maaja Vadi

Head of Institute of Management and Marketing

Professor of Management

University of Tartu, Faculty of Economics and Business Administration

Address: Narva Road 4, 51009 Tartu, Estonia, Tel: + 372 7376 323, Fax: +372 737 6312, e-mail: maaja.vadi@ut.ee

Ruth Alas

Professor of Management

Vice Rector for Scientific Affairs and Head of Management Department

Estonian Business School

Lauteri 3, Tallinn 10114, Estonia

Telephone: +372 6651346

Fax: +372 6313959

ruth.alas@ebs.ee

Organizational culture in Russian and Chinese organizations[1]

Maaja Vadi*, Ruth Alas**

*University of Tartu and **Estonian Business School

Abstract: This paper develops comparison of organizational cultures in Russia and China which have many common features. The main goal of our study is to examine the organizational culture in the two above-mentioned cultural contexts. The empirical research was conducted through a lens of task and relationship orientations with the sample of 639 employees working for 25 organizations in Russia and of 450 respondents in 18 Chinese companies, while the results reveal that in the Chinese version of questionnaire there are three and in the Russian sample two meaningful factors. We found that task and relationship orientations exist in the both of samples, while in the Chinese sample the factor called disinclination was additionally detected. Disinclination indicates behaviors and attitudes which cannot be tolerated by Chinese employees. The results indicate that organizational cultures may differ significantly in those regions despite many similarities that these countries share.

Introduction

China and Russia can be compared in regard with organizational environment from two perspectives – society in general and cultural issues. Michailova and Hutchings (2006) compare China and Russia and they point out that China and Russia are both large countries with China's 1.3 billion people constituting 22 per cent of the world's population while Russia has the largest territory in the world with 17,075,200 sq. km. In similar vain, Buck, Nolan, Filatotchev, Wright (2000) mention that similarities between Russia and China evolve enormous geographical scale, cheap labor, large potential markets to attract foreigners, and generous endowments of natural resources. They add that both countries inherited somewhat similar economic and political ideologies from their Stalinist/Maoist periods, with a common emphasis on Party control, heavy industry, high defense budgets, large industrial enterprises, heavy bureaucratic and tariff protection against manufactured imports, and subsidized public services.

Abovementioned characteristics provide an intriguing context for analyzing how these environmental issues impact on organizations. Here we tap the organizational aspect into the organizational culture concept because it gives the main points of organizational differences and similarities (Trompenaars, Woolliams 2003). Hereafter, we follow the idea that the organizational culture is shaped primarily by two major factors: the organizational task and relationship orientations (Schein, 1992). Task orientation shows estimations towards the work and towards the aim of the organization. The orientation of relations shows the human side of the organization and how much the mutual relations are valued in the organization (Vadi, Allik, Realo, 2002). The national culture (the macro level) has an important effect on managerial practices and if we want to involve the organizational level, the concept of organizational culture is helpful here because, as Smircich (1983, p. 346) has argued: "For academics, culture provides a conceptual bridge between micro and macro levels of analysis".

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Thus the main goal of our study is to examine the organizational culture through a lens of task and relationship orientations in China and Russia. It gives possibility to compare organizations in two countries what have some similarities and differences too. This is a study where we try identify specific phenomena that seem to exemplify some received theory or theories if apply the approach by Barney, Zhang (2009). Namely, we explore The Chinese and Russian management issues when comparing these. The structure of paper is organized so that the first section describes the theoretical framework of the study. The second section summarizes the empirical study, while the final section presents the discussion and implications of the results gained.

The framework for the measurement of organizational culture in China and Russia

Organizations receive form their environments four types of resources, which put significant impact on the organizational culture — human resources, information, technology, and legitimacy (Trice & Beyer 1993).

The history of research into organisational culture is the history of how a field dominated by scholars steeped in psychology and sociology has learned from cultural anthropology (Ashkanasy et al., 2000b). Discourse about organisational culture has come to be about the way an organizational context shapes the meanings and actions of organizational members.

In the context of this survey the authors see organizational culture from a functional perspective as an adaptation mechanism, which helps an organization to adapt and survive in a changing environment. This is consistent with the definition of organizational culture given by Schein (1992) that organizational culture is the pattern of basic assumptions that a given group has invented, discovered, or developed in learning to cope with its problems of external adaptation and integral integration. Trice and Beyer (1993) have also connected culture with the environment, seeing organizational culture as a collective response to uncertainty and chaos. Harrison (1995) connects organizational culture with levels of consciousness in organizations according to a hierarchical model of need satisfaction (Maslow, 1954) and distinguishes between survival, defense, security, self-expression and transcendence cultures.

Several theorists have pointed out *task-orientation and relationship-orientation of organizational culture*: Kidman and Saxton (1983) and Cooke and Lafferty (1986) focus on people versus task; Gaffe and Jones (2000, 2001) separate sociability, which is similar to relationship-orientation and solidarity, and similar to task-orientation; Harrison (1995) distinguishes between power culture, role culture, achievement culture and support culture. Roots (2002) in his monograph about typologies of organizational culture points out, that from these four types two - achievement culture and support culture - are more relevant for today than the others. The former is similar to task-oriented and the latter to relationship oriented organizational cultures.

In the context of organizational change, task-orientation could influence people’s attitudes by establishing clear goals and developing values, which could help the achievement of these goals at all levels of the organization. But achieving employee participation in the beginning is not enough; ensuring that the change process does not reverse and building more effective relationships between peers are also necessary (Landau, 1998). Relationship-orientation could influence people’s attitudes toward change through informal structures and communication (Selznick and Pfeiffer, 1978).

The following section opens the theoretical background for the comparison organizational culture in China and Russia. We focus on the following aspects.

First, the Chinese Communist Party was able to maintain central control and to avoid democratic reforms of political institutions unlike it happened in Russia. Buck, Nolan, Filatotchev, Wright (2000) propose that China and Russia have shown different behavior patterns towards foreign investors. For example, in Russia there are fewer demands for outsiders to accept responsibility for social provisions and employment guarantees, while China has always provided low country risks for foreigners by scrupulously protecting their property rights. Buck et al (2000) refer the Chinese approach to the 'gradualist' reforms, without privatization or significant democratization and Russia experienced 'shock therapy'.

Indeed, these impacts over time at an enterprise level can be considered in the short and long term. In 1978, China initiated an experiment with private ownership and opened up to the outside world (Waldman, 2004). The economic reforms Deng Xiaoping started in 1978 have increasingly introduced market forces into the socialist system. China’s emerging “network capitalism” represents a unique blend of Western market capitalism and collectivist values (Boisot and Child 1996). Several major developments have given special momentum to those changes: China entering the WTO, opening the western regions of China, building up an information network, transforming new management systems nationwide, and encouraging innovations and entrepreneurship (Wang, 2003).

Since the 1970s, fundamental transition has transformed the economic landscape of the People's Republic of China. One of the central aims of the reform in China is to improve the performance of the economy, which ultimately boils down to performance of the firm, especially the previously inefficient state-owned enterprises (SOEs) (Tan and Tan, 2003). Over the past several decades China has experienced significant changes in transforming its bureaucratic system of state planning into a more market-oriented economic regime. In Soviet period the execution of plans proposed by the government was the ultimate goal of all the work. The socialist emulation motivated individuals and groups to be performance-oriented. The socialist emulation was held at different levels, starting with the organizational and finishing with the pan-union level, while the fulfillment of plans and development of comradeship spirit were both important criteria for assessing organizations. Radical changes in the Russian economy were initiated in the end of nineties of former century.

Thus, we can propose that there is a precondition for the differences in the understanding of organizational life due to the different patterns of economic development in general. We refer on the study by Ralston, Holt, and Terpstra, Kai-Cheng (1997) where they contrast ideological and cultural aspects of different organizational environments (figure 1).

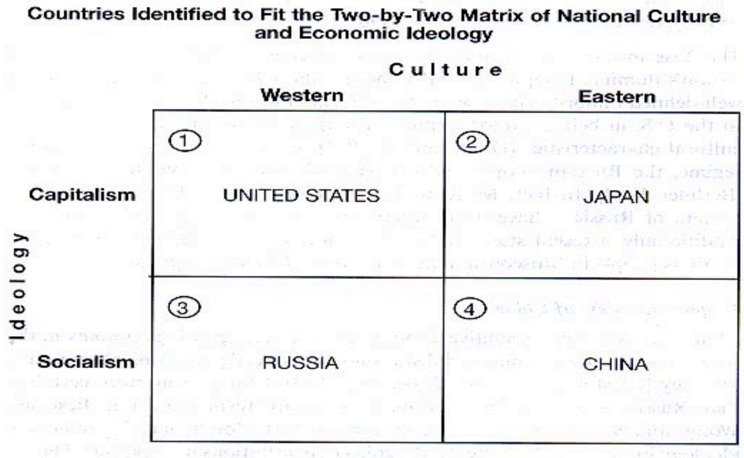

Figure 1. Two-by-Two Matrix of National Culture and Economic Ideology (Ralston, Holt, Terpstra, Kai-Cheng 1997)

Namely, Ralston et al (1997) argue that although Russia and China have the similar ideological background, the managerial work values differ along the cultural dimension because they have shown that Russia belongs to the Judeo-Christian religion that has been the primary influence in the West. The Protestant Work Ethic epitomizes the Judeo-Christian emphasis on personal achievement and individual self-worth, while China follows Buddhism and Taoism, the primary religions of the Eastern cultures. This kind of difference is also proposed by Michailova & Hutchings (2006) and they propose that differences in the essence of collectivism as well as in the extent of collectivism in the two cultural contexts lead to different intensities of knowledge sharing in Chinese and Russian organizations. Again, there is a ground to hypothesize that organizational members in China and Russia obviously have different understanding of organizational life.

The culture of organizations in the Soviet Union was found to be bureaucratic (Andréen et al. 1993:178–179; Loogma 1988). Nurmi and Üksvärav (1994:54) compared organizational cultures in Former Soviet Republic Estonia and Finland based on Trompenaar's model and found that organizational culture in Estonian organizations was Eiffel tower type. This emphasis on hierarchy makes this type of culture suited to a stable environment, but too bureaucratic for the dynamic and highly competitive environment. Communist ideology put a lot emphasis on the personnel, while the specific term –cadre- was used when talked about organizational members. "Kadrovaja rabota" (operating the cadre) indicated on the Human Resources Management. This term was a brainchild of the Soviet system and implies the military domain, thus illustrating the underlying philosophy of Soviet economic system and prevailing attitude toward recruitment. It was based on instructions from the top and subjective criteria were important in the personnel selection.

In the second half of the 1980's enterprises were gradually given more autonomy in the Soviet Union and it was legal to establish enterprises, which operated outside the central planning. These enterprises could be owned by private citizens and joint ventures with foreign ownership. According to opinions held by managers, stability started to increase by 1995 (Liuhto 1999a).

Task and relationship orientations are suitable for researching the organizational culture as they bring forth the most general aspects in the social groups. Same orientations are also analyzed in case of the leadership, group processes and conflict management. These dimensions of organizational culture are important issues in the Russian and Chinese organizational context as well. The historical background which comes from the socialist system and cultural heritage has a twofold impact on people's minds. On the one hand, the organizational task was influenced by socialist ideology; on the other, relationships counted for a lot in organizations. The risks of oversimplifying organizational culture by using such a basic model are significantly balanced in the authors' opinion by the opportunity to make quick conclusions about the existence (or absence) of general relationships between elements of organizational culture and facets of collectivism, without aiming for particular depth or attempting to analyze cause-effect relationships.

Research Method

Sample

In order to study the organizational culture empirical research was conducted in Russia and China. The Russian sample consisted of 639 employees working for 25 organizations in Russia. Representatives were selected from different organizations in order to capture a variety of organizational experience and opinions. All these organizations are located in the capital city Moscow and in the former capital Sankt Petersburg. Organizations represented the following mix: light industry producers and retailers, consumer goods distributors and retailers made the larger part of the sample with other ones being from such diverse range of industries like transportation, food service, advertising, and innovation/high-technology. Most of the organizations were from the private sector and some of them were market leaders in their sectors, while others were not as successful. Research into 18 Chinese companies was conducted in 2005–2006 with 450 respondents. The companies were from two areas: Peking and Jinan. Companies were from production, retail and wholesale, consulting, telecommunications, transportation and service sector.

Measurement

The OC estimations were measured with the *Questionnaire of OC*. This questionnaire consists of 43 statements. The respondents were asked to indicate their attitude to the items on a 10 – point scale ranging from "completely disagree" (1) to "completely agree" (10) (Vadi *et al*. 2002). The idea is that OC can be characterized through task and relationship orientations. Task orientation reflects to what extent all members are willing to support their organization. The representative statements in this orientation are: in our organization "people are proud of their organization", "positive changes constantly take place" and "people's well-being is important". Relationship orientation indicates belongingness. The characteristic statements are: in our organization "people know about each others´ hobbies and out-of-work activities", "all important matters are discussed with each other" and "in tough situations there is a strong feeling of togetherness".

The measurement tools were translated from English into Russian and Mandarin. The backward translation was accomplished and thus the statements were retranslated into English. The retranslations were compared to the original English version. In order to make the questions understandable to employees at all levels of the organizations, specific management terms were not used in the questions.

A principal component analysis of the 43 items followed by a varimax rotation was separately performed for the Chinese and Russian samples.

Results

Five factors had an eigenvalue above 1 for the both samples but the shape of the scree-plot suggested the three-factor solution for the Chinese and two-factor solution for the Russian sample (figure 2). These account for 45.5 % and 37, 7 % of total variance, respectively for Chinese and Russian sample. Items not loading highly (greater than |.30|) on any of the three factors or loading approximately equally on more than one factor were dropped.

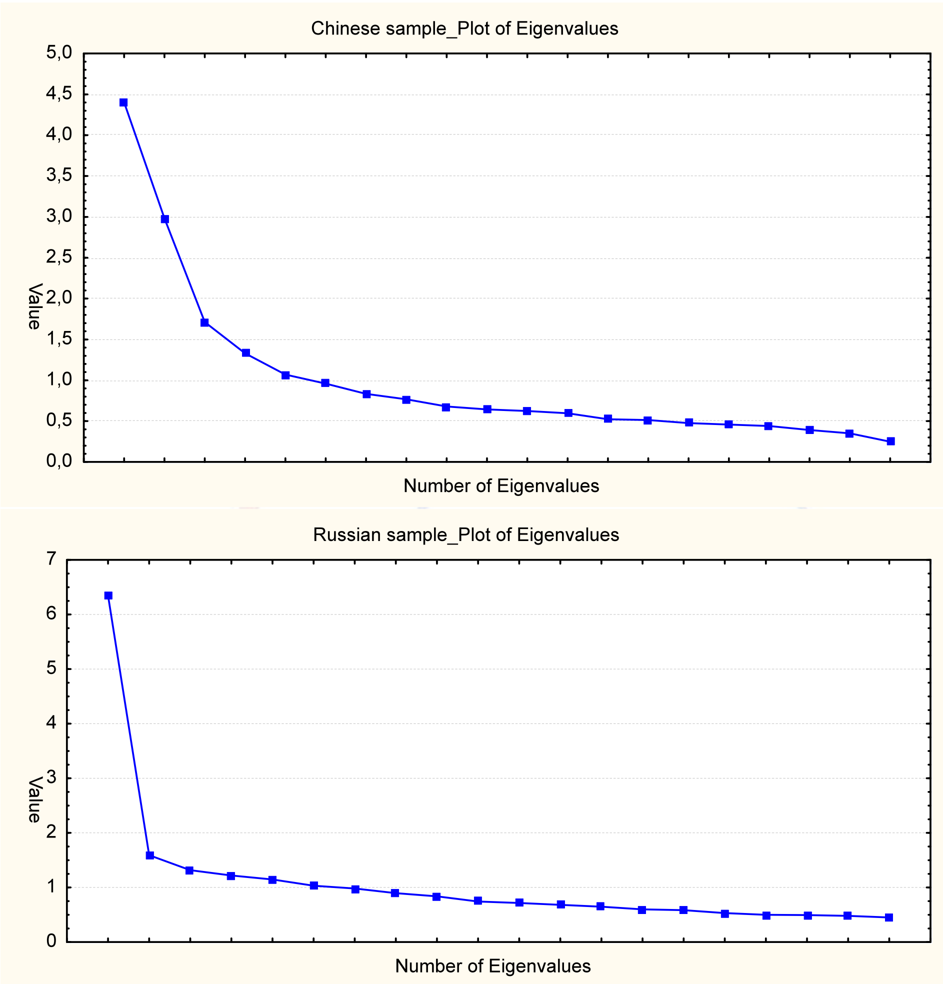

Figure 2. Plots of Eigenvalues.

The plot of factor loadings was also computed for the both samples (Figure 3). These plots confirm that the factor structures of Chinese and Russian sample have different shapes. We see three assemblages on the plot reflecting factor analysis of the Chinese data, while the Russian data form clearly two assemblages. Thus, there is a ground to accept that the similar questionnaire reflecting the task and relationship orientations of organizational culture shows different issues in the Russian and Chinese organizations. We found that task and relationship orientations are present in both samples, while in the Chinese sample the factor called disinclination was additionally detected.

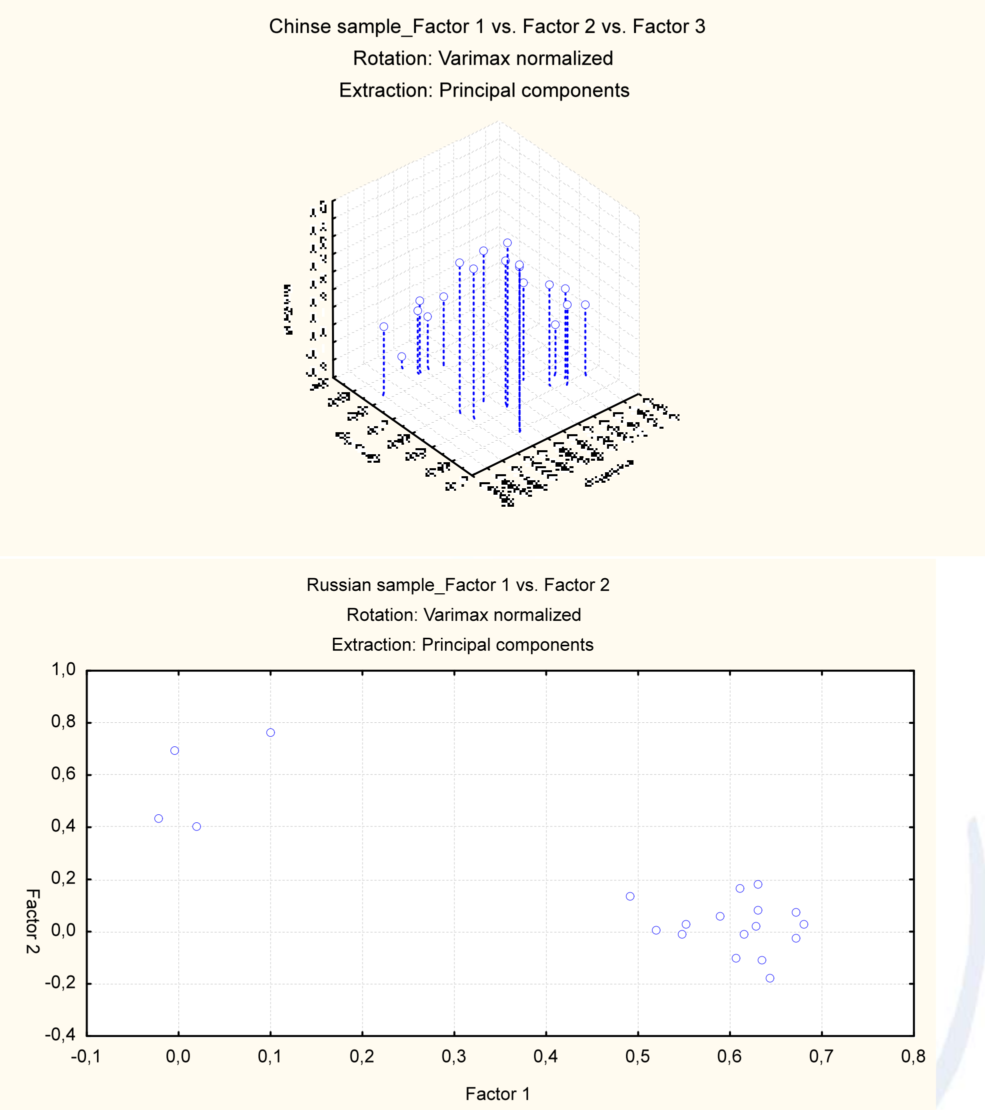

Figure 3. Plots of factor loading for Chinese (above) and Russian (below) sample.

The Chinese version of the measurement tool evolves three aspects according to the contents – task, relationship, and disinclination orientations (table 1). The following statements[2] were referred to task orientation: *employees are proud of the own organization*, *strong competitive consciousness among the stuff, the employee's work are recognized, tradition is important, employees' welfare issues are put into important position, be good at dealing with personal relationship.* We argue that abovementioned statements reflect the positive attitude towards organizational task, while the relationship orientation basis on the following set of statements: *a lot of entertainment activities, people have mutual polite communication, people have good mood, all the important issues are discussed openly, amicable management style is accepted,* and *many people have worked together for a long time.* Disinclination orientation explains employees' feelings and especially negative attitudes towards their job and its context. Here are on the scene statements as p*eople feel embarrassed when talk about their job, people are not willing to their own job, the status symbol is reduced to the minimum, employee's personal requirement are more important than organizational goals.*

Table 1. The results of factor analysis: the Chinese sample

[2] Statements are taken from version of the backward translation of the questionnaire.

Factor Loadings (Extraction: Principal components) China

	Factor 1	Factor 2	Factor 3
The employee's work are recognized	**0,78**	-0,03	0,11
Be good at dealing with personal relationship	**0,72**	0,08	0,08
Employees are proud of the own organisation	**0,66**	0,03	0,23
Strong competitive consciousness among the stuff	**0,65**	-0,03	0,15
Employees's welfare issues are put into important position	**0,65**	0,10	-0,02
Employee can keep in order when faces trouble	**0,57**	0,04	0,26
Tradition is important	**0,48**	0,19	0,26
People are not willing to their own job	0,02	**0,79**	-0,23
No one is afraid of making mistake	0,13	**0,68**	-0,01
The status symbol is reduced to the minimum	0,08	**0,68**	0,10
People feel embarrassed when talk about their job	0,06	**0,68**	0,07
Employee knows each other's way of receation	0,22	**0,65**	0,10
Employee's personal requirement are more important	-0,24	**0,64**	0,09
People have good mood	0,15	-0,23	**0,64**
People have mutual polite communication	0,15	-0,22	**0,63**
Many people have worked together for a long time	0,25	0,03	**0,63**
A lot of entertainment activities	-0,00	0,16	**0,56**
Amicable management style is accepted	0,02	0,07	**0,56**
All employees are evaluated	0,18	0,17	**0,55**
All the important issues are discussed openly	0,25	0,06	**0,51**

The factor analysis of the Russian version reveals two factors which we refer to the task and relationship orientations (table 2). A bit problematic is that one strong factor covers several themes but the highly loaded statements — *employees feel proud of their organization, employees are recognized for their good work, employees are well aware of the corporate goals, all employees are evaluated, positive changes are constantly taking place, employees enjoy their work* — allow us to propose that different aspects of organizational task are focused in this factor.

Table 2. The results of factor analysis: the Russian sample

Factor Loadings Russia

	Factor 1	Factor 2
Employees are recognized for their good work	**0,68**	0,03
Employees feel proud of their organization	**0,67**	-0,03
All employees are evaluated	**0,67**	0,08
Managers can be easily contacted if necessary	**0,64**	-0,17
Employees are well aware of the corporate goals	**0,64**	-0,11
Positive changes are constantly taking place	**0,63**	0,18
Employees enjoy their work	**0,63**	0,08
Issues of employees' welfare receive high priority	**0,63**	0,02
Employees have good interpersonal skills	**0,62**	-0,01
Misunderstandings are promptly attended to	**0,61**	0,17
Instructions are clearly communicated	**0,61**	-0,10
Employees know each other well	**0,59**	0,06
Employees are aware of the competition	**0,55**	0,03
Good mood is appreciated	**0,55**	-0,01
Entertainment programs are offered	**0,52**	0,00
Entertainment programs and other corporate events are popular	**0,49**	0,13
Employees are aware of each other’s pastime activities	0,10	**0,77**
All failures trigger strict responses from management	-0,02	**0,43**
Several friendship groups have emerged	0,02	**0,41**
Employees know about each other's personal matters	-0,00	**0,69**

The rest of statements transmit the similar issues, while some surprising aspects are also presented. Namely, the importance of entertainment programs was two times significantly loaded into this factor (statements: *entertainment programs are offered, entertainment programs and other corporate events are popular*). Four statements which stand for relationship orientation are the following: *employees know about each other's personal matters, employees are aware of each other's pastime activities, several friendship groups have emerged,* and *all failures trigger strict responses from management*. If to analyze the themes of the testaments we can conclude that here very personal aspect of relationships is covered, while organizational relationships were tied with the task orientation. The comparison of contents of factors shows that there are some common elements in the task orientation, while other structures differ markedly.

Discussion

Both countries China and Russia are undertaking pathways to capitalism and we hypothesized that organizational members may have different understandings about their organizational life. The measurement of organizational culture on the angle of task and relationship orientations reveals that there is significant difference between in the Chinese and Russian employees' understandings, however, there are similarities too. The study of organizational culture may open important issues for the management. For example, study conducted in China and in two former Soviet Rebuilds, Russia and Estonia, indicated importance of organizational culture in change process (Andreeva et al 2008). It was found that in cases where organizational culture had changed as a result of change program implementation, the change efficiency received a higher assessment along both parameters, than in the programs where no change in organizational culture was witnessed (Andreeva et al 2008). We can conclude some matters.

First, the importance of interpersonal relationships (comradeship) is always mentioned. (Loos 1974, Donskaja, Lintshevski 1979, Kitvel 1983). The relationship orientation was dominating and apparently people share emotions and support each other in many respects. Task and relationship orientations were detected in both Russia and China but the contents were not similar for them. Relationship orientation was for Russians related to the personal relationships and feelings, while for the Chinese employees there are issues of communication and various activities in the factor that presents so called relationship orientation. It can be construed in the light of differences in collectivism. Francesco & Chen (2004) illustrate well in their study that collectivism may have special meaning in China. Michailova & Hutchings (2006) explain these differences by saying that in China individuals tend to prioritize the group interests higher than their own and make decisions that are personally detrimental if they benefit the collective.

The China's uniqueness is the quality of highly personalized interpersonal relationships. Chinese communities have evolved their own term for such relationships and the norms of reciprocity that apply to them – *guanxi* (Child 2009). Russian context has also one specific feature *blat* (Ledeneva, 1998). In China familial relationships are replicated in work situations with managers often being called 'uncle' or 'auntie' to demonstrate the level of respect they are accorded. Russian management culture, too, is characterized by a high degree of paternalism with CEOs often being referred to as 'fathers'. The latter explanation clarifies why intraorganizational relationships were related to the task orientation. We hypothesize that collectivists see this as an organic part of organizational task.

Through changes in the macro environment, the challenge has been to internalize a new type of organizational behavior in order to operate successfully under unfamiliar conditions. Therefore, the focus of the change process has shifted from product innovation and technological change to behavioral aspects of change and to attitudes about change (Bergquist, 1993). The organizations' ability to adapt to change depends on individual employees and how they react to changes, since organizational change has been seen as an individual-level phenomenon, because it occurs only when the majority of individuals change their behavior or attitudes (Whelan-Berry et al., 2003). This leads to change in organizational culture.

So-called „disinclination" was the aspect of organizational life that did not expect to find when we started this comparison of Chinese and Russian organizations. We put this finding into the context which is described by Buck et al (2000) and they argue that China is characterized by central authority and even doubts and ignorance are perceived by central decision-makers to be a personal threat. On the contrary, post-Stalinist reforms of economic institutions were permitted by the Russian government, devolving a significant degree of decision freedom to the enterprise collective, that is, to enterprise managers and other employees. Thus, we can hypothesize that the traditions of central decision making put impacts on the employees' attitudes towards organizations in China. This issue needs more exploration in future because the understanding of processes in Chinese organizations may open up a more general picture about the developments in China.

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GROWTH STRATEGIES OF MALAY ENTREPRENEURS – CHALLENGES AND OPPORTUNITIES: A MALAYSIAN CASE

Ummi Salwa Ahmad Bustamam
Faculty of Economics & Muamalat
Islamic Science University of Malaysia

ummiabh@yahoo.com.my

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Ummi Salwa Ahmad Bustamam
Faculty of Economics & Muamalat
Islamic Science University of Malaysia

ummiabh@yahoo.com.my

ABSTRACTS

Entrepreneurship and growth are closely equated with high performance and survivability among entrepreneurs. Although much has been written about the growth of entrepreneurship, there is no single theory which can adequately explain it. Adopting a case study method, this paper includes in-depth interviews with one Malay entrepreneur to understand how he has successfully grown his business. This study is expected to contribute significantly to the wealth of academic literature in the subject of entrepreneurial business growth process. Thus, it can be regarded as a concentrated effort to provide guidance for new and aspiring Malay entrepreneurs to carefully plan their business strategies as well as the projected business growth. This study also plays an essential role to provide recommendations for policy makers to foster and encourage entrepreneurship through targeted policy initiatives by fully understanding the elements that constitute an entrepreneur and the entrepreneurial activity.

Keywords – entrepreneurial growth process, entrepreneurship, Malay entrepreneur, case study

Introduction

The subject of entrepreneurship research has been widely discussed and deliberated by many scholars from the fields of economics, sociology, economic history, psychology, social anthropology, religion, and even economic geography. It is also generally agreed that the field of small business is closely related to entrepreneurship. The importance of the manager, who is often the owner of the venture, is also widely recognized.

Growth is characteristically equated with high performance and offers the opportunity for financial gain, return on investment (ROI) and also increased chances for survival (Davidsson & Delmar, 1997; Taylor & Cosenza, 1997). Growth is also regarded as an indication of continued entrepreneurship (Davidsson, 1991). Although much has been written about growth among small businesses, Gibb and Davies (1990) asserted that there is no single theory which can adequately explain it due to the heterogeneity factor. In addition, many of the studies, which examined similar issues, had only focused on developed countries such as the UK, the US and Australia (Boardman et al, 1981; Chaston & Mangles, 1997; McMahon, 1999; Smallbone et al, 1995). Thus, there are demands for more studies on entrepreneurship in other areas, especially in the developing countries.

This paper examines one case study drawn from a PhD research that profiled successful Malay entrepreneurs in Malaysia to understand the entrepreneurial process towards business growth. It would provide a greater understanding as to how a Malay entrepreneur overcomes the obstacles and challenges that are ubiquitous in a dynamic and volatile business environment like Malaysia, and turn them instead into opportunities to grow his ventures.

The Entrepreneurial Process

The entrepreneurial process involves all the functions, activities, and actions associated with the perception of opportunities and the creation of organizations to pursue them (Bygrave & Hofer, 1991). Even though the entrepreneurial process is a complex phenomenon, this process is important in understanding the entrepreneurial growth. Kobia and Sikalieh (2010) suggested that researchers should focus on the whole entrepreneurial process. The current study is based on Ucbasaran et al's (2001) illustration of the entrepreneurial process; opportunity recognition and information search; and, resource acquisition and business strategies.

Opportunity Recognition and Information Search

According to Smith et al (2009) and Ucbasaran et al (2001), even though opportunity recognition and information search are often considered to be the first critical steps in the entrepreneurial process (Baron & Shane, 2005; Christensen et al, 1994; Hills, 1995; Shane & Ventakaraman, 2000; Timmons et al 1987), limited empirical research has been conducted about this process. Kirzner (1973) noted that an entrepreneur identifies opportunities by being "alert" to and "noticing" opportunities that are present in the market. The process of search and opportunity recognition can be influenced by the cognitive behaviour of entrepreneurs. The ability of the entrepreneurs to learn from previous business ownership experiences can influence the quantity and quality of information collected (Gaglio, 1997). Previous entrepreneurial experience may provide a framework or mental schema for processing information (Ucbasaran et al, 2001). In addition, it allows informed and experienced entrepreneur to identify and take advantage of disequilibrium profit opportunities (Kaish & Gilad, 1991). Some people habitually activate their mental schema for processing information and can notice it in the midst of an otherwise overwhelming number of stimuli (Gaglio, 1997). This may explain why the pursuit of ideas and opportunities invariably leads entrepreneurs to additional innovative opportunities (Ronstadt, 1988). Another aspect that is important in opportunity recognition and information search is network (Low & MacMillan, 1988). Studies have found that networking allows entrepreneurs to enlarge their knowledge of opportunities, to gain access to critical resources and to deal with business obstacles (Floyd & Wooldridge, 1999; Hills et al, 1997; Johannisson et al, 1994).

Resource Acquisition and Business Strategies

Studies have attempted to examine entrepreneurs with respect to their resource endowments and resource acquisition strategies. A useful starting point for this discussion is the literature on the resource-based theory of the firm (see, Penrose, 2009 (original edition was published in 1959); Wernerfelt, 1984). The resource-based theory posits that a firm's success is largely driven from resources that posses certain special characteristics. The resource-based theory is built upon the theory that a firm's success is largely determined by the resources it owns and controls (Wernerfelt, 1984). The resource-based approach (Penrose, 1959; Wernerfelt, 1984) is attracting the attention of a growing number of researchers from a variety of perspectives (for example, see Mahoney and Pandian, 1992), with the mainstream of strategy research among them. Distinctive competencies (Ansoff, 1961) of heterogeneous firms, for example, are a fundamental component of the resource-based view. Based on the resource-based theory of the firm, Chandler and Hanks (1994) suggested that businesses should select their strategies to generate rents based upon resource capabilities. They argue that when there is a synergy between the available resources and the venture's competitive strategies, the firm's performance should improve. A firm selects its strategy to generate rents based upon their resource capabilities. Firms have a strong basis for competitive advantage if they have the ability to evaluate effectively the resource position of the firm in terms of strengths and weaknesses (Andrews, 1971). The firm's unique capabilities in terms of the technical know-how and managerial ability are important sources of heterogeneity that may result in a competitive advantage (Penrose, 2009). According to Ramanujam & Varadarajan (1989), the resource-based view contributes to the large stream of research on diversification strategy in four areas. First, the resource-based approach considers the limitations of diversified growth (via internal development and mergers and acquisitions). Second, the resource-based view considers important motivations for diversification. Third, the resource-based approach provides a theoretical perspective for predicting the direction of diversification. Fourth, the resource-based view provides a theoretical rationale for predicting superior performance for certain categories of related diversification.

Challenges and Obstacles to Business Growth

Despite the importance of growth for the SMEs, there is a wide recognition in the literature about the obstacles and barriers faced by the SMEs (Churchill & Lewis, 1983), preventing them from growing further and putting them in a critical position to face new challenges that arise. Some of the existing literature (e.g. Small Medium Industry Development Corporation (SMIDEC), 2006; Saleh & Ndubisi, 2006), highlighted many challenges facing the SMEs, such as the lack of financing, low productivity, lack of managerial capabilities, lack of access to management and technology as well as heavy regulatory burden.

In the context of this study, according to Gomez and Jomo (1997), since 1980s, the government policies tended to assist larger businesses rather than the smaller companies. Larger, politically well-connected enterprises have enjoyed better access to tenders. The size of the business and political influence interact as part of the new Malay idiom of power in contemporary Malaysia. In addition, commercial banks have also been more inclined to provide credit to large establishments. These and other problems have restricted the ability of small businesses to accumulate capital, in turn limiting their voice and political influences, and subsequently, access to government patronage. Lack of technological capacity and skilled labour, market limitations and competition have also kept their turnover and profit low, thus inhibiting their ability to grow. In addition, small Malay enterprises have to compete with companies owned or controlled by politicians who are generally assured of favourable government treatment, particularly in the awarding of licenses and contracts, and in terms of access to finance and information.

Therefore, Shukor (2006) suggested that values and attitudes, entrepreneurial skills, managerial skills and entrepreneurial characteristics are required and important for entrepreneurial success. His study was based on Malay businesses and he found that the Malay participation in the economic sector is still lagging behind when compared to non-Malays. According to him, this is due to some cultural aspects and attitudes of the Malays that obstruct their business growth. This conformed to Mahathir's (1970) argument about the Malays. He stated that the Malay culture has certain deficits that impede business growth, resulting in a poor rate of Malays' business successes. The problem of developing Malay entrepreneurs in terms of quantity and quality has been debated by many authors (Ahmed et al, 2005; Kechot & Khalifah, 1999). Most of them highlighted sociocultural and attitudinal aspects of the Malay entrepreneurs (Chee, 1992; Firdaus et al, 2009; Ragayah & Zulkifli, 1998; Shukor 2006; Storz, 1999) because they believed that those were barriers to successful business endeavours. Albeit many other authors have proposed suggestions and recommendations to assist entrepreneurship in Malaysia, but, there may be other hidden obstacles and barriers that would slow down their business journey.

Case study – a Method

This paper adopted a case study approach as suggested by Yin (2003) to gain a more comprehensive understanding and insight of the entrepreneurial process towards business growth by Malay entrepreneurs and also to attempt an idiographic explanation (DeVaus, 2004) for the whole case. According to King (1994), in order to explore the underlying (subjective) reasons for entrepreneurs' particular decisions, which in some cases progressed over a number of years, the semi-structured qualitative approach is deemed to be appropriate. This approach enabled the researcher to address the process-based issues concerning why events happened and how they unfolded over time (Denzin & Lincoln, 1998). Nevertheless, it was recognized that the interview sessions with the entrepreneurs themselves did not, in a true sense of the word, constitute the case study research and therefore, the interview data were compared with information from annual reports and company's publications, regulatory authorities, and magazine and newspaper articles. This was undertaken to enrich and strengthen the evidence for the case study (Yin, 2009) and to support the validity of the findings.

In the context of this paper, an in-depth case analysis was conducted on one of the small businesses operating in the gelatine industry in Malaysia. The company's ten years of growth was tracked based on the turnover and total fixed assets. The research was divided into several stages. First, the gelatine industry was reviewed to identify the key players. Several leading companies were approached and their cooperation was sought to ensure the success of the project. Then, an extensive review of the company's documentation for the 10 year period, beginning from its foundation to date, was undertaken. This documentation included its annual reports, financial reports, newspaper interviews, informal records of managers, etc. The current CEO of the company was then interviewed to validate the content of the secondary data and to explore his thoughts on the growth and development of his company. The CEO certainly had played a central role in managing his business throughout the growth period. Therefore, he had a deep understanding of how the business developed and expanded. The interview was tape-recorded and transcribed before it was translated (interviews was conducted in the Malay language, Bahasa Malaysia) and the data systematically checked by the author for patterns. Based on the primary and secondary data collected, the author conducted narrative analysis. The actual name of the entrepreneur and his company are kept anonymous as an ethical consideration for the study. Thus, the entrepreneur and his company are coded as E2 and HG Co, respectively. This methodology has been successfully used to study the strategy evolution of an entrepreneurial business as proposed by Mintzberg and Water (1982).

Findings - Case Study

Industrial background: the *Halal* Gelatine Industry

Consumers may not realise that many of the items that they consume contain gelatine because it is actually already a part of countless number of products in the market. Gelatine is pure protein obtained from animal raw materials which contain collagen. This natural and healthy food has excellent gelling strength but it is capable of doing a lot more. Its broad spectrum of capabilities allows it to be used in many different industries and for a variety of products (Gelatine

Manufacturers of Europe (GME) 2009, Homepage). GME is the organizer for all of the major European gelatine manufacturers. Overall, they accounted for around 45 per cent of the world's gelatine production. The GME, currently based in Brussels, was founded in 1974 as an interface between its members and the European decision-makers. In its working committees, the GME remains steadfast in pursuing its main task of ensuring the production of high quality gelatine for their customers and consumers. The global production of gelatine is more than 330,000 million tonnes annually. However, according to the GME (2009), only 1 per cent of the gelatine produced is certified *halal*[1]*l*. Currently, a majority of the gelatine is produced in Western Europe and at least 80 per cent is derived from pig skin. Another 15 per cent comes from bovines such as cows and buffaloes. While another 5 per cent is derived from the bones of bovines, pigs, fish and poultry. Due to religious concerns and adherence, some consumers may not be able to consume products containing gelatine because its sources are not deemed as *halal*. This would be gelatine derived from pigs or animals that are not slaughtered according to the Islamic requirements. The entrepreneur in this case study, coded as E2, saw the opportunity presented by the demand in the market for *halal* gelatine and established HG Co. to meet the consumers' needs.

Entrepreneurial Background

HG Co.'s establishment has opened many eyes on the strong demand for *halal* gelatine by Muslim consumers worldwide. Incorporated in 1997, HG Co. has now broadened its business activities from trading to manufacturing and distributing an entire range of *halal* products under the HG brand. The meteoric success of HG Co. gave rise to various subsidiaries namely, HG Distributor, HG Plant, HG Products and HG Industries that now form the HG Group of Companies. The person behind the successful stories of HG Co. is the current Chief Executive Officer (CEO) of the company, E2. He obtained his degree in Bachelor of Agricultural Science from University Pertanian Malaysia (UPM)[2] in 1986. After completing his degree, he worked as an Assistant Manager at Golden Hope Plantation. Later on, he moved to CIBA Geigy (M) Sdn Bhd as a Medical Representative for Malaysia's northern region. During his service, E2 was awarded the Best Sales Representative based on his excellent sales performance.

Identification of Business Opportunity

The turning point of his life came when one of the Muslim doctors he approached during his sales tenure at CIBA Geigy (M) Sdn Bhd refused to use his products. He was surprised to learn that the products he was selling and promoting at that time were not *halal*. All this while, he was under the assumption that the hard and soft capsules he was selling were *halal* since it was openly sold in Malaysia, a predominantly Muslim country. The incident left a deep mark on his consciousness and changed his life in a big way.

"I had the opportunity to talk to a Muslim doctor who informed me that the capsules I was promoting were not halal and that left an indelible impression on me."

He was curious to know the truth. This led him to conduct an extensive research on the matter and discovered that the gelatine supplied to the pharmaceutical industry worldwide was not certified *halal*. Ironically, many of the Muslim consumers are unaware of the non-*halal* content and sources of the gelatine by-products. In order to gain more information about this matter, he visited the Department of Islamic Development Malaysia (JAKIM), a Malaysian Government institution which was established to develop a progressive and morally upright society based on the Islamic principles. E2 made an enquiry to JAKIM about the status of non-*halal* gelatine being

[1] *Halal* – permissible for Muslims
[2] UPM now have changed its name to University Putra Malaysia

used in many items consumed by Muslims in the country, whether knowingly or unknowingly, and specifically for the pharmaceutical products. Their respond was that the current condition was such that it is deemed as *darurat*[3]. In the event that they could not get any substitutes for the non-*halal* gelatine, Muslims are allowed to consume these products under certain rules and regulations. Dissatisfied with the response and the prevailing situation, E2 felt that, as a Muslim, it was his responsibility to find an alternative. For him, he would either be a part of the problem or the solution. One of the vital attributes of an entrepreneur is the ability to find solutions to problems, and for E2, his entrepreneurial attributes naturally made him an essential part of the solution. As a result, he founded HG Co., a company which started by trading and distributing *halal* gelatine. It has now moved up to the next level by starting to produce and manufacture *halal* gelatine in own plant. This is a mega project for HG Co with a total investment of around RM100 million. The plant is expected to produce about 3000 tonne *halal* gelatine for the worldwide market consumption.

Searching for Information

Realizing the importance of gathering as much information concerning *halal* gelatine and capsules, E2 went on a personal crusade that saw him travelling to India, Pakistan, the Middle East and China. He finally found a reliable source of *halal* raw gelatine from Pakistan. He subsequently started the business of importing these products in 1997 to Malaysia and its neighbouring countries. According to E2, till today, Pakistan is the only *halal* gelatine manufacturer in the world, processed entirely from *halal* bovine sources. Clearly, E2 has successfully steered HG Co. into a profitable business venture and has expanded its operation from importing and distributing to manufacturing *halal* gelatine-based alternative products.

Resource Acquisition

Resource-Based View (RBV) posits that a firm's success is largely driven from resources that posses certain special characteristics (Penrose, 1995; Wernerfelt, 1984). As such, E2 utilises his tangible and intangible resources in his commitment to see his company grow. Currently, he has a factory in Sungai Petani, Kedah, which produces his company's products. Although the main operation is in the northern region of Malaysia, his marketing office is situated in Shah Alam, which is located not far from the capital city of Malaysia. He decided to separate these two important entities of his business due to cost and trade demands. According to the General Marketing Department, Mr. A, it is easier for the customers to reach them when they moved their marketing department to Shah Alam. On the other hand, the production department remains in Kedah because E2 intents to help the local community in his hometown by providing the much needed employment. Besides the establishment of the factory, machineries and logistics, E2 also developed a R&D team to come out with innovative products based on *halal* gelatine. These products are subsequently marketed using an attractive brand name that is catchy and easy to remember. To date, they are widely recognized and identified by the consumers due to an aggressive advertising and media campaign. E2 is also quite fortunate to have a wide network of clients and customers from his previous industrial background. He made excellent use of his contacts to have access to a broader base of resources, managerial talent and intellectual capabilities. This also provides a quick access to industry-related information and the opportunity to network with industry peers (Heinonen et al, 2004).

[3] *Darurat* – a situation where *haram (not permitted)* can become *halal* because there is no alternative, and harm may befall a person if he/she does not opt for the *haram*

Selection and Formation of Business Strategy

"The key to HG's success is a thorough and meticulous planning, designed around a corporate mission and vision."

E2 asserts that it is vital that the core management team also believes in his mission. The team must have in-depth product knowledge as well as an understanding of Malaysia's domestic market situation. E2's achievement is not an overnight success story. He formulated sound strategies in order for his company to be the market leader in providing *halal* gelatine to the consumers. He has developed a Quality Control Department and he personally leads the Research and Development (R&D) Department that plays an important role in the company's business growth. The Quality Control Department has established a strict quality control system for raw material, in-process, packaging material, finished products and stability samples. The Department has two laboratories for chemical and microbiology testing with staff that is well trained and has years of experience in the related areas. Both laboratories are also equipped with the most advanced instruments and equipment to enable the R&D Department to develop new and better products as well as carry out research in new product stability and packaging design.

Currently, HG Co. also is working in collaboration with University Kebangsaan Malaysia (UKM) in an ongoing research to modernise technology in the production and supply of *halal* gelatine for the food and pharmaceutical industries. The technology developed by the UKM team in the laboratory had proven successful in increasing the existing gelatine production. There is a huge potential for *halal* gelatine, which constitutes about 15 per cent of the food industry and E2 saw this as a great opportunity that would spearhead his company's growth. E2 has discovered opportunity while others do not (Kirzner, 1979). He offers contract manufacturing services – a production solution to bring other companies' products to the market efficiently if they lack the capacity to produce themselves. His product development team develops products based on their requirement and provides something extra. This niche market strategy is important to small companies such as HG Co. as suggested by Perry (1987).

Halal products are closely related to the Muslims' consumption requirement. In this regard, E2's entrepreneurship and keen eyes for expansion not only enable him to expand his market reach to the neighbouring countries, but to members of the Organization of the Islamic Conference (OIC) and the Western Asia region. This geographical expansion has contributed successfully to his company's growth (Barringer & Greening, 1998).

When asked about his future plans, E2 responded by saying that he would be focusing on his mega project which is to develop the HG Plant that would cost the company RM100 million. Once operational, the plant is expected to produce about 3000 tonnes metrics of *halal* gelatine.

"I am looking for a suitable partner. I don't really bother to make this company as a family-run business. I believe that every growing company needs a professional advisor. Once the factory is successfully running, I leave it to the professional to run the business."

According to Robson and Bennett (2000), a small growing company should gain external/professional advisor to ensure the company's growth. The external advisor will inject new capabilities to the company in terms of managerial resources and business strategy. With a modest start from a small room in his own house, E2 currently employs about 110 skilled workers. The company keeps growing along with the increase in terms of the number of employees it has.

Obstacles and Challenges to Business Growth

Rivalry and stiff competition are all part of a business' ups and downs. For E2, his first attempt to find an alternative for the non-*halal* gelatine has opened his rival's eyes on his company's ability to supply the product to the market. His own business journey has not been smooth sailing and was fraught with many challenges and difficult incidents. One of the more unforgettable incidents was when his factory was burnt down not once but twice within a very short period. E2 took it all in his stride and used that experience as a lesson in perseverance.

"Our store was burnt not once but twice in just eight month's time. We have to struggle a lot since I did not take any insurance before."

These unfortunate incidents have made him to be more aware of any possible dangers that may come his way. He became more proactive in protecting his company by buying extensive insurance coverage and providing security for the factory. He also makes it a point to know the background of the people whom his company are dealing with. There are relatively less studies on risk management among the SMEs (Herbane, 2010) and how it should be prioritised as a way to help them recover from any damages, especially during this uncertain time. In terms of financial constraints, E2 faces challenges to convince his prospective venture capitalists of his mega project. He emphasizes that it is vital to build a *halal* gelatine plant as a long-term investment, not only for HG Co. but also for Malaysia if it intended to be one of the *halal* hubs in the world.

Growth Orientation

HG Co. is the sole importer, manufacturer and distributor for *halal* food and pharmaceutical grade gelatine, hard gelatine capsules and gelatine soft gels for the local market as well as China, India, Turkey, Sri Lanka, Canada, United Arab Emirates, Brunei and Indonesia. To date, HG has produced 28 wide ranges of products from industrial, consumer, health and neutraceuticals products. In November 2008, HG Co. was appointed by the Islamic Corporation for the Development of the Private Sector, a subsidiary of the prestigious Islamic Development Bank, Jeddah, to be their consultant for a gelatine and capsule project in Saudi Arabia. HG Co. has also received the *halal* certification from the Indonesian Council of *Ulamas*' Assessment Institute for Foods, Drugs and Cosmetics (LPPOM-MUI) and Islamic Central Committee Office of Thailand (ICCT).

E2 mega plan is to build a plant to produce *halal* gelatine which is at a critical stage at the moment in terms of a steady supply. He is going to employ the vertical integration strategy which starts from the manufacturing of the *halal* gelatine to the distribution of the end-products to the customers. This would provide a strategic value chain which in turn would lead to a positive impact on his company's growth. As previously mentioned, E2 asserts that he may consider to use the service of a professional consultant to assist him in managing and expanding his business. Furthermore, he does not have any qualm about getting an external venture capitalist to invest in his company because to him, the most important thing is to ensure the availability of *halal* gelatine to Muslim consumers worldwide.

Conclusion: Lessons & Implications

This case study demonstrates a number of lessons which differentiate E2 from other Malay entrepreneurs and are described as follows:-

1. **Risk management**

   Risk is inherently part of strategy that needs to be measured in terms of organizational objectives (Dickinson, 2001). Hence, risk management is vital for company's growth performance. However, according to Herbane (2010) studies that focus on risk management among SMEs are rare (for example, see Pearson, 1992). For E2, the company's factory burnt tragedy has taught him a specific lesson about risk management. Prior to the fire that had destroyed his factory, he did not realize the importance of buying an insurance coverage for his business. This may be due to the lack of information about insurance or may be due to the risk-propensity which entrepreneurs tend to possess. In this case, a risk management plan would actually help small business entrepreneurs to pursue moderation risk in business, in particular for the Malay entrepreneurs who are vulnerable in entrepreneurship field.

2. **Religious obligation – *fard kifayah***

   Fard Kifayah is a collective obligation which must be executed by the Muslim community. However, not every Muslim has to carry out the obligation because once it was done by others, the obligation is considered as fulfilled. In E2 situation, he became involved in the *halal* gelatine business because of his obligation towards Islam and the Muslims. He believes that it is a *fard kifayah* for him to solve the problem of producing and distributing *halal* gelatine to the world. He is very concerned about the matter because he is in the position to make a change and if he did not take any action to solve the problem, who else will? E2 is certainly committed to his decision to venture into the *halal* gelatine industry, of which no other Malay entrepreneurs had dared to make the first step. There are plenty of other *fard kifayah* which can be fulfilled by Malay enterpreneurs who are alert of the religious obligation and also could be grabbed as business opportunities.

3. **Employing external advisor for business expansion**

   During the conversation, E2 mentioned about hiring external professional consultancy for his business expansion. Findings by Bennet and Robson (1999) resulted that 95 per cent of SMEs in Britain using external advice in their business operation. Although this kind of collaboration is still new in Malaysian context, studies (Robson & Bennet, 2000) found that the external advice will provide significant contribution to the SMEs growth. Therefore, it is learnt that Malay entrepreneurs should open up their mind by employing external advisor for their business expansion.

To conclude, graph 1.0 depicted the business strategies employed by E2 to prosper HG Co. as it is today. Among strategies that have been undertaken are branding, international geographic expansion, product expansion and diversification, and also vertical integration through distribution and manufacturing. These strategies were undertaken along the business journey to growth. Based on E2's entrepreneurial process which he had gone through from the day one he started his business, today, he can be proud of himself as being one of the successful Malay entrepreneur in *halal* gelatine industry, which is still in its infancy industrial stage.

This case study contributes to qualitative inquiry in entrepreneurship research which is a complex phenomenon and which could not be fully understood through statistics or numbers only. It is vital for the government to encourage more Malay entrepreneurs to independently grow and develop their business. It would certainly help to discard the negative perception about the Malays who are generally regarded as a government-subsidized community. It could also serve as a useful educational vehicle to further investigate and identify the characteristics associated with entrepreneurs from various ethnic communities, e.g. the generation of ownership, previous experience, sector operating, etc. Stories from successful entrepreneurs can be shared at the national level and can be valuable to prospective and nascent entrepreneurs, as well as scholars in the field. Also, further research could be carried out to identify the training requirements of Malay-owned firms. It is also recommended that a more effective way and solution to break the barrier of a business growth be looked into and that it should be based on a particular ethnic composition of the communities.

Title:
THE WAY OF DEFINING A REALISTIC BALANCED SCORECARD: A BUILDING PROCESS TECHNIQUE

Authors:
Bernard Morard, University of Geneva, Bernard.Morard@unige.ch
Christophe Jeannette, University of Geneva, Christophe.Jeannette@unige.ch
Alexandru Stancu, University of Geneva, stancua@iata.org

Topic:
Business Administration and Business Economics; Marketing; Accounting

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Bernard Morard
Christophe Jeannette
Alexandru Stancu

University of Geneva

ABSTRACT

This paper examines the connection between structural equation modeling and Balanced Scorecard in a Swiss non-profit organization. Using financial and non-financial data taken directly from the establishment, the paper puts forward a rational construction and analysis of Balanced Scorecard by choosing the right indicators for the right strategic perspectives. This choice is made by implementing a series of Partial Least Squares in the proposed model. In addition, the method determines the cause-and-effect chain defined by Kaplan and Norton as: the measures of organizational learning and growth will impact the measures of internal business processes which in turn will affect the measures of the customer perspective which, finally, will shape the financial measures. *It will be observed that the Kaplan and Norton model of Balanced Scorecard is different from the findings in this paper, a case somehow too general to cope with today's complex market environment. Subsequent to this, the study suggests a general approach to build step-by-step a realistic Balanced Scorecard rooted in the actual company's strategy. Finally, the proposed approach will be applied and evidenced in a detailed real case of a Swiss non-profit organization.*

INTRODUCTION

An original model of strategic management was introduced in the early 1990s by Robert Kaplan from Harvard Business School and David Norton, co-founder and president of Balanced Scorecard Collaborative Inc., based in Boston, USA. They entitled this system the Balanced Scorecard (BSC). Identifying some of the limitations and ambiguity of earlier management systems, the BSC approach offers a comprehensible direction as to what organizations should measure in order to "balance" the financial perspective.

The Balanced Scorecard summarizes a set of measures that gives top managers a rapid but complete picture of the business. The Balanced Scorecard includes financial measures that illustrate the consequences of actions already taken and it harmonizes the financial indicators with operational measures on customer satisfaction, internal processes, and the organization's innovation and improvement activities – "operational measures that are the drivers of future financial performance" (Kaplan & Norton, 1992).

One of the drawbacks of the BSC lies in its construction. Even though the authors give us some channeling points and explains us the steps for developing the BSC, the notions are quite vague and can be hard to put into operation in the organizational environment.

There are three objectives in this paper. The first objective is to combine the above notions and try to posit several assumptions for a realistic construction of a BSC using the Partial Least Square (PLS) technique. This is demonstrated with a nonprofit organization case where we have 94 performance indicators and 14 monthly periods for each. The performance indicators chosen will shape the different axes, and a rational explanation for this choice is developed. A cause-and-effect sequence will be engendered and clarifications made as to which latent variables (perspectives) are impacting and which are to be impacted. The second goal is to put side by side our method with Kaplan and Norton's BSC, proposing the reflection that Kaplan and Norton's model of BSC is a particular case of our conclusions. The final aim is to try to generate a realistic model that can be applied in the organization environment, thus modeling the concept of BSC.

The paper is organized as follows. In the next part, the BSC notions will be presented. The "idealistic" process of 4-axes construction is then empathized pursued by a logical scheme acknowledging for the identification of the number of axes as well as the number of performance indicators associated to each perspective. This is followed by a real case of a nonprofit establishment in which the PLS technique is implemented, to create a rational BSC. At last, a tentative modeling of BSC that can be implemented in an organization environment is put forward.

THE CALL FOR A NEW VALIDATION METHODOLOGY

According to Kaplan and Norton, the BSC is a management system (not only a measurement scheme) that allows organizations to identify their vision and strategy and translate into action. Therefore the BSC grants top management a comprehensive assembly that converts the company's strategic objectives into a rational series of performance measures. It delivers response around the internal company processes as well as external outcomes in order to continuously progress strategic performance and results. When entirely deployed, the BSC translates strategic planning from a theoretical task into the central point of an organization. In Fielden's eyes (1999), organizations all over the world have begun influencing the capacity of BSC for converting vision and strategy into measurable goals.

The Balanced Scorecard can control the core of the organization's attempts, indentifying and communicating the vital key concerns to managers, employees, investors, even customers (Kaplan & Norton, 1993). With the four perspectives, the BSC cut down information surplus by restricting the number of performance indicators used and forces top managers to focus on the handful of measures that are most crucial. As a result, it permits organizations to outline financial results while simultaneously observing development in structuring the capacities and obtaining the intangible assets they would need for future growth (Kaplan & Norton, 1996). The Balanced Scorecard offers top managers with the ability to build up measures that could accurately forecast the wealth and health of an organization. By allowing the ability to translate strategy into prompt and measureable actions, a BSC coordinates strategy in an organizational environmental and tap into hidden assets and information. Additionally, by linking both internal and external people with these strategies, continual learning and development can be attained (Pineno, 2002).

Nevertheless, the BSC has problems with some of its key assumptions and relationships. First of all, there is not a causal but rather a commonsense relationship among the areas analyzed. Nørreklit (2000) argues that customer satisfaction does not automatically engender greater financial results. Measuring the financial effects of increased customer satisfaction or quality improvements requires a financial computation. Sequences of action that generate a high ratio of customer value at low costs lead to good financial outcomes. But this is not a question of causality; it is commonsense since it is inherent in the concepts. As a result, the BSC makes irrational assumptions, which may lead to the expectation of performance indicators which are inarticulate, resulting in sub-optimal performance. Moreover, the BSC is not an official strategic management tool mainly because it does not certify any relationship between organizational and environmental reality (e.g. competition). Therefore, a divergence must be accepted between the strategy articulated in the actions actually undertaken, and the strategy took into account (Nørreklit, 2000).

Within this broad-spectrum environment of criticism and uncertainty, some writers (Shields, 1997; Shields & Shields, 1998) have called on management accounting researchers to make superior use of Structural Equation Modeling (SEM). Structural Equation Modeling is a statistical method that permits the simultaneous examination of a series of structural equations and may be considered as a family of techniques (encompassing path analysis, Partial Least Squares models and latent variable SEM). Nevertheless, there appears to be some agreement that all SEM models imply two aspects: first, the approximation of multiple interconnected dependent relations between variables, and second the capacity to represent latent variables in these relations while accounting for estimated measurement error associated with the imperfect measurement of variables. These techniques are specifically useful when a dependent variable in one equation becomes an independent variable in another equation (Hair et al., 1998).

An important issue to record is the necessity of a significant sample size for the majority of SEM models. A recommended rule of thumb for latent variable SEM is a minimum sample volume of 100 (Medsker et al., 1994). Moreover, it has further been suggested that a sample size of 200 may be needed to create valid fit measures and to avoid generating imprecise conclusions (Marsh, Balla, & McDonald, 1988; James & James, 1989; Boomsma, 1982; Medsker et al., 1994).

Despite these concerns, Smith and Langfield-Smith (2004) observe in one of their management researches that eleven of the 20 surveys (55%) had sample sizes smaller than 200. Even though the recommended sample size of 100 is considered the minor bound of tolerability, three of the 20 studies (Magner, Welker, & Campbell, 1996, Chalos & Poon, 2000, Abernethy & Lillis, 2001) fall below this benchmark, meaning that the conclusions pulled from these studies could be challenged.

Because of that, management accounting researchers may be discouraged from employing covariance based methods due to the considerable sample size needs, and puts forward the assertion that the technique is only suitable in areas where theory is rather strong. While these drawbacks are true for latent variable SEM techniques, Partial Least Squares (PLS) modeling offers an alternative.

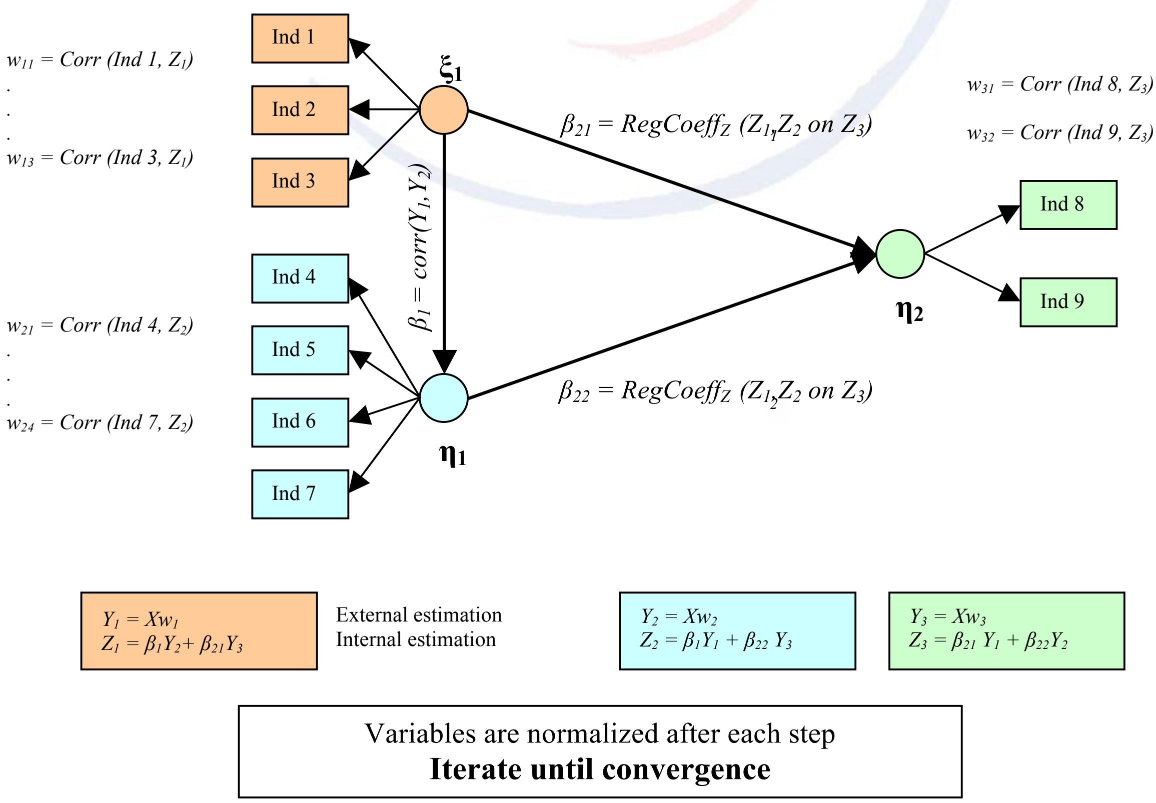
Partial Least Squares regression is a relatively recent technique that generalizes and combines characteristics from principal component analysis (PCA) and multiple regressions. It is particularly helpful when needing to predict a set of dependent variables from a (very) significant set of independent variables (i.e., predictors). It was exploited in the social sciences (specifically economics, Herman Wold 1966) but became popular first in chemometrics (i.e., computational chemistry) due in part to Herman's son Svante, (Geladi & Kowalski, 1986) and in sensory evaluation (Martens & Naes, 1989). But PLS regression is also becoming an option in the social sciences as a multivariate approach for non-experimental and experimental data alike (neuroimaging, see Mcintosh, Bookstein, Haxby, & Grady, 1996). It was first introduced as an algorithm similar to the power method (used for computing eigenvectors) but was quickly employed in a statistical environment (Hervé, 2003).

The use of PLS, in spite of its inherent restrictions (particularly that it is a limited-information technique, intended to maximize prediction, rather than fit), appears to be a way in which statistical modeling in management accounting study can move forward without the prerequisite to acquire large samples, something which management accounting researchers have traditionally found difficult. Another advantage of PLS is the technique's capacity to accommodate non-normal data, caused by less rigorous assumptions supporting the technique (Smith & Langfield-Smith, 2004).

However, there is some confusion in the terminology used in the PLS field. Trying to explain it created a way to ensure the evolution of the ideas in the PLS approach. Herman Wold first developed the concept of Partial Least Squares in his study about principal component analysis (Wold, 1966) where the NILES (nonlinear iterative least squares) algorithm was initiated. This algorithm (and its expansion to canonical correlation analysis and to particular situations with three or more blocks) was later named NIPALS (nonlinear iterative partial least squares) (Wold, 1973; Wold, 1975).

The concept of "PLS approach" is somewhat too general and combines PLS for path models on one side and PLS regression on the other. Following a proposal by Martens (1989), this article uses the term PLS for Structural Equation Modeling to indicate the use of "PLS Path Modeling" as illustrated in Figure 1.

Figure 1
Example of PLS Path Modeling



Any PLS model is defined by two main relations, one between the latent variable and its manifest variables called the outer model and the other between the latent variables themselves called the inner model.

Relation between the manifest variables and the latent variables (outer model)

Each latent variable ξ_j is indirectly defined by a group of manifest variables x_{jh}. Each manifest variable is connected to its latent variable by a simple regression:

$$x_{jh} = \pi_{jh0} + \pi_{jh}\xi_j + \varepsilon_{jh}$$

Relation between the latent variables (inner model)

The causality model drives to linear equations linking the latent variables:

$$\xi_j = \beta_{j0} + \sum_i \beta_{ji}\xi_i + v_j$$

The latent variables associated to ξ_j are split into two groups: the predecessors of ξ_j which are latent variables explaining ξ_j and the successors which are latent variables described by ξ_j.

For a predecessor ξ_i of the latent variable ξ_j, the inner weight e_{ji} is equal to the regression coefficient of Y_i in the multiple regression of Y_j on all the Y_i's related to the predecessors of ξ_j. If ξ_i is a follower of ξ_j then the inner weights e_{ji} is equal to the correlation between Y_i and Y_j (Tenenhaus & Vinzi, 2004).

The only existing software has been for many years LVPLS 1.8 built by Lohmöller (1987, last available version). Lohmöller has extended the basic PLS algorithm in several ways and published all his research results in 1989. Lately, an updated software has been developed by Chin (2001, for the last version, still in beta test however) named PLS-Graph 3.0. It includes a Windows user-friendly graphical interface to PLSX, which is in fact the original engine for PLS path modeling existing in LVPLS 1.8. Moreover, it proposes a cross-validation of the path model parameters by jack-knife and bootstrap.

Bootstrapping is the method of estimating characteristics of an estimator (for instance its variance) by measuring those factors when sampling from an estimating distribution. One standard choice for calculating distribution is the observed distribution of the empirical data. In the case where a set of observed variables are supposed to be from an independent and identically distributed population, this can be employed by building a number of resamples of the observations (and of equal size to the observations), each of which is realized by random sampling with substitution from the original dataset. The advantage of bootstrapping over analytical techniques is its great straightforwardness - it is considerably simple to put the bootstrap into practice to find estimations of standard errors and confidence intervals for complex estimators of complex factors of the distribution, such as proportions, percentile points, odds ratio, and correlation coefficients.

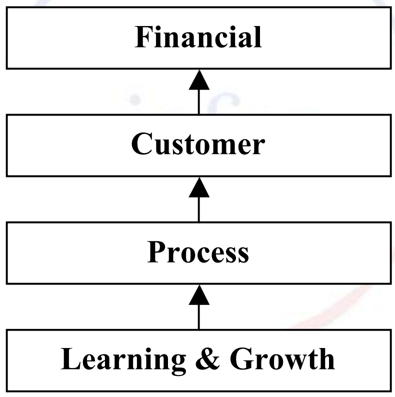
Nevertheless, a deeper analysis of the PLS Path Modeling allowed us to build our software from scratch in order to compute the path weighting scheme and the bootstrap technique validation.

CONNECTING BALANCED SCORECARD WITH PARTIAL LEAST SQUARES

Ittner and Larckner advise that "(...) decisions using multicriteria performance measurement systems should be computed using explicit, objective formula that prescribes the weights to be attached to each measure, or should be based on subjective evaluations where the weights to be attached to each measure is implicitly or explicitly chosen by the decision maker" (Ittner & Larckner, 1998). This should be taken into consideration in order to build, check and validate assumptions of causality relations between the indicators within the framework of the implementation of BSC in an organization, while following the application of a PLS technique.

The original assumptions of causality relations between the four latent variables of the Kaplan and Norton BSC, illustrated by the four perspectives in Figure 2, remain subjective. The employ of a structural equations model is recommended to show, in a more objective way, the strength of the links between the latent variables expressed by sets of measurable indicators. Certainly, whereas the selection of the perspective and the assumptions that bind them remain subjective, the model of structural equations intends "to provide a meaningful and parsimonious explanation for observed relationships within a set of measured variables" (MacCallum, 1995).

Figure 2
Generic relationship map (Kaplan and Norton 1996)



In a system of structural equations we would find latent variables that cannot be measured directly and accurately. Therefore, these latent variables need measurable variables, which are defined through performance indicators that can be directly observed and measured. The technique of structural equations is based on the principal component analysis (exploratory or confirmatory, according to the specific case) of the data to identify and validate the model of the causal relations which constitute the architecture of BSC. It is imperative to underline that one of the limits inherent in the application of a system of structural equations in the context of BSC, is the prerequisite statistics needed for the data standardization, which requires an important quantity of observations in order to confidently validate the results obtained. The collection of a great sample of data is not obvious, especially in small and medium-sized companies. This is why the application of the PLS is better in this particular case or in any case where significant data is available.

A PRAGMATIC CASE: Example of a non-profit organization

The method proposed in this research is presented using an example of a non-profit organization. To ensure data protection, the name of the organization, as well as some of its services, were camouflaged. The analyzed organization is a non-governmental, non-profit, health-services type of institution that promotes ways to inform, identify, prevent and cure in some cases a particular class of diseases.

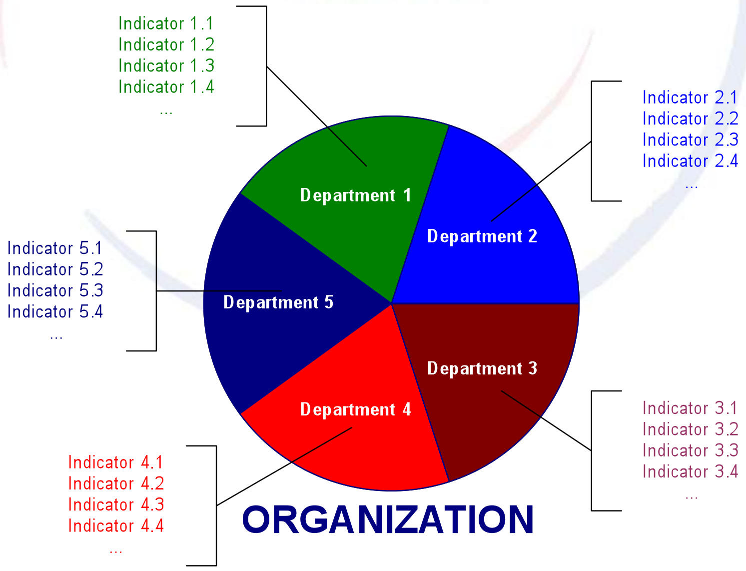
The idea of using PLS approach in order to analyze the measures of performance, translated into BSC, will permit the following:

- Enhanced decision-making for resource reallocation with the help of performance simulation of the selected strategy;
- Improved communication within the company of this performance;
- Anticipation of new strategic performance indicators.

In brief, there are five chronological main steps in our proposed methodology that will allow us to construct and put into practice a rational and optimal BSC: (1) collect data from the organization, (2) clean and prepare the final database, (3) establish and define the numbers of perspectives and performance indicators related to those, (4) build the cause and effect chain between strategic perspectives and, finally, (5) use and manage the tool for long-term vision.

As illustrated in Figure 3, **the first step** is related to gathering all historic key performance indicators throughout the company. As this might seem an easy task, it involves a tremendous time harvesting the indicators used in the company, especially creating a stable historic base. This part is very important and will considerably condition all of the following steps. A total of 148 quarterly key strategic indicators have been collected throughout the whole organization summarizing 16 time periods (quarters).

Figure 3
Identifying and collecting company's indicators



Because of the large initial database of performance indicators, **the second step** is related to the need of a cleaning of data that could contain noise, polluting the final result (Figure 4). As mentioned before, the indicators gathered are affecting the findings. Therefore the data should be characterized by (a) reliability and consistency, (b) same frequency and availability in time, (c) capability to capture a portion of the company's actual strategy, (d) information singularity and (e) easiness of use and clarity. After a rough analysis and intense top management interviews, the final database from our non-profit organization case was reduced to 94 key performance indicators. These indicators were considered to be the chief drivers in the organizational overall strategic analysis.

Figure 4
Example of cleaning and arranging the final database

Strategic performance indicator database					
	Ind 1.1	Ind 1.2	Ind 1.3	...	Ind 5.10
Month 1	x	x	x		x
Month 2	x	x	x		x
Month 3	x	x	x		x
...		x	y		x
Month 30		x	x		x

Missing variable

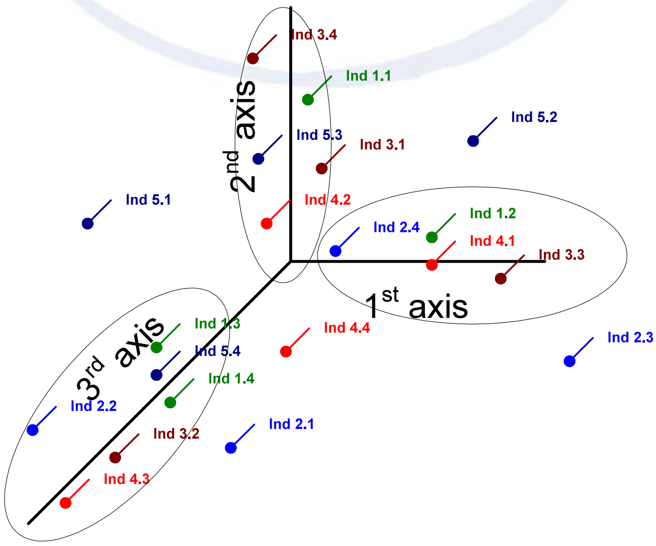
Missing variable

Unreliable variable

However, even if this commonsense managerial filter has been applied, the organization still has a considerable database which is quite difficult to manage for the BSC construction. Also portrayed in Figure 5, **the third main step** is to regroup and filter the indicators within specific axes (or strategic perspectives) that can summarize a portion of the company's information.

There are three major achievements by doing that: first is to generate groups of indicators that are correlated to strategic axes, second is to filter each axis and keep only the indicators that are strongly related and putting apart any redundant and insignificant information and third is to name these groups (or axes) by analyzing the type of information that gravitates each axis.

Figure 5
Filtering the performance indicators per strategic perspectives



There are few existing statistical techniques in order to achieve this classification. Both factor analysis and principal component analysis (PCA) can be used for this scope. Principal component analysis can be employed for dimensionality reduction in a data set by maintaining those features of the data set that contribute most to its variance and by retaining lower-order principal components and ignoring higher-order ones. Such low-order components usually capture the "most important" characteristics of the data. Factor analysis on the other hand, is a statistical method applied to explain variability among studied variables in terms of fewer unobserved variables named factors. Factor analysis helps to identify "factors" that describe a variety of results on different tests.

Nevertheless, the PCA fits better our requirements as it is suited for a non-predefined experimental model, whereas factor analysis is better for models that have already a guideline. Factor analysis is often mixed up with principal components analysis. The two techniques are connected, but different, though factor analysis becomes basically equivalent to PCA if the "errors" in the factor analysis model are assumed to all have the same variance.

As the statistical model applied (PCA) is using historical data, the result of the actual research will consequently depend on the data available at the time of collection. However, the objective of this illustration is not to develop the best indicators, which sometimes could conduct to subjectivity and personal choice, but to actually highlight the relevance of the variables available.

The software employed for the PCA computation was SPSS. After this step is completed over the whole database, one can easily remark that with 6 components, merely 78% of the total organizational variance is explained (Table 1). This percentage could be translated by the influence of the axes on the total performance: the higher this percentage, the more explanation it gives on the performance.

Table 1
Extract of Total Variance Explained

Component	% of Variance	Cumulative %
1	27.17	27.17
2	17.08	44.25
3	12.38	56.63
4	10.55	67.18
5	5.70	72.88
6	5.09	77.98

The same PCA analysis also gives the variables (indicators) influencing each of these 6 axes with the help of the component matrix determining the correlation of each variable with the selected axes. Table 2 visualizes the correlation of the first 10 variables with each axis. The closer a correlation is to 0, the less the corresponding variable influences the axis. The data will be sorted and filtered with respect to the influence is has upon the axes. In principal, a variable will be associated with the axes it influences the most (which is given by the absolute value of the correlation).

The sorting by axis makes possible to name and define them strategically. For that, the first 10-15 indicators per axis are preferable for selection, sorted by their correlation with the axis. First, this number of indicators gives a good visibility of the information grouped by the axis and second, as the indicators are sorted by their correlation, the indicators will be less and less correlated with the axis, thus their explanatory value will decrease. One can remark that this simple selection will group the indicators that are specific to one area of the company. That is to say, a simple mathematical grouping will sort out the actual areas specific to the company.

Table 2
Extract of the First 10 Indicators from Component Matrix

VAR no.	VAR name	1st axis	2nd axis	3rd axis	4th axis	5th axis	6th axis
VAR001	Total $ Income from Philo	-0.095	0.832	0.205	-0.299	0.012	-0.126
VAR002	Total Restricted Expenditures (salaries and other recoverables)	-0.675	0.415	-0.036	0.422	-0.375	-0.068
VAR003	Total Unrestricted Expenditure (remaining salaries and non recoverable operational costs)	-0.729	0.287	0.188	0.526	-0.141	0.085
VAR004	Total No of projects	0.671	0.447	0.166	0.315	-0.316	-0.047
VAR005	No of Task Force Members	0.453	-0.479	0.256	-0.516	0.116	-0.147
VAR006	Training grants	0.472	0.036	-0.666	-0.24	-0.229	-0.016
VAR007	No of advocacy interventions	0.036	0.353	-0.683	0.082	-0.02	0.521
VAR008	No of experts recruited	0.426	0.758	-0.227	0.012	0.17	-0.094
VAR009	Total no of Task Force Members	0.783	-0.007	0.285	0.16	-0.237	-0.355
VAR010	Total no. Of Expert Panel Members / Experts Recruited	0.863	0.231	-0.087	0.071	-0.115	0.13

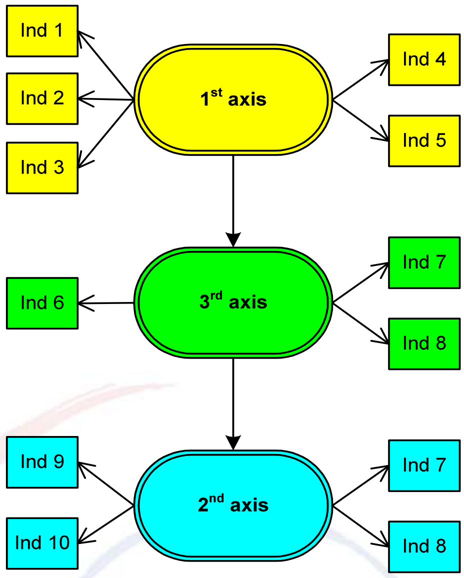
That being done, one still needs a small grooming of the data by removing those indicators which would not sufficiently explain the definition given of the axis. Though this step it is not mathematically justified, it is mainly intended to clear certain data that is not rigorously exact and would pollute the definition of the axis. The exclusion of the variable must be well explained in light of the strategy for defining the statistical axes. In any economic environment (which by definition is uncertain) it is rather difficult (even impossible) to find only the indicators correlated to the perspective in the cause. Statistically speaking, several indicators could be highly correlated to one axis. However, from a practical point of view these indicators do not represent the axis and will corrupt the final result. These indicators should not be selected as being representative for the final model as they do not describe the definition of the majority for that axis.

However, due to a very low correlation of indicators with the final axis on one hand and inconsistency in explaining the indicators linked with this axis on the other hand, it has been decided to completely remove the 6th axis from this analysis. With only five axes, one can notice that the total variance of the company is explained to almost 73%, being more than enough to extrapolate to the overall strategy of the organization.

In order to be able to control and understand the final model, to keep a certain precision of the axes and leaving aside indicators that will not bring in much explanation value, the final number of indicators per axis should not exceed six or seven. At the end of this third step, the following strategic perspectives have been identified: Quality, Learning and Growth, Internal Processes, Finance and External (Stakeholder) Impact each of them with 4 to 7 explanatory variables as explained in the next step.

As illustrated in Figure 6, the **fourth major step** in finding out the actual strategy of the organization is to implement a PLS Path Modeling regression on the final and selected strategic perspective. To find out the most viable cause-and-effect chain between the axes, all possible valid connections between the axes should be analyzed. The most stable PLS model from all of the above combinations is considered to be the closed to the company's actual strategy. The stability of the PLS model could be determined using the bootstrap technique on each possible graph.

Figure 6
Exemplification of a cause-and-effect chain using PLS Path modeling

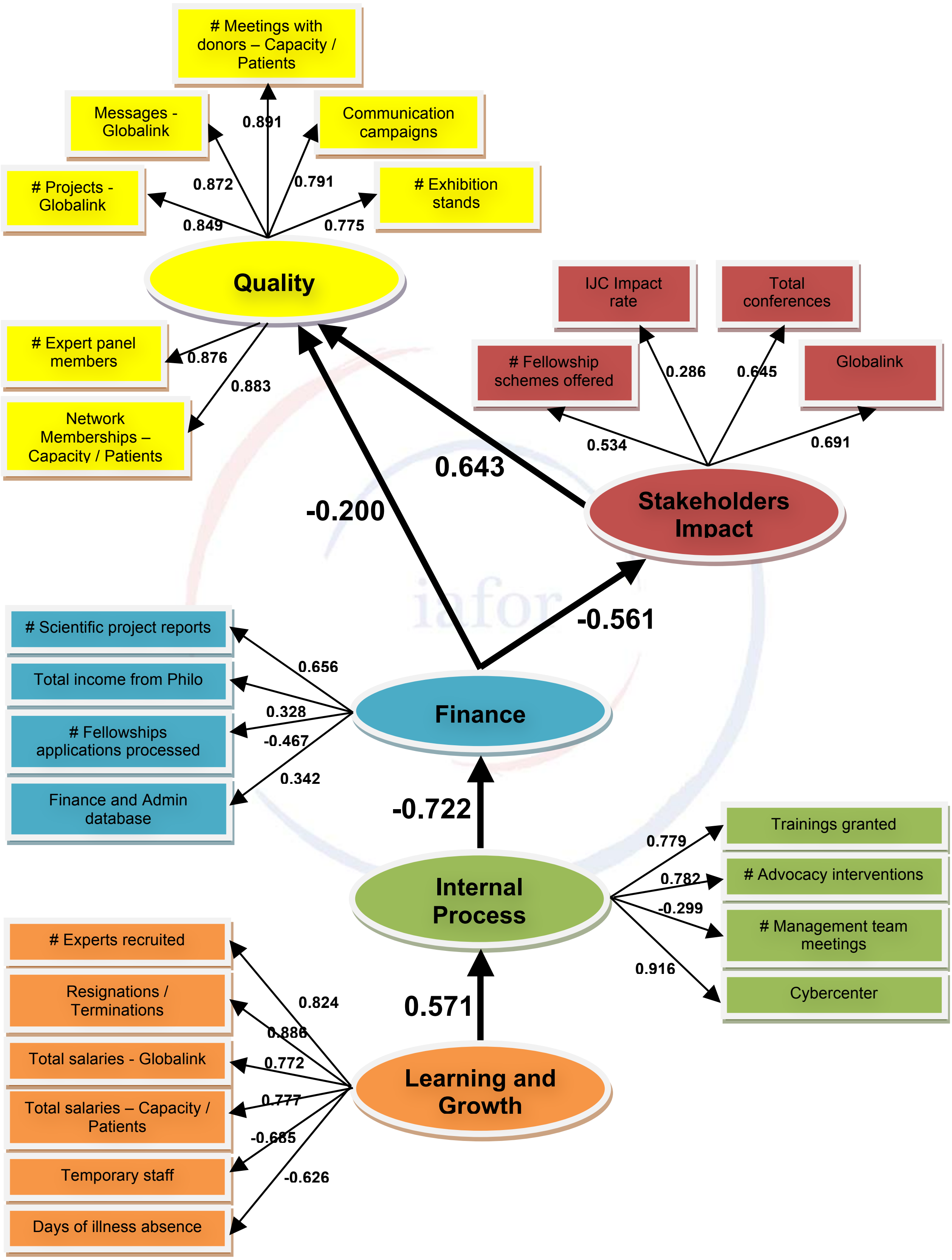


Applying this step to our specific case, all possible valid connections between the 5 axes, that is to say a total number of 52’720 possibilities were analyzed with the software created specifically for this study and the most stable PLS model was selected from all of the above combinations represented in Figure 7.

We could state that this arrangement is the optimal structure of connections between the five axes. This logical chain appears more realistic than any other model and closer to the present organizational strategic vision.

First thing to notice is that Learning and Growth and Internal Process perspectives are situated at the bottom of the chain, similarly to the original Kaplan and Norton BSC, where the measures of organizational learning and growth will positively impact the measures of internal business processes. However, the Internal Process perspective negatively impacts the Finance one. This is explained by two reasons. First, by analyzing the performance indicators from the Internal Process axis (trainings, advocacy interventions, Cybercenter), it is rational that more stress is put into it the more financial indicators are impacted. Second, it was well known that the organization is facing poor financial management since several years. Moreover, Finance perspective also negatively impacts both the Stakeholder and Quality axis. This means that when more focus is placed over organizational investments a compromise is made to the other axes. Realistically, the major stakeholders were unhappy with the quality offered by the organization, taking into consideration the investments propelled recently. It should be also noticed the positive link between the stakeholders versus quality perspective. Indeed, the more emphasis is placed on fellowship scheme offered, external conferences and Globalink (one of the main services offered by the organization), the more positive influence is granted to Quality.

Figure 7
BSC's cause-and-effect chain using PLS approach (with 16 quarterly time periods)



When it comes to model validation (Table 3), the overall figures are relatively good, assessing in a good way both measurement (outer) and structural (inner) model. As a general thumb, the Average variance Explained (AVE) should be above 0.5 (Chin, 1998) and Composite reliability greater than 0.6 (Werts, Linn, and Jöreskog, 1974) in order to accurately validate the outer model (measurement model). One can remark a poor validation for the Finance perspective, but this could be partially explained by the 3 indicators that have quite low loading factors (0.328, -0.467 and 0.342 respectively).

Table 3
PLS model validation criteria

	AVE	Composite reliability	R-square	Redundancy index
Finance	0.218	0.191	0.522	0.112
Learning and Growth	0.587	0.605		
Internal Process	0.537	0.719	0.396	0.161
Quality	0.721	0.947	0.598	0.131
Stakeholder Impact	0.515	0.629	0.354	0.100

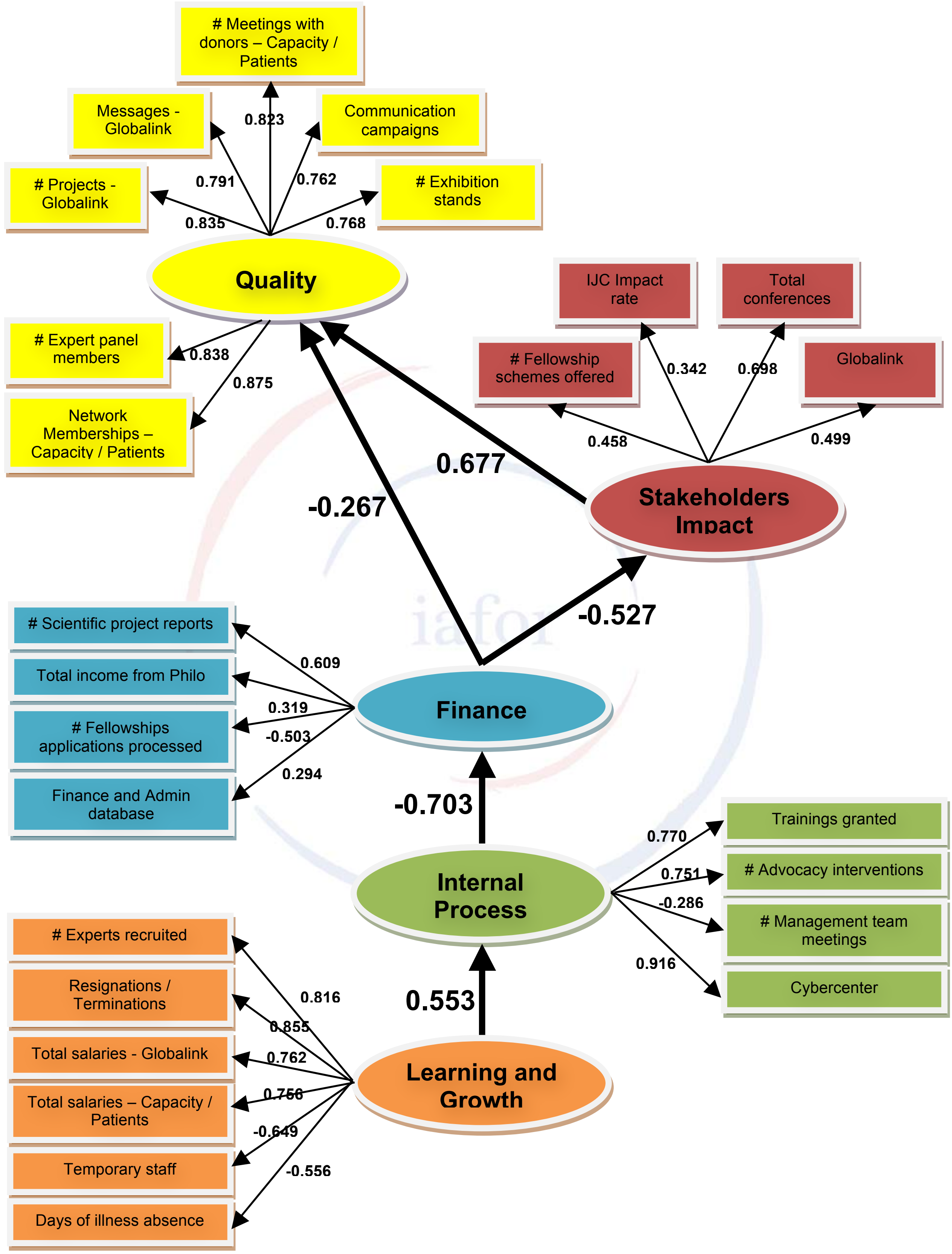
As for structural model assessment, the best gauge to use is the R-square level. Values of 0.67, 0.33 and 0.19 are considered to be strong, moderate and respectively weak for the inner model valuation (Chin, 1998). The R-square have acceptable values for Internal Process and Stakeholder axes and substantial levels for Finance and Quality axes, altogether validating in a satisfactory way the inner model.

As noted in the first part of the study, the inner and outer relations are based on structural equations. Therefore, behind each PLS Path model lies equations that explains the relations between indicators with the corresponding axis (outer model) and between the axes or strategic perspectives (inner model). The **fifth major step** is to apply these equations in order to study the relations between the items for the long term. From a practical point of view, there are significant advantages by doing that:

a) analyzing the variance of one (or several) indicators to the whole model;
b) forecasting the strategic changes by looking at the relationships between the axes;
c) the direct and indirect changes needed for an important change in the company strategic vision;
d) simulate the impact of resources allocation decisions on the strategic performance (why not substituting the budget with this approach for next years);

Exemplifying this step with the current pragmatic case, we were able to reproduce the PLS model with 4 additional datasets (one year). Although the fourth step has been completely redone, no major changes have been highlighted in the current strategy, as one can easily remark from Figure 8. The positive aspect of this finding is that the methodology proposed is further confirmed emphasizing the stability of our optimal model. However, on the negative side, we observe no key adjustments taken by the organization in order to recalibrate to the actual global crisis situation, even if a complete proposition has been made, based on the PLS analysis and in collaboration with the top-management. In addition, this outcome highlights the fact that a change in an organization strategy cannot be done in a rapid and unreflected way. Moreover, one has to keep in mind that a non-profit organization cannot be revolutionized or radically transformed as a commercially-driven company might be. Nevertheless, this example reinforced our findings posed in the beginning of the study.

Figure 8
BSC's cause-and-effect chain using PLS approach (with 20 quarterly time periods)



CONCLUSIONS AND REMARKS

The key part in the PLS technique is the choice of the axis and of the corresponding performance indicators. If the aim of the study is the strategy, then it is necessary that the key performance indicators describe it well.

This leads us to the decision to filter out the essential constituents for defining the strategy with respect to the chosen level of analysis. Undeniably the measures of the strategy for an organization or a sector do not have the same performance indicators as one of another sector (e.g. manufacturing company).

The research goal of this study was to develop and empirically validate a comprehensive research framework that bridges Balanced Scorecard model and Structural Equation Modeling approach and promotes a state-of-the-art understanding of factors underlying, in order to better manage and control the corporate performance.

The first important step towards this objective was the development of a common frame of reference that harmonized hitherto conflicting theoretical assumptions related to Balanced Scorecard ease of implementation. Based on this foundation, we proposed a framework for strategic analysis embracing three major concepts. The proposed model:

1. addresses the problem of strategic vision of any company and translates the current strategy into a easy-to-use structure for better integration, communication and long-term management;
2. highlights the utmost performance indicators that have the capacity to capture the most relevant information from the company, information that is strongly linked to the actual objectives the company is aiming for;
3. assembles distinct strategic perspectives that summarizes company information in a convenient way, in order to generate an all-inclusive representation driving organizations in their road to success;
4. establishes the best relations between strategic perspectives in a cause-and-effect link that emphasizes the interactions taking place at the strategic level, helping in this way to better understand and spotlight the company's advantages and weaknesses;
5. overcomes the static character of prior models dealing with some of the dynamic evolution over time by implementing mathematical equations between performance indicators and the strategic perspectives, improving the forecast and control of the main elements within a company.

Having established the strategic research framework, we attempted to empirically test the proposed model in the context of the one nonprofit organization. This approach makes it possible to simulate the impact of a resource allocation decision on the strategic performance.

The main purpose of this study has been to put in perspective the BSC in the debate between Kaplan and Norton theory and a more pragmatic approach. A strategic chart has been developed for a non-profit organization. The robustness of this model has been tested through the analysis of the links' validity among the perspectives using the bootstrap technique. With this intention, the SPSS software was used along with and a PLS software built specifically for this study. The results obtained showed that the reasoning of BSC postulated in the problems can be formalized in a rigorous way. It is thus possible to reconsider the remarks advanced by Kaplan and Norton as shown in the analysis of the case. This illustration provides, using the PLS software, a theoretical framework for a pragmatic approach. It should be stressed that the conditions necessary to arrive here are relatively constraining. In general, it is necessary to have sufficient number of indicators being used for estimating each perspective while respecting postulates such as normality or removing the strong correlation between the indicators. Then, it is essential to have a relatively viable and important sample of data. Moreover, the noted real use of BSC lies more in the diffusion and the comprehension of the strategy on all the levels within the company.

The PLS Path modeling converts the actual vision into strategic perspectives, that can be managed and observed by different performance indicators. One might argue that by using historical data, the model summarizes and explains obsolete information that it goes way too much in the past. While the supposition is correct, the model is actually describing the current strategy implemented by the organization. And not only the current one, but, as the PLS regression is more suited for maximize prediction, it also portrays the forecast vision of the organization. It is also true that these tools are applied in a moment of a significant strategic change in the company. The use of this approach allows not only understanding the chain of causality of the strategically performance, but also reinforcing intuition by “a measure of the measures”.

To conclude, we think that it would be relevant to develop a tool making it possible to formalize and to validate the strategy in a theoretical way, while using a simplified model. The PLS method suffers from a lack of theoretical base. Similarly, Kaplan and Norton's approach was strongly criticized in the literature from this point of view as well. The difficulty with which future researchers will be confronted lies in the reconciliation between the pragmatism sought by the institutions and the need for the theoretical framework.

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About the Authors:

Bernard Morard, is a double PhD in both Finance and Accounting and currently a full professor in Accounting Management at the University of Geneva, Switzerland. He is the author of numerous publications in accounting management and various financial studies in the specialized literature.

Christophe Jeannette is a Teaching and Research Assistant in Accounting Management. He is also starting up his PhD thesis identifying and establishing patterns for company's failure and bankruptcy processes. He is also the full developer of PLS software that enabled many in-house studies and researches to be analyzed and finalized.

Alexandru Stancu is a PhD in Accounting Management and is currently working in IATA (International Air Transport Association). His PhD thesis focused on the Balanced Scorecard concept and identifies new ways in building a rational management tool closer to today's organizational environment and demands, by implementing statistical methods like principal component analysis (PCA) and partial least squares (PLS).

KNOWLEDGE TRANSFER AMONG MNE'S SUBSIDIARIES: A CONCEPTUAL FRAMEWORK FOR KNOWLEDGE MANAGEMENT

Z - Other Special Topics

Hsin-Mei Lin [1] Wen Chung Hsu [2] I-Fan Yen [3*] Yi-Tien Shih [4]

[1] Associate Professor, Dept. of International Business Studies, National Chi Nan University

[2] Assistant Professor, Dept. of International Business Studies, National Chi Nan University

[3* 4] Ph D Candidate, Dept. of International Business Studies, National Chi Nan University

[3*] s97212906@ncnu.edu.tw (corresponding)

ABSTRACT

This study emphasizes the success of knowledge transfer depends on the similarity in organizational characteristics, ranging from similarity in technological capability, organizational structure, organizational culture, and strategic roles. Socialization, internalization, combination, and externalization of knowledge within subsidiaries of MNE enable MNE to enjoy better performance. Using Asia-based subsidiary of Agus, an German MNE, this study develops a conceptual framework of knowledge transfer. Our research results argued that the similarity of organizational characteristics among MNE subsidiaries is beneficial for knowledge transfer. The exchange and transfer of knowledge among subsidiaries can not only advance technical development but also strengthen competitive advantage.

Keywords: Knowledge transfer; MNEs; Organization characteristics

INTRODUCTION

Inside a multinational enterprise (MNE), subsidiaries can learn from each other and benefit from new knowledge developed by other subsidiaries (Tsai, 2002). Knowledge transfer among MNEs provides opportunities for mutual learning and peer subsidiaries cooperation that stimulate the creation of new knowledge and, at the same time, contribute to MNE subsidiary's ability to innovate (e.g., Kogut & Zander, 1992; Tsai & Ghoshal, 1998). However, knowledge is often "sticky" and difficult to spread (Szulanski, 1996; Von Hippel, 1994). How can a MNE subsidiary gain useful knowledge from other subsidiaries to enhance its innovation and performance?

Prior research has suggested that MNE subsidiaries not only hold specialized knowledge but also have the opportunity to learn from other subsidiaries (Huber, 1991). However, not every subsidiary can learn from all other subsidiaries in the MNEs. A subsidiary may want to obtain knowledge from other subsidiaries but may not be able to access it. Even though the knowledge is available, the subsidiary may not have the capacity to absorb and apply it for its own use. MNE subsidiaries require external access and internal capacity to learn from their peers. Because of their differential external access and internal capacity, MNE subsidiaries differ in their abilities to leverage and benefit from knowledge developed by other subsidiaries.

Although the organizational characteristics literature has highlighted the importance of the capacity to absorb knowledge by increasing R&D intensity (e.g., Cohen & Levinthal, 1990), much less attention has been focused on the knowledge transfer among MNE subsidiaries. Successful knowledge diffusion and integration among all subsidiaries of MNE surely necessitates a careful diagnosis of factors affecting the success of knowledge management within MNEs. The critical challenge for knowledge transfer among MNEs has received considerable attention over the last decade. Gupta & Govindrajan (2000) argued that the value of knowledge transfer in MNEs particularly depends on how subsidiaries provide access to new ideas and information of foreign markets that can be subsequently applied in other markets. Birkinshaw et al. (1998) argued that MNE subsidiaries not only hold specialized knowledge but also have the opportunity to learn from other subsidiaries.

In the past studies, the analysis of knowledge transfer from the integrated perspectives of intra-network (Gupta & Govindarajan, 1991), organizational structure (Narasimhan, 2005) and subsidiaries roles (Jarillo et al., 1990) is overlooked. In this research, we conceptualize a systematic framework to capture knowledge transfer and investigate a subsidiary's access to knowledge by analyzing its organizational characteristics among MNE subsidiaries.

LITERATURE REVIEW

Knowledge Transfer Among MNE Subsidiaries

The increasing importance of organizational learning for creating competitive advantage has triggered the study of antecedents and consequences of knowledge transfer at intra and inter-subsidiaries. Knowledge transfer among MNEs refers to the process through which organizational actors – teams, units or subsidiaries, exchange, receive and are influenced by the experience and knowledge of others. Since knowledge transfer requires the integration of differentiated knowledge, it manifests itself through changes in the knowledge bases or performance of recipients (Argote et al., 2000). In addition to studies focusing explicitly on knowledge transfer (Tsai, 2002), studies have labelled knowledge transfer processes in alternative but related ways. For example, studies have considered knowledge sharing and socialization (Tsai, 2002), knowledge flows and combination (Gupta and Govindarajan, 2000;

Schulz, 2001), knowledge acquisition and internalization (Darr et al., 1995; Lyles and Salk, 1996).

Contextual conditions may moderate the relationships between knowledge transfer and its antecedents and consequences. Previous research, for instance, has argued that transferring knowledge across different MNE subsidiaries is more complicated than transferring knowledge between units within the same subsidiary (Inkpen and Tsang, 2005). Some studies have examined MNE inter-subsidiary can facilitates knowledge and expertise transfer from one part of the units to others through tight interactive relationship. Gupta and Govindarajan (1991) also argued that, in additional to capital and product flows, knowledge flows across subsidiaries become specifically significant. Therefore, MNE inter-subsidiary across national borders has become more important in not only building durable competitive advantage but contributing to share experience, resources, and knowledge (Birkinshaw et al. 1998).

Antecedents of Knowledge Transfer

A considerable amount of research is emerging that considers organizational attributes as antecedents of knowledge transfer (Birkinshaw et al., 2002). Previous empirical studies have indicated that organizational characteristics are the most important predictors of knowledge transfer among MNE subsidiaries (Szulanski et al., 2004). Some antecedents studied are associated with the underlying knowledge being transferred, others are related to specific organizational characteristics, and still others to the social relations and networks of organizations. Consistent with prior literatures, therefore, we classify antecedents of knowledge transfer among MNE subsidiaries into four broad categories: technological capability, organizational structure, organizational culture, and strategic roles (cf. Adler and Kwon, 2002; Inkpen and Tsang, 2005).

Technological capability

A first stream of research has focused on technological capability as antecedents of knowledge transfer among MNE subsidiaries. Subsidiary technological capability represents MNE subsidiary's ability to effectively recognize, exchange and apply knowledge. How do subsidiaries recognize, exchange and apply knowledge? Technological capability and technical expertise resulting from the investment in R&D may provide subsidiaries with the capability to recognize important knowledge and identify potential sources of this knowledge (Cohen & Levinthal, 1990). Thus the knowledge stock of MNE subsidiaries can be expected to reflect this expertise and serve as an appropriate indicator of technological capability. Of course, the mere recognition of the importance of outside knowledge does not necessarily permit a firm to absorb it. The firm must also develop linkages to outside sources of knowledge that act as conduits for knowledge transfer (Dyer & Nobeoka, 2000; Gulati, Nohria, & Zaheer, 2000). The formation of relationships with external organizations (formal and informal) is facilitated by the possession of valuable knowledge, since a firm's knowledge base makes it more attractive to other organizations interested in the acquisition and sharing of knowledge. For instance, Von Hippel (1988) describes how firms use patented knowledge as ''bargaining chips'' when arriving at inter-firm technology agreements.

Almeida (1996) shows that MNE subsidiaries that absorb knowledge are also most likely to share it with other subsidiaries. Possession of valuable knowledge permits reciprocity in knowledge exchange, and helps open up channels that facilitate inter-firm knowledge flows, as evidenced by research on technological communities (Rosenkopf, Metui, & George, 2002), alliances (Inkpen & Dinur, 1998), acquisitions (Shan & Song, 1997), and regional clusters (Saxenian, 1994). Thus the technological capability of the subsidiary to recognize and absorb external knowledge is linked closely to its knowledge stock. We call this capability, which emerges from research knowledge, and permits the recognition and absorption of external knowledge among MNEs. Technological capability plays an important predictor in subsidiary innovation (e.g. Levin and Cross, 2004; Simonin, 1999; Szulanski et al., 2004). By ensuring the availability of new knowledge this capability permits the subsidiary to increase the scale and quality of innovation.

Organizational structure

The second stream of research has focused on organizational structure as antecedents of knowledge transfer among MNE subsidiaries. Organizational structure is important in leveraging technological architecture. Although intended to rationalize individual functions or units within MNEs, organizational structural elements have often had the unintended consequence of inhibiting collaboration and sharing of knowledge across internal organizational boundaries. For example, organizational structures that promote MNE subsidiaries' behavior in which locations, divisions, and functions are rewarded for "hoarding" information can inhibit effective knowledge management across MNEs (O'Dell, C, and Grayson, C., 1998). In fact, the optimization of knowledge sharing within a functional area can many times sub-optimize the sharing of knowledge across subsidiaries.

Taken to a larger level, the optimization of knowledge sharing within the subsidiaries can sub-optimize sharing across a supply chain. In essence, it is important that organizational structures be designed for flexibility (as opposed to rigidity) so that they encourage sharing and collaboration across boundaries within the organization and across the supply chain.

Organizational culture

The third stream of research has focused on organizational culture as antecedents of knowledge transfer among MNE subsidiaries. Previous studies suggest that organizational culture is an important cognitive element characterizing knowledge transfer (e.g. Inkpen and Tsang, 2005). Organizational culture is increasingly recognized as a factor in promoting knowledge transfer within MNEs. According to De Long and Fahey (2000) culture influences

MNE subsidiaries behavior central to knowledge creation, sharing, and use in several ways. First, culture—and subcultures in particular—shapes assumptions about what knowledge is worth exchanging among MNE subsidiaries. Second, culture creates the context for social interaction that determines how knowledge will be shared in particular situations. Third, the transfer of knowledge is to a high degree influenced by the cultural distance between the subsidiary and the home country of the MNE.

As stated by Hofstede (2001), knowledge is largely embedded in its local environment, which is appropriate in one cultural context may not be relevant in others. Cultural distance may also impede the knowledge transfer process. Different languages, business cultures, and institutions increase the perceived psychic distance and make it less likely that knowledge is transferred across borders (Johanson and Vahlne, 1977). Different organizational culture or cultural distance between MNE subsidiaries may lead to misunderstandings that can limit the sharing of important knowledge (Lyles and Salk, 1996; Szulanski et al., 2004).

Strategic roles

The fourth stream of research has focused on strategic roles as antecedents of knowledge transfer among MNE subsidiaries. Though every subsidiary has the potential to access and use knowledge resources from both MNEs and other subsidiaries, the relative importance of alternate knowledge sources is likely to be influenced by the subsidiary mandate and strategy, or the role that it plays within the MNE. While the early conceptualization of the MNE subsidiary suggested a market-seeking or knowledge exploitation role, subsequent research suggests that subsidiaries play a variety of strategic roles within the MNE (Birkinshaw et al., 1998; Jarillo and Martinez, 1990). For instance, subsidiaries can be seen to be either market-seeking units or resource-scanning units (Dunning, 1994). Similarly Birkinshaw et al. (1998) contrast subsidiaries that are essentially 'product specialists' with limited expertise and focus and those with a 'world mandate' that have broad responsibilities, considerable autonomy within the MNEs, and extensive capabilities in research and development. Many researchers have focused on varying subsidiaries' strategic roles particularly with respect to R&D (Bartlett and Ghoshal, 1989; Kogut and Chang, 1991). In an important classification, Kuemmerle (1997) points out that, sometimes, subsidiary R&D is needed to adapt existing products to local needs.

METHODOLOGY

The conceptual framework (see Figure1) includes antecedents---technology capability, organizational culture, organizational structure, and strategic role---that influence the knowledge transfer and share among MNE subsidiaries. The mechanism of knowledge transfer is comprised by knowledge combination, externalization, socialization and internalization among MNE subsidiaries. In this article, our research sample is Agus, a world leading company in plastic material supply. Agus produces and sells plastic material applies in bearings, electric cables, plastic products, and mechanical accessories. Agus has 27 subsidiaries worldwide centering on technology service and sales. The subsidiaries share information and knowledge about the innovation in service and application weekly.

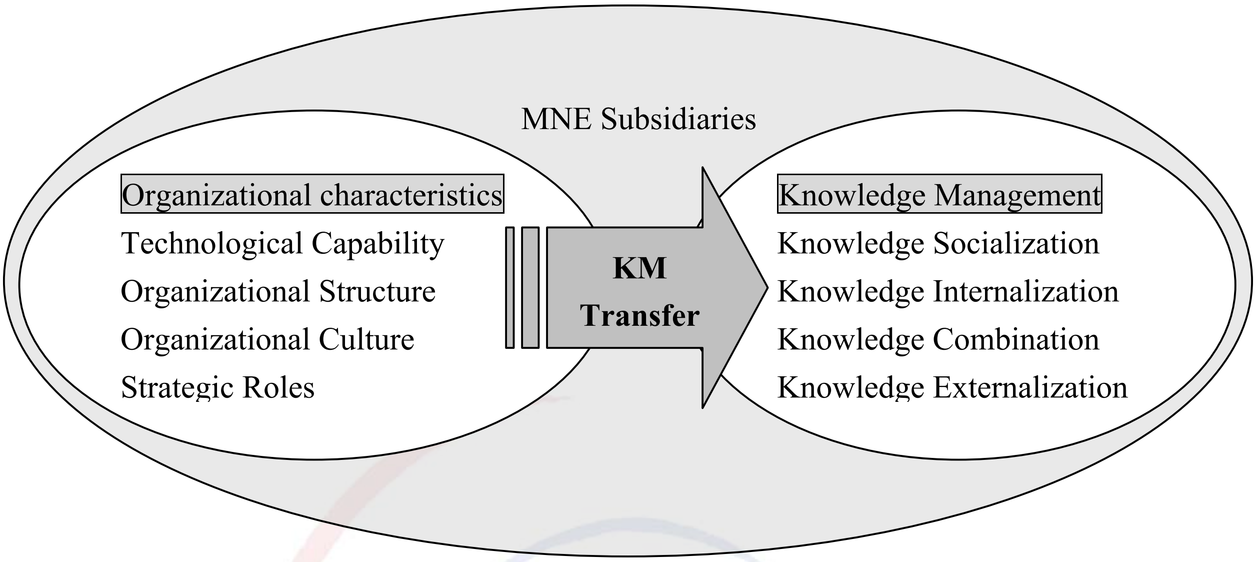

Figure1 Conceptual framework

Research Design

This article is based on a detailed case study of Agus from the perspective of Taiwan-based subsidiary. The main fieldwork was conducted on-site at Agus's subsidiary in Taiwan, which semi-structured interviews carried out with the most knowledgeable managers and informants. In order to provide a managerial perspective as well as a holistic organizational perspective, the researcher formally interviewed country manager of Taiwan and other five key product managers. The range of interviewees was to cover the different actors and management levels involved in the development and implementation processes.

The first step involved gaining access to Agus by contacting its country manager of Taiwan to solicit participation. Through reviews of the literature, Agus, is identified as a potential case company for in-depth study. The subsidiary of Taiwan was chosen since it connects most of the other subsidiaries who share identical industries and grows rapidly since its birth 7 years ago. First, the immediate aim is to identify key players in the context of KM regional share in the area of a regional-based subsidiaries network. Taking a rather different approach from the "contacting middle management" strategy, an e-mail was first sent to the country manager to express an interest in learning more about Agus intranet and KM experience. Then, after a preliminary study of the company is made, access issue will be proposed and negotiated.

Observations of meetings, training forums, and individuals at work were made throughout the study. The field notes from these observations were used to verify or elaborate the interview data. In addition, access to the case, MNE's subsidiaries were gained. The country manager of

Taiwan supplied a laptop, allowing observation of knowledge share and transfer in real time during the site visit. More than dozens of discussions or shares over knowledge application or local innovation carried out with other subsidiaries everyday. Thus the inter-network provides cross-culture information about social and technical issues.

RESULTS

The Similarity in Technological Capability and Knowledge Socialization

Knowledge socialization involves the sharing of tacit knowledge between individuals. We use the term socialization to emphasize that tacit knowledge is exchanged through joint activities—such as being together, spending time, living in the same environment—rather than through written or verbal instructions. Long years of apprenticeship allow newcomers to understand others' ways of thinking and feeling. Thus in a certain sense, tacit knowledge can only be shared if the self is freed to become a larger self that includes the tacit knowledge of the other.

Sharing organizational knowledge is inextricable from technological capability of a subsidiary with other MNE subsidiaries. Technological capability concerns the extent to which a nodal subsidiary's innovation and production is reliant upon technological knowledge or assistance offered by other subsidiaries. While strategic interdependence is largely shaped by subsidiary roles assigned by parent firms, technological capability is mainly determined by operational needs of the nodal subsidiary itself. Technological tasks and new product development in a given subsidiary can hardly be accomplished sufficiently without borrowing the technology and know-how that originated in other MNE subsidiaries (Granstrand et al., 1993). Acquisition and supply of technology necessitates significant sharing of follow-up organizational guidance and practice to ensure that the technology is adequately exploited. Many elements of organizational knowledge are about organizing firm production, operation, and management activities such that productivity is improved (Nonaka and Takeuchi, 1995).

When a subsidiary closely linked with other MNE subsidiaries' technological capability, it will demand more procedural knowledge socialization from peer subsidiaries about how to integrate the transferred technology with the own value-adding process and how to organize aftermath operations and management to maximize technology-derived gains (Caraca and Simoes, 1995). Aftermath procedural knowledge socialization such as information control, data management and workforce motivation enhances managerial innovation, which links technological capability to firm performance (Spender, 1996).

The Similarity in Strategic Roles and Knowledge Socialization

Focusing on variations in knowledge transfer, Gupta & Govindarajan (1991) have further proposed that all MNE subsidiaries could be located somewhere along the following two dimensional space: (i) the extent to which a subsidiary engages in knowledge inflows from the rest of the corporation, and (ii) the extent to which the subsidiary engages in knowledge outflows to the rest of the corporation. Thus, in terms of knowledge transfer patterns, four generic subsidiary roles can be identified: Global Innovator, Integrated Player, Implementor and Local Innovator (Gupta & Govindarajan, 1991).

In a Global Innovator (Gl) role, the subsidiary serves as the fountainhead of knowledge for other units. This role has traditionally been played only by the domestic units of export-oriented MNEs. However, as technological gaps among countries have declined, some foreign subsidiaries have begun turning into major knowledge creators for the entire corporation (Harrigan, 1984). The Integrated Player (IP) role also implies a responsibility for creating knowledge that can be utilized by other subsidiaries. The Implementor (IM) role is one where the subsidiary engages in little knowledge creation of its own and relies heavily on knowledge transfer from sister subsidiaries. Finally, the Local Innovator (LI) role implies that the subsidiary has almost complete local responsibility for the creation of relevant know-how in all key functional areas; however, this knowledge is seen as too ideosyncratic to be of much competitive use in other countries. Traditional "multi-domestic" MNEs have consisted almost entirely of subsidiaries with Local Innovator (LI) roles.

The similarity in strategic roles means that the extent of localization is similar among subsidiaries. It represents that tacit knowledge about localization, such as how to cope with local governments, interpret and predict regulatory changes, reduce foreign exchange risks, and improve local adaptations is similar. In this condition, the employees or managers of MNE subsidiaries are easy to communicate and interact with the employees of other subsidiaries on the similar knowledge base. Tacit knowledge is also exchanged and transferred among them in formal or informal occasions, such as employee rotation across areas, cooperative projects across directorates, or brainstorming camps (Birkinshaw et al., 1998; Jarillo and Martinez, 1990). The above discussion leads to the following proposition:

Proposition 1. The similarity in technological capability and strategic roles among subsidiaries is beneficial for knowledge socialization.

The Similarity in Organizational Structure and Knowledge Internalization

Internalization is the conversion of explicit knowledge into the organization's tacit knowledge. This requires the individual to identify the knowledge relevant to oneself within the organization's explicit knowledge. In internalization processes, the explicit knowledge may be embodied in action and practice, so that the individual acquiring the knowledge can re-experience what others go through. Alternatively, individuals could acquire tacit knowledge in virtual situations, either vicariously by reading or listening to others' stories, or experientially through simulations or experiments. Learning by doing, on-the-job training, learning by observation, and face-to-face meetings are some of the internalization processes by which individuals acquire knowledge (Nonaka & Takeuchi, 1995; Nonaka & Konno, 1998).

Organizational structure is important in leveraging technological architecture. Although intended to rationalize individual functions or units within an organization, structural elements have often had the unintended consequence of inhibiting collaboration and sharing of knowledge across internal organizational boundaries. For example, structures that promote individualistic behavior in which locations, divisions, and functions are rewarded for "hoarding" information can inhibit effective knowledge management across the organization (O'Dell and Grayson, 1998). In essence, it is important that organizational structures be designed for flexibility (as opposed to rigidity) so that they encourage sharing, collaboration and internalization across boundaries within the organization and across the supply chain.

The Similarity in Organizational Culture and knowledge Internalization

While the knowledge internalization between MNE subsidiaries is difficult, it is clear that the problems associated with knowledge transfer will increase with cultural distance. It would be difficult to specify fully tacit information embedded in trained personnel and technicians in one country to local employees in another country. Partially, the difficulty lies in the absorptive capacity of the local employees learning the new routines. The difficulty would increase further as the cultural distance between the source and recipient countries increases, since it would become more difficult and costlier to assess the abilities of foreign employees and monitor their performance in the recipient country due to higher information costs (Jones and Hill, 1988; Kogut and Singh, 1988). Further, the transfer would encounter greater knowledge barriers regarding local political, cultural and societal norms in culturally distant countries (Hennart and Larimo, 1998). Consequently, the exchange of ideas and knowledge will be costlier between culturally distant members of the MNE network than between culturally close members. This suggests that MNE subsidiaries may be expected to exchange and internalize knowledge better with those units that are located in culturally more proximate countries. In other word, the similarity in organizational culture among MNE subsidiaries is positively associated with knowledge internalization (Nonaka & Takeuchi, 1995). The above discussion leads to the following proposition:

Proposition 2. The similarity in organizational structure and organizational culture among subsidiaries are beneficial for knowledge internalization.

The Similarity in Technological Capability and Knowledge Combination

Knowledge combination involves the conversion of explicit knowledge into a more complex set of explicit knowledge (Nonaka & Konno, 1998) through the systemization of concepts and conversion of knowledge. It is a process where an organization or subsidiary can create new knowledge by combining its explicit knowledge with other explicit knowledge. Individuals exchange and combine information through such media as documents, technology, manufacturing capability and computer networks. They create new knowledge by reconstructing the existing information through classifying, adding and combining tacit knowledge. Traditional management information systems often result in the creation of combination knowledge (Riggins & Rhee, 1999). A knowledge combination process includes various works such as crystallizing related strategies, concepts and making management data and product specifications.

Dixon (2000) puts more emphasis on technological capability in implementing knowledge management because it considers technological capability plays the role of an enabler for knowledge combination. The MNE subsidiary's knowledge management system is a combined form of its database and groupware intended for sharing, accumulating and diffusing knowledge. The MNE subsidiary utilizes its knowledge management system, focusing on the management of explicit knowledge (Combination) and conversion of tacit knowledge into explicit knowledge (Externalization). In addition, the MNE subsidiary set up a communication plaza that mainly deals with the exchange of tacit knowledge. As a result, the similarity in technological capability among MNE subsidiaries is beneficial for knowledge combination. The above discussion leads to the following proposition：

Proposition 3. The similarity in technological capability among subsidiaries is beneficial for knowledge combination.

The Similarity in Technological Capability and Knowledge Externalization

Externalization involves the expression of tacit knowledge and its conversion into comprehensible forms that are easier to understand. Conventional learning methodologies require the externalization of the professor's knowledge as the initial step in the student's learning process (Raelin, 1997). Moreover, externalization involves techniques that help to express ideas or images as words, concepts. visuals, or figurative language (e.g., metaphors, analogies, and narratives), and deductive/inductive reasoning or creative inference (Nonaka and Konno, 1998; Nonaka & Takeuchi, 1995).

In practice, externalization is supported by two key factors. First, the articulation of tacit knowledge—that is, the conversion of tacit into explicit knowledge—involves technological capability that help to express one's ideas or images as words, concepts, figurative language (such as metaphors, analogies, or narratives), and visuals. Dialogue, "listening and contributing to the benefit of all participants", strongly supports externalization. The second factor involves translating the tacit knowledge of customers or experts into readily understandable forms. This may require deductive/inductive reasoning or creative inference.

The similarity in technological capability among subsidiaries is positively associated with knowledge externalization (Levin and Cross, 2004). Because the similarity in technological capability among subsidiaries represents professional knowledge is similar among them. It can reduce the barrier and uncertainty of communication among subsidiaries when interacting to each other. The technical personnel or sales representatives of one subsidiary will have more willingness, capability, and opportunity to express and provide some tacit knowledge for members of other subsidiaries through formalization, exhibition and illustration, such as some ideas or skills about product application expressed in form of written language (Simonin, 1999). In this condition, tacit knowledge of one subsidiary will be transformed directly and indirectly into transmittable and systematic knowledge which can be absorbed by other subsidiaries easily.

The Similarity in Strategic Roles and Knowledge Externalization

Externalization refers to a process where tacit knowledge that has gone through the socialization process is transformed into a specific concept (Explicit Knowledge). Through the externalization process, tacit knowledge becomes specified, and metaphors, analogies, concepts, hypotheses and models take shape. Externalization includes creating concepts during a product development process, crystallizing CEOs' thoughts and experts' know-how into a language, and expressing and materializing the covert needs of customers. It always involves the creation of easy-to-share and easy-to-deliver explicit knowledge within an organization by using a set of languages and visual messages (Nonaka & Konno, 1998).

A subsidiary operating in a local market successfully must possess not only sufficient physical resources but invisible tacit knowledge including management, professional, operating experience, and communication skills to overcome the risk of local operation. Tacit knowledge is owned by management and employees of the subsidiary and hard to be expressed by the way of language or written words (Nonaka and Takeuchi, 1995). Nevertheless, it is difficult for a MNE to transfer knowledge among subsidiaries since the strategic roles of every subsidiary are different. Different customers, culture, governments, norms, and markets would make every subsidiary has their unique operational mode. This would cause the barrier of communication among subsidiaries. Thus, management and employees of a subsidiary would have no motives or intentions to transform corporate tacit knowledge into absorbable explicit knowledge. In this condition, the subsidiary is not willing to transfer knowledge to other subsidiaries through the approach of externalization (Davenport & Prusak, 1998).

On the contrary, if strategic role is similar among subsidiaries, it represents that the characteristic of local customers, some problems about local government they face, and the structure of local market are similar among subsidiaries. It also represents that the thoughts, concepts, and working manners of employees is similar among subsidiaries. On this premise, when a subsidiary interacts with other subsidiaries, the unspoken consensus and the frequency of communication among subsidiaries would be increased. Hence, management and employees of the subsidiary are willing to transform corporate tacit knowledge into explicit knowledge to make other subsidiaries consult and learn it conveniently. The above discussion leads to the following proposition:

Proposition 4. The similarity in technological capability and strategic roles among subsidiaries is beneficial for knowledge externalization.

CONCLUSION

Research on organizational knowledge transfer is burgeoning. Although conceptual and qualitative reviews of the literature on organizational knowledge transfer have been done (e.g. Easterby-Smith et al., 2000; Inkpen and Tsang, 2005), no study has attempted to summarize a systematic framework to capture knowledge transfer and investigate a subsidiary's access to knowledge by analyzing its organizational characteristics among MNE subsidiaries. We contributed to the existing literature on organizational knowledge transfer by reviewing and consolidating existing empirical research using exploratory study and in-depth case study. Specifically, our findings provide more fine-grained insights into the conceptual framework including four subsidiary characteristics---technological capability, organizational structure, organizational culture and strategic roles to examine the relationship between the similarity in subsidiary characteristics and knowledge transfer. Moreover, in the field of knowledge transfer, past scholars examined mostly the extent, frequency, and content of knowledge transfer (Huber 1991). They didn't subdivide knowledge transfer further. Addressing the gap, we adopted four knowledge transfer modes containing knowledge socialization, knowledge internalization, knowledge combination, and knowledge externalization according to the study of Nonaka and Takeuchi (1995) to examine the interaction of tacit knowledge and explicit knowledge.

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MNEs and Strategic Philanthropy:

Evidence from the Wenchuan (汶川) Earthquake Relief Efforts

Jiyoung Shin

Korea University Business School

Anam-Dong, Seongbuk-Gu, Seoul, 136-701, Korea

Email: alfolike@korea.ac.kr

Jon Jungbien Moon

Korea University Business School

Anam-Dong, Seongbuk-Gu, Seoul, 136-701, Korea

Email: jonjmoon@korea.ac.kr

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Jiyoung Shin

Korea University Business School

Jon Jungbien Moon

Korea University Business School

Abstract

This paper argues that the philanthropic actions by multinational enterprises (MNEs) serve strategic purposes as well as charitable causes. By utilizing the data from 460 MNEs who actively engaged in philanthropic efforts in helping the 2008 Wenchuan (汶川) earthquake victims, we demonstrate the strategic nature of corporate philanthropy by MNEs. We hypothesize that the amount of donation is determined by various firm characteristics, such as the size of the MNE, cultural distance between its home country and China, industry characteristics, and the MNE's level of establishment in China. We propose that there exist size effect, home country effect, industry effect, and guanxi effect that influence the amount of donation in the relief effort for this high-profile tragedy. Specifically, we find that the size of the donation will be larger when the size of the company is larger, the cultural distance is closer, the industry is consumer oriented, the entry to China is earlier. These findings show that MNEs conduct philanthropic actions strategically, in order to gain competitive advantage in a host country.

Key words : multinational enterprise, corporate philanthropy, corporate social responsibility, China, Wenchuan earthquake

JEL field code : M14

1. Introduction

Traditionally, companies used to concentrate solely on financial performance. However, more and more companies consider meeting the expectations of stakeholders just as important as achieving high earnings, meaning that the conventional thinking is outdated and that a new way is needed (Prahalad and Hamel, 1994).

Under these circumstances, the more interest companies have in corporate social responsibility (CSR), the more advantageous it will be to their survival (Choi and Wang, 2007). CSR plays an important role in cultivating a good corporate reputation as well as in alleviating some of the risks that a company faces in the marketplace, especially in a foreign market. Furthermore, CSR is useful for companies looking to overcome cultural barriers and differences in business environments (Daniels et al., 2009). For these reasons, CSR is a catalyst for multinational enterprises (MNEs), helping them alleviate the liability of foreignness and projecting a positive reputation (Peng, 2006). CSR is not merely a public relations (PR) campaign that lasts for a month or two. MNEs can use CSR as a source of competitive advantage over other companies (Porter and Kramer, 2006). For example, since the SK Corporation from the Republic of Korea opened its first operation in China in 1998, it has supported a TV quiz show (壯元榜) for talented high school students in order to elevate the SK's reputation, and it has gained much goodwill among young Chinese. Other examples include those numerous companies that sponsored the 2008 Summer Olympic Games in Beijing in the hope that such a sponsorship would be a good long-term investment in this burgeoning economy. These examples suggest that companies that have entered China seek competitive advantages by engaging in various forms of CSR.

The Chinese market is the biggest emerging market in the world, with a population of more than 1.3 billion people and many years of double-digit economic growth (Fock and Woo, 1998). Moreover, it is an attractive site for multinational corporations in both obtaining resources, such as skilled labor at low costs, and marketing their products. Therefore, many MNEs enter China to take advantage of variety of opportunities. However, because of the difference between their home countries and China, many corporations face operational difficulties there. China's culture and traditions are profoundly different from those of the West, and its social, governmental, and economic systems are especially complex (Vanhonacker, 1997). In particular, a traditional Chinese business practice known as *guanxi* (关系) or "personal connection" is a major barrier, hindering outsiders from tapping into a wide variety of opportunities provided by the Chinese market (Fock and Woo, 1998). In short, *guanxi* is a connection based more on social relationships than business relationships. It works as a connection that allows transactions or exchanges that create mutual benefits (Yeung and Tung, 1996). Good working relationships between Chinese officials and MNEs are not an option but a required condition for operating in China. Therefore, competency in non-market operations, such as maintaining a good relationship with the Chinese government officials and engaging in CSR proactively, are just as important as expertise in market operations.

On May 12, 2008, an earthquake with a magnitude above 8.0 hit Wenchuan, a mountainous region in western China's Sichuan Province. After the devastating earthquake hit, strong aftershocks continued even months after the main quake. According to Chinese state officials, the quake caused about 70,000 known deaths and left over 18,000 people missing. Damages to properties were estimated to exceed 1.5 trillion Chinese Yuan (USD 220 billion in terms of the exchange rate at the time).[1] Immediately following the quake, foreign nations and organizations responded by offering condolences and assistance.

Using data from 460 MNEs that actively engaged in philanthropic efforts to help the victims of the 2008 Wenchuan earthquake, our research tries to demonstrate the strategic nature of corporate philanthropy by MNEs. Regarding this high-profile tragedy, we hypothesize that the donations were determined by various corporate characteristics, such as the size of the MNE, the cultural distance between its home country and China, industry characteristics, entry modes and the MNE's level of establishment in China.

The remainder of this paper proceeds as follows. In the next section, we briefly review the literature on corporate philanthropy and develop our hypotheses. Section 3 describes our method of data collection and analysis. Section 4 provides the empirical findings, and section 5 provides a conclusion and a discussion of our findings.

2. Literature and Hypotheses

Philanthropy means engaging in acts or programs to promote human welfare or goodwill, including the charitable donations of financial and other resources by businesses. According to Carroll (1979, 1991), the four components of social responsibility that constitute CSR are economic responsibility, legal responsibility, ethical responsibility, and philanthropic responsibility, with the most fundamental being economic responsibility. A business must create value by operating efficiently and innovating, while meeting its legal responsibilities. This means that companies should abide by the laws of the society in which they operate. The third component is ethical responsibility—distinguishing right from wrong—which compels a company to operate in an ethical way. Finally, philanthropic or discretionary responsibility includes participating in voluntary charitable giving to the community and society. Previous studies have considered corporate charitable giving or philanthropy as an integral part of CSR (Moore, 2001).

[1] *New York Times*, May 26, 2008. "China Struggles to Shelter Millions of Quake's Homeless."

In this paper, we view philanthropic contributions by businesses that have strategic motivations as well as humanitarian ones. Strategic philanthropy can be defined as an act of social responsibility by a company choosing how it will voluntarily allocate its slack resources to charitable causes in order to reach business-related goals (Thorne et al., 2003, Seifert et al., 2004). Therefore, strategic philanthropy has goals that increase not only a company's value, but also its social benefits (Saiia et al., 2003, Smith, 1994, Thorne et al., 2003). Porter and Kramer (2002) emphasized the possibility of using philanthropy as a competitive advantage. Philanthropy can improve the environment surrounding a company by aligning social and economic goals and developing the long-term stability of the company's performance (Porter and Kramer, 2002).

The goal of strategic philanthropy is to be in harmony with the business environment where the company operates. Saiia et al. (2003) found evidence that philanthropic managers believe their companies are becoming more strategic in their philanthropic activities, according to a survey of managers of U.S. companies. The results confirmed that the corporate philanthropy is progressing to fit a more competitive market.

Many existing articles examining the effect of a company's size on CSR activities and outcomes (Stanwick and Stanwick, 1998, Reimann, 1975, Trotman and Bradley, 1981, Turban and Greening, 1997). The results showed a positive relationship between size and various measures of CSR, such as *Fortune* magazine's corporate reputation index and toxic release record (Orlitzky, 2001).

When an MNE's size is bigger, it should pay more attention to its CSR (Chen and Metcalf, 1980). Because the larger MNEs have greater visibility to their various stakeholders (Waddock and Graves, 1997), in addition to suffering from "liability of foreignness" in host countries, they try to use CSR as a way to overcome these obstacles. In other words, MNEs that have greater visibility try to manage their good reputation and positive images through CSR. Choi and Wang (2007) suggested that corporate philanthropy enhanced both corporate reputation and loyalty among stakeholders, leading to better corporate performance.

Philanthropy needs larger companies because charitable giving should come from a company's working capital, either from a cash account or inventories. Among the many CSR activities, philanthropy is particularly closely related to company's size. Buckholtz et al. (1999); Seifert et al.(2003); and Amato and Amato (2007) found that larger companies made more philanthropic contributions, with the sizes measured by the results of the companies' sales, total assets, and average assets per employee. Therefore, we hypothesize a positive relationship between a company's size and the amount of donations it made to the Wenchuan earthquake.

Hypothesis 1 (size effect): The amount of donations is likely to increase with both the size of an MNE's global operations and the scale of its operations in China.

Cultural distance is a critical factor for companies entering foreign countries. MNEs develop the capacity to reduce barriers to foreign entry, for example, through a good bargaining position with host governments or communities (Fagre and Louis, 1982, Lecraw, 1984). If a company accumulates experience in a foreign country, it should be able to reduce the cultural barriers with respect to the performance of various modes and ownership structures that concern a foreign entity (Barkema et al., 1996).

According to Hofstede (1984, 2001), four factors relate to countries' cultural distances: power distance; uncertainty avoidance; individualism and collectivism; and masculinity and femininity. A number of studies have found theoretical and empirical support for the effects of national culture on the mode of entry (Kogut and Singh, 1988, Barkema et al., 1996). For example, Kogut and Singh (1988) analyzed data on 288 entrants into the U.S. market through an acquisition, a wholly owned subsidiary (WOS), or a joint venture (JV). Using a multinomial logic model, they found that the culture distance between countries affects the choice of a corporation's mode of entry. Companies' choices of entry were different according to the psychic distance between home country and host country. On the other hand, there is little empirical research about the relationship between cultural distance and philanthropy.

We presume that, if the cultural distance is less between countries, a member of either society could share similar sentiments, thereby making it easier to commiserate with the other society or country. When a natural disaster like the Wenchuan earthquake happens, the people who live in countries with a similar cultural background should feel the pain more acutely. As a result, cultural distance can affect the charitable giving activities of MNEs, depending on their origin. Therefore, we hypothesize that companies that originate from a country that has a cultural similarity to China will donate more to the victims of Wenchuan earthquake.

Hypothesis 2 (home country effect): MNEs from culturally similar countries or regions are likely to make bigger donations.

Some studies found that companies in particular industries are more likely to make philanthropic contributions (Cottrill, 1990, Seifert et al., 2003, Amato and Amato, 2007). Depending on the nature of the industry, the stakeholder issue, which is most critical to the company, differs. For example, companies in the mining industry are more concerned about environmental issues than consumer issues. By contrast, companies in consumer-oriented industries, such as consumer durable goods manufacturing or banking, pay more attention to common social issues.

In this paper, we focus on the public exposure of a company's products and services as a determinant of its inclination for philanthropic actions. Useem (1988) suggests that companies from industries with a high level of public exposure, such as retail, insurance, or banking, typically donate more than companies from low-exposure industries, such as mining or primary metals. Advertising intensity is a good measure of a company's level of consumer orientation. Amato and Amato (2007) analyzed the results of different industries' corporate giving. They used advertising intensity to determine the relationship between industries with high visibility and corporate giving. They found that a higher advertising intensity has a positive relationship with corporate giving. Given these findings, we anticipate that companies in more consumer-oriented industries engage in philanthropy more actively.

Hypothesis 3 (industry effect): MNEs in consumer-oriented industries are likely to make larger donations.

As mentioned in the Introduction, a personal connection, called *guanxi*, is at the center of Chinese culture and tradition. It takes a long time to form the bonds of guanxi, based on the principles of Confucianism. Alston (1989) suggests that participants in a *guanxi* relationship are fully committed to each other. They could, for example, agree to exchange favors in spite of official commands to act neutrally. Scarce resources or information in the Chinese market are often allocated by *guanxi* rather than as dictated by laws or other rules. Under these circumstances, MNEs should look to develop *guanxi* relationships with government officials.

Xin and Pearce (1996) found that the underdeveloped legal and institutional environments make private company executives more dependent on *guanxi* than are executives in state-owned or collectively owned companies. Moreover, (Xin and Pearce, 1996)(Xin and Pearce, 1996)(Xin and Pearce, 1996)(Xin and Pearce, 1996)(Xin and Pearce, 1996)(Xin and Pearce, 1996)in Chinese culture, *guanxi* includes an exchange of non-reciprocated gifts, which are viewed as investments in the relationship and an upkeep of *guanxi* (Yang, 1994).

When China opened its doors to foreign investments in the late 1970s, *guanxi* was very important to foreign entrants' survival. Indeed, Chinese officials had stronger bargaining power over foreign companies then than now. In the same way, foreign companies that entered early tried to develop good relationships to obtain information concerning government policies, market trends, and business processes. This was done to reduce uncertainty and improve efficiency for accessing the necessary production resources (Davies et al., 1995).

Yeung and Tung (1996) found that *guanxi* is a key factor for long-term success in the Chinese market as measured by the growth of annual net income or pretax profits. Pan and Chi (1999) presented empirical evidence that MNEs that entered China in earlier years had higher profits than those that entered in later years. In this situation, MNEs that entered early had strong connections within Chinese society as participants in *guanxi* relationships, and more was expected of them in terms of meeting societal needs in China. For these reasons, we hypothesize that early movers into the Chinese market have stronger bonds of *guanxi*, giving them the motivation to behave as participants in the *guanxi* network, just as Chinese companies do.

Hypothesis 4 (**guanxi** ***effect): MNEs that entered China earlier are likely to make bigger donations.***

China is the largest recipient of foreign direct investment (FDI) among emerging countries. The choice of entry modes into new markets is a major strategic decision for MNEs because it relates not only to companies' performance, but also to their survival in those markets. Conventional thinking is that success in the Chinese market depends on well-connected Chinese partners (Vanhonacker, 1997). MNEs could enhance their performance by benefiting from the existing *guanxi* network of a local partner.

Similarly, MNEs can increase their performance by utilizing the *guanxi* relationship to their competitive advantage (Luo and Chen, 1997), who analyzed the effect of *guanxi* on companies' performance using data from a survey of general managers from 100 companies in Jiangsu Province, P.R.C, in 1995. They found evidence that *guanxi* relationship has a positive impact on their companies' efficiency and growth.

In previous studies, it was found that entry modes affect companies' performance in the Chinese market because of the *guanxi* relationship. Accordingly, a number of MNEs choose joint ventures to take advantage of the bonds of *guanxi* when they set up in the Chinese market (Kivela and Leung, 2005). In fact, Pan and Chi (1999) found that equity JVs had a higher profitability than WOSs in China through a survey of general managers from 1,066 MNEs operating in manufacturing sectors. We presume that a WOS does not have as strong a bond of *guanxi* as one established by a joint venture. Following this line of reasoning, a WOS has a stronger motivation to use corporate philanthropy strategically in order to form a stronger bond with the Chinese stakeholders. Therefore, we hypothesize that the degree of philanthropy differs according to the operating mode because a WOS has a weaker *guanxi* network compared to a JV, thereby necessitating more visible actions in dealing with a national tragedy like the Wenchuan earthquake.

Hypothesis 5 (operating mode effect): MNEs operating in a WOS are likely to donate more compared with those operating a JV.

3. Methodology

Although the studies cited above represent important contributions to the understanding of our hypotheses, some of them are limited in data and empirical techniques. Unlike Western countries, such as the U.K. and the U.S.A., China does not keep public information regarding philanthropy, including charitable donations. In this study, we conducted empirical studies with quantitative data made available by the highly publicized Wenchuan earthquake.

Data

This study seeks to find evidence of firms strategically using CSR after the 2008 Wenchuan earthquake in China through the size of their donations. The sample consists of 460 companies in which the parent companies are able to be distinguished through donation schedule notifications (跨国公司、外商投资企业和台港澳企业捐赠 情况一览表) complied by the Chinese Red Cross as of June 19, 2008. The sample is composed of MNEs with their countries of origins. Each company is either a wholly owned subsidiary or a joint venture. The original data is in Chinese, and the joint venture companies are often recorded by their Chinese name, which does not show an immediate connection to a foreign partner. Thus, the parent companies and nations are matched through Chinese sites and parent companies' sites using Chinese portal sites such as Baidu (百度, www.baidu.com).

The following process was used to collect the financial information for each foreign parent company in the dataset. First, we collected financial information from the Compustat Global database whenever possible. Second, for companies that were not listed in the Compustat Global database, we used each company's home country public financial information through the U.S. and Europe's respective Securities and Exchange Commission (SEC), Korea's Kisvalue, and Taiwan's Market Observation Post System (MOPS). The Hong Kong, Macao, and Singapore companies' financial information was found through Investor Relations Asia Pacific (IR Asis). Third, companies that are not listed in a stock market were researched through data on the companies' homepages. The year of entry into China and the mode of entry were also searched for on the companies' official homepages. In order to avoid contemporaneous endogeneity, all explanatory variables are from the fiscal year 2007, a year before the Wenchuan earthquake.

Dependent Variable: Amount of Donation

The dependent variable of this study is each MNE's donation to the victims of the Wenchuan earthquake, either in case or in kind. The amount of a donation is the market value of the donated spot or cash rate estimated by the Chinese Red Cross and denominated in Chinese Yuan. The Chinese Red Cross was the official authority for collecting and distributing the charitable contributions made to the earthquake victims. We excluded personal donations by a company's manager and only included the donations made in a company's name. Because this variable is highly skewed, we used a natural logarithm of the donation amount as the dependent variable.

Independent Variables

We used two measures of the size of the MNE: the size of the MNE's global operations and that of its Chinese operations. For each measure of size, we calculated a natural logarithm of total assets and a natural logarithm of total sales. In cases where the currency of reporting is not U.S. dollars, the donation was converted into U.S. dollars using the exchange rate on December 31, 2007.

The index of Hofstede's four dimensions of cultural distance was used in calculating the cultural distance. Following Kogut and Singh (1988), we constructed the following Euclidean distance measure:

$$\mathrm{CDj}=\ \mathrm{i}=14\mathrm{Iij}-\mathrm{Iiu}2/\mathrm{Vi}/4\ .$$

where *j* is the subscript for home country, and *i* is the subscript for Hofstede's four dimensions: power distance, uncertainty avoidance, individualism/collectivism, and masculinity/femininity. A fifth dimension, long-term orientation, is excluded because for some countries in our sample it is not defined. The level of consumer orientation was measured by the average advertising intensity of each industry as defined by four-digit SIC in the 2007 Compustat Global Database. Among the 355 companies for which the advertising intensity information is available, we classified them into three groups: the lowest advertising intensity group (lower third, coded 0), the middle group (middle third, coded 1), and the highest group (upper third, coded 2).

The number of years an MNE has been operating in China is used as a proxy for the level of establishment in China We have the data on the starting time of a factory or an office operation in China and by subtracting that year from 2008 we calculated the age of an MNE in China. The ages of were then divided into three groups: below 10 years, between 10 and 20 years, and above 20 years.

Companies with foreign ownership shares of between 20% and 95% are classified as joint ventures, whereas the companies with foreign ownership shares above 95% are classified as wholly owned subsidiaries.

In this study, we used four control variables. Profitability was measured by the company's return on assets (ROA). Both the ROA of an MNE's headquarters and of its Chinese contingent was estimated for 2007. In addition, the fraction of Chinese sales was computed as the Chinese subsidiaries' total sales divided by the MNE's worldwide total sales, and it measures the relative importance of Chinese market to the MNE. Similarly, the fraction of Chinese assets was computed as the Chinese subsidiary's total assets divided by the MNE's worldwide total assets, and it measures the relative magnitude of Chinese operations within the MNE's global network. Table 1 presents descriptive statistics and correlation coefficients for the variables used in our analysis. The magnitude of the correlation coefficients indicates that multicollinearity is not likely to pose a problem in our regression analysis.

Table 1 Descriptive statistics and correlation

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Log(Donation)	5.879	1.083	1.000												
2 Total Assets_HQ	19.478	1.202	0.144*	1.000											
3 Total Assets_China	13.412	2.059	0.152*	0.141*	1.000										
4 Sales_HQ	19.211	1.244	0.116*	0.884*	0.187*	1.000									
5 Sales_China	13.526	2.152	0.172*	0.169*	0.924*	0.257*	1.000								
6 Cultural distance	28.345	15.975	0.013	0.381*	0.070	0.433*	0.107	1.000							
7 Advertising intensity	1.062	0.821	0.141*	-0.006	-0.066	0.006	-0.003	0.128*	1.000						
8 Age	1.928	0.762	0.010	0.033	0.055	0.077	0.107	0.088	0.034	1.000					
9 Operating mode	0.417	0.491	0.009	-0.084	-0.082	-0.059	-0.072	0.008	0.071	0.055	1.000				
10 ROA_HQ	0.068	0.062	0.137*	-0.169*	0.017	-0.117*	0.060	-0.075	0.195*	0.111*	0.058	1.000			
11 ROA_China	0.101	0.106	0.094	-0.282*	0.083	-0.223*	0.205*	-0.016	0.008	-0.001	0.024	0.177*	1.000		
12 Total Assets_China/ Total Assets_HQ	0.06	0.217	-0.029	-0.313*	0.126	-0.226*	0.106	-0.230*	0.074	-0.001	-0.118	-0.054	0.103	1.000	
13 Sales_China/ Sales_HQ	0.014	0.016	-0.011	-0.514*	0.415*	-0.545*	0.415*	-0.331*	-0.034	-0.004	-0.061	-0.007	0.313*	0.310*	1.000

Note: correlation coefficient * $p<0.05$

4. Results

Table 2 shows the results of the regression analysis. Models 1 and 2 are basic. These models differ in terms of the measurement of size, as the natural logarithms of total assets are used in Model 1 and the natural logarithms of total sales are used in Model 2. Models 3 and 4 are full models with control variables such as profitability and the relative importance of Chinese operations within an MNE. Hypothesis 1 conjectures that the size of the MNE shows a positive relationship with its amount of philanthropic giving. In Model 3 and 4, the sizes of the Chinese subsidiaries have a positive relationship with the amount of donations. In model 3, $p=0.013$, and in model 4, $p=0.035$, and an MNE headquarters' size has a positive relationship with the amount of that MNE's donation, albeit at a weaker significance level (in model 3, $p=0.09$ and in model 4, $p=0.07$). Therefore, larger companies contribute larger amounts, which confirms hypothesis 1.

Hypothesis 2 concerns cultural distance, and the coefficients of cultural distance are negative and highly significant in all four models presented in Table 2. This result confirms that MNEs from the countries whose culture is closer to China make more generous philanthropic contributions, which supports hypothesis 2.

Hypothesis 3 concerns the consumer orientation of the MNE. In Models 3 and 4, the coefficients for advertising intensity are positive and significant at a 10% level. Industries that are more consumer-oriented spend more money on philanthropic activities, which confirms hypothesis 3.

Hypothesis 4 is about the level of an MNE's establishment in China, as measured by the number of decades it has been in China. Results show that MNEs with long history of more than 20 years contributed significantly more toward the earthquake relief, whereas there is no difference between MNEs with a history of 10 to 20 years and MNEs with a history of less than 10 years. The results show a positive and significant linkage between the level of establishment an MNE has through its history in China and its philanthropic contributions, thus confirming hypothesis 4.

Hypothesis 5 concerns the operating mode, and the results suggest that the operating mode is not associated with the amount of philanthropic giving. Therefore, hypothesis 5 is not supported.

Among the control variables, only the profitability of an MNE's headquarters turns out to be positively associated with the amount of philanthropic giving.

5. Conclusion and Discussion

The purpose of this paper is to see if MNEs engage strategically in philanthropic activities. Under the setting of a high-profile national disaster like the 2008 Wenchuan earthquake in China, we tried to find evidence of strategic philanthropy by investigating how MNEs' philanthropic contributions are determined The key findings of this paper answer our research questions affirmatively.

First, an MNE's size has an effect on its donation amount. This result is consistent with previous research (Yan and Gray, 1994, Amato and Amato, 2007, Cottrill, 1990, Orlitzky, 2001). Second, we find that a home country's cultural similarity to China has an impact on corporate philanthropic behavior. Third, because MNEs operating in consumer-related industries are exposed to more public pressure, these companies offer more charitable contributions. In other words, MNEs that have entered China try to gain Chinese consumers' approval through philanthropy and other CSR activities, and after the earthquake they did not want to miss a chance to be viewed as a virtuous organization. Fourth, in order to survive and prosper in China, MNEs should continue strengthening their *guanxi* relationships. When a national tragedy of this magnitude occurs, Chinese officials and public expect the managers of MNEs to commiserate, and this societal pressure should be higher for companies with long history in China. For these reasons, we set out to confirm that MNEs that entered the country earlier are more active in corporate philanthropy than MNEs that entered more recently. Finally, counter to our expectations, modes of entry do not relate to the amount of philanthropic giving on this occasion.

To the best of our knowledge, there is no empirical printed testing of the relationship between an MNE's philanthropic activities and its size, cultural distance between its home and its host country, degree of consumer orientation, the level of establishment, and the mode of operation. Therefore, we believe this paper makes a valuable contribution to the international business literature as well as the literature on CSR and philanthropy.

Table 2 The determinants of corporate philanthropy

Independent variables	Dependent variable = amount of donation (logarithm)			
	Model 1	Model 2	Model 3	Model 4
Total Assets_HQ	0.171**		0.150*	
	[0.071]		[0.091]	
Total Assets_China	0.095**		0.120**	
	[0.039]		[0.048]	
Sales_HQ		0.148**		0.141*
		[0.069]		[0.073]
Sales_China		0.071*		0.079**
		[0.036]		[0.038]
Cultural distance	-0.011**	-0.012**	-0.012**	-0.013**
	[0.006]	[0.006]	[0.006]	[0.006]
Consumer orientation	0.214**	0.219**	0.167*	0.168*
	[0.092]	[0.093]	[0.094]	[0.094]
Younger MNEs	0.091	0.111	0.128	0.117
	[0.183]	[0.183]	[0.181]	[0.180]
Older MNEs	0.408**	0.393**	0.416**	0.377**
	[0.185]	[0.188]	[0.187]	[0.187]
Operating mode	-0.085	-0.084	-0.109	-0.129
	[0.154]	[0.155]	[0.153]	[0.155]
ROA_HQ			2.753**	2.714**
			[1.321]	[1.296]
ROA_China			0.135	-0.284
			[0.779]	[0.781]
Total Assets_Chian/ Total Assets_HQ				-0.539
				[0.396]
Sales_China/ Sales_HQ			-6.520	
			[7.115]	
N	209	208	206	206
R-squared	0.120	0.112	0.160	0.149

Note: Standard errors in brackets *** p<0.01, ** p<0.05, and *p<0.1

Discussion

This paper makes a contribution to the existing literature in three ways. First, while most research on corporate philanthropy uses data from Western countries, such as the U.S. or U.K. (Cowton, 1987, Bartkus et al., 2002, Campbell et al., 2002, Brammer and Millington, 2003), this study draws attention to the Chinese market. The Chinese market is a very important place for MNEs, ranking second in terms of GDP (PPP) and ranking third in terms of GDP (nominal) in the world in 2008,[2] while still growing at an impressive speed. However, there is a lack of research regarding the relationship between CSR and philanthropy in China. It helps both MNEs and researchers to understand the Chinese market better.

Second, the lack of data limits the active empirical research in the field of philanthropy, especially in an emerging economy like China. Although our data is only about one event, we believe that its high visibility makes it an ideal ground to test the nature of corporate philanthropy by MNEs. Finally, we provide evidence that MNEs use philanthropy strategically.

While this study provides important insights into corporate philanthropy by MNEs, the paper does have its limitations. First, due to the limited availability of some key variables and the difficulty associated with matching Chinese subsidiaries and their foreign parents, our sample size is rather small. If we can expand the data substantially, we might observe stronger results, especially with regard to the operating mode. Second, we cannot say anything about the financial performance implications of this corporate philanthropy. Therefore, we cannot say whether the decisions regarding philanthropic actions make sense in terms of company's profitability or sustainability, even though we claim that MNEs in our sample use philanthropy strategically. We would certainly like to see more research linking MNEs' financial performance to their corporate philanthropy, or more broadly, to their CSR in the host country in the future.

[2] World Development Indicators database, World Bank, revised July 9, 2010.

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IT Portfolio Management Framework: Anti-Money Laundering System in Indonesian Bank

Anna Yuliarti Khodijah
Supervised by Prof. Jay Rajasekera
E-Business Management
International University of Japan

Abstract

Money laundering in Indonesia has been a major problem for the country. However, partly to blame are the inherent problems in the financial system, such as ineffective financial regulations, ineffective law enforcement, and the corruption. The proceeds from criminal activities such as bank fraud, illegal logging, and corruption are easily laundered through this vulnerable financial system. It is clear that the current reporting system on suspicious financial transactions through banks to the central bank needs supporting tools, including IT solutions that are widely used in some other countries.

The purpose of this study is to review current situation in Indonesia and explore the problems and challenges that the banks are facing there in terms of Anti-Money Laundering system and propose solutions following IT Portfolio Management, which is a general framework for keeping track of implementation aspects of IT in large organizations and broad government projects.

1. Introduction

Indonesia had been in the list of "non-cooperative countries" maintained by international money-laundering watchdog Financial Action Task Force (FATF) from 2001-2006 (Ref: 1). Being on the list, Indonesia is considered a high-risk country in terms of financial transactions.

Indonesia has made some attempts to get off the list by adopting a number of measures (Refs. 1, 2, 3). First, Indonesia's anti money laundering law, implemented in 2002 clearly identifies any transaction that can be categorized as money laundering. The law also stipulates that harsh sanctions must be imposed on violators. Indonesia also adopted mutual legal cooperation with other countries regarding money laundering and institutionalized an operable reporting system, known as Suspicious Transactions Reports or STR. This STR system is supposed to report the suspicious financial transactions by all the banks to the central bank or Bank Indonesia.

After consecutive years of Indonesia's infrastructure review by FATF, Indonesia was then finally removed from the FATF blacklist in February 2006.

Irrespective of the law being effective since 2002, the number of STR cases, has been increasing in general over the last 10 years or so.

(Source: PPATK)

Figure 1: Trend of STR in Indonesia

2. Objectives

The purpose of this study is to review current situation and explore the problems and challenges that Indonesian banks are facing in terms of Anti Money Laundering system and to delineate IT Portfolio Management to propose solutions for Indonesian banks, Indonesian Financial Transaction Reports and Analysis Centre (INTRAC) or any other related parties in to increase preventative measures for the financial sector, and, in doing so, to make money laundering through banking system more difficult to accomplish.

3. Methodology

We will explore the current situation and key issues of Anti-Money Laundering scheme in Indonesia, in term of policy, strategy and system itself. Then, using IT Portfolio Management, which is combination of IT Policy Planning Strategy and IT Project Management (Ref. 4), we will derive a framework and master plan for implementing workable IT strategy and system implementation in the battle of Anti-Money Laundering in Indonesian banks.

4. Discussion

Currently all banks have minimum system to monitor Money Laundering activities, or Suspicious Transactions. Even if they have, the process to compile the data and send the report to Regulatory Bank takes several business working days. In this way, the money launderer would have been gone by the time the report reached Regulatory Bank.

5. Novelty

To implement the good monitoring or alert system, all banks should come up with a single system that monitors incoming and outgoing foreign transactions. The current SWIFT system should be well integrated with another monitoring or alert system, in a way that the moment a suspicious transaction takes place, the system will alert and inform the bank head office and, if possible, Regulatory Bank as well (Ref. 5).

6. Conclusion

A great deal must be done to fight money laundering in Indonesia, and, indeed, many efforts have already established for anti-money laundering basic steps (Ref. 6), such as forming PPATK, drafting anti-money laundering laws, applying Know Your Customer (KYC) principle, and designing good design of IT system. The importance of IT system to support this effort plays a major role, and the starting point to do this is to design and plan a map or framework with IT project management for the system itself.

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THE INFLUENCE OF LARGE SHAREHOLDERS ON PAYOUT POLICY: ANALYSIS FROM AN AGENCY PERSPECTIVE

Nathasa Mazna Ramli*
Faculty of Economics and Muamalat
Islamic Science University of Malaysia
Nilai, Negeri Sembilan, Malaysia
and
School of Economics and Finance
La Trobe University

Darren Henry
School of Economics and Finance
La Trobe University

* Corresponding author- Address: School of Economics and Finance, La Trobe University,Victoria 3086, Australia
Phone: +61 3 94795314, Fax: +61 3 94791654 Email: nmramli@students.latrobe.edu.au

THE INFLUENCE OF LARGE SHAREHOLDERS ON PAYOUT POLICY: ANALYSIS FROM AN AGENCY PERSPECTIVE

Nathasa Mazna Ramli
Islamic Science University of Malaysia (USIM)
Nilai, Negeri Sembilan, Malaysia
and
La Trobe University
Victoria 3086, Australia

Darren Henry
School of Economics and Finance
La Trobe University

ABSTRACT

The paper investigates the effect of large shareholders on the magnitude of corporate payouts for Malaysian companies using panel data from 2002 to 2006. Based on an agency perspective, large shareholders are hypothesized to have influence on companies' payout ratio. Contrarily to the notion that the largest shareholder might expropriate the companies' wealth, and thus lead to lower payout ratio, it is observes that the higher the largest shareholding, the higher the payout ratio of the company. This result also does not support the classical agency view that the shareholders ownership and payouts substitute each other to reduce agency conflicts. In addition, the paper finds that the presence of substantial second largest shareholder has a significant and positive impact on the payout ratio. The presence of a minority shareholders watchdog group as other large shareholder is also observes to influence the payout level of Malaysian companies. However, the paper does not find that different types and ethnicity of the large shareholder have any statistically significant influence on the magnitude of payout ratio. It is hoped that this study will add to the literature and enhance the understanding of this subject by providing evidence from an Asian country where the level of ownership concentration is high and large shareholder can be categorized according to ethnic lines.

Key words: Payout Policy, Ownership Structure, Agency Theory, Malaysia

1. INTRODUCTION

Recent studies have noted that many publicly listed companies located outside the United States (U.S.) and the United Kingdom (U.K.) have high concentration of ownership, wherein a single large shareholder or shareholder group controls a company or corporation (Claessens et al., 2000, La Porta et al., 1999, Faccio and Lang, 2002). The evidence suggests that the large shareholders in developed countries besides the U.S. and the U.K., European countries and East Asian countries, operate in such a way that they negate the concept of separation of ownership from control discussed by Berle and Means (1932).

Effective control by large shareholders enables them to influence the decisions regarding how companies are run, as well as how their corporate policies are developed and put into practice. However, as stated by Holderness (2003), the role of large shareholders is not well developed in the ownership literature, especially the role of the largest shareholder. The largest shareholder is a unique type of shareholder, where their holding is associated with benefits and costs, especially underinvestment costs (Truong and Heaney, 2007, Claessens et al., 2002). One type of company decision that is generally influenced by corporate ownership structure concerns payout policy. Companies will always need to make decisions on what percentage of earnings that needs to be paid out as dividends, and in what form to distribute cash to shareholders.

It has been suggested that corporate payouts are used to alleviate agency problems (Easterbrook, 1984, Jensen, 1986, Rozeff, 1982). According to agency perspective, the non-existence of effective governance simply encourages managers to expropriate corporate funds. Managers are then free to pursue endeavours that serve their interests and they would not properly devote their time or resources to profitable investments or allocate earnings to shareholders. Distribution of a company's earnings may go no further than the managers, and for this reason corporate payouts have become a corporate governance device to mitigate agency conflicts. Many studies have been undertaken previously on the subject of payout policy, yet little research had been done on agency-based-explanations of corporate payouts. As stated by La Porta, Lopez-de-Silanes, Shleifer and Vishny (2000), 'the idea of dividend policy in addressing agency problem has been getting limited attention until recently'. Claessens and Fan (2002) even suggest payout policy serves as an alternative governance device in emerging markets as conventional governance instruments are not effective in mitigating or solving agency concerns.

This paper mainly focuses on investigating the impact of large shareholders on corporate payout policy, from the perspective of agency arguments. Specifically, listed companies in an emerging economy, Malaysia, are examined. Instead of focusing only on a single payout channel (i.e. dividends) as many studies have done, this paper investigates the influence of large shareholders on corporations' total payout (i.e. dividends and share buy-backs). Malaysia provides an interesting background when examining this issue because its corporate ownership structure is highly concentrated and large shareholders are in control. This study finds that the largest shareholder or a shareholder group owns around 40 percent of a company's paid-up capital and 75 percent of observations have a significant second largest shareholding. Another area of focus in this study concerns how the largest shareholder is classified, i.e. whether they are a family, an institution or the Government. There is a unique feature of Malaysia's corporate sector that is analyzed in this study, specifically the fact that corporate ownership in Malaysia can be categorized according to ethnic groups. The Bumiputera-Malays and the Non-Bumiputera, are the two ethnic groups that predominantly control listed companies in Malaysia[1]. The phenomenon of Malaysian ownership structure according to ethnicity has been considered to be another dimension of agency problems. Consequently, how the ethnicity of the largest shareholder could influence the payout policy of Malaysian companies is explored here.

This paper is organized as follows. The next section provides a review of prior literature and hypothesis development for the paper. Section 3 discusses the data, the methodology and variables employed in this study. Section 4 presents the results and the discussion of the analysis. Section 5 contains a summary of the findings and conclusion.

[1] Bumiputera means "sons of the soil' in Malay. It refers to Malays and other indigenous people as distinct from Chinese, Indians, and other non-indigenous residents. Although there are other ethnic groups, it is these two main groups who dominate much of Malaysia's socio-economic activities and the government's policy decisions.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Agency theory suggests that large shareholders ownership may either alleviate or exacerbate agency conflicts. A high level of managerial ownership could minimize agency problems, as managers have to bear a portion of the losses arising from their divergent behaviour (Jensen and Meckling, 1976, Morck et al., 1988). Large shareholders have a strong incentive to maximize the company's wealth, have control over the company to have their interest respected (Shleifer and Vishny, 1997) and have the advantages in collecting information and monitoring the company (Shleifer and Vishny, 1986). Nonetheless, the interest of large shareholders might not match the interest of minority shareholders, thus leading to possible expropriation by large shareholders (Shleifer & Vishny, 1997).

Agency theory also suggests that corporate payouts can be used as a corporate governance (CG) mechanism to mitigate agency concerns. Rozeff (1982) develops an optimal dividend payout/cost minimization model and postulates that dividend payments are part of a monitoring device. Corporate payouts can also minimize agency conflicts by subjecting companies to the scrutiny of capital market monitoring (Easterbrook, 1984). Based on the free cash flow hypothesis, Jensen (1986) suggests that high payment of dividends could limit the cash available for managers. Therefore, managers' investment in uneconomic projects or wastage on perquisites can be minimized. The association between the managerial ownership and payout policy has been extensively examine in empirical studies (e.g.Rozeff, 1982, Moh'd et al., 1995, Agrawal and Jayaraman, 1994).

Corporate payouts also play a significant role in controlling possible agency conflicts between large shareholders and minority shareholders. By distributing payouts, a pro-rata distribution can be guaranteed to all shareholders and limit corporate wealth from large shareholders' control (Gugler, 2003). La Porta et al. (2000) indicate that minority shareholders in countries with stronger legal protection system will use their power to force controlling shareholders to pay higher payouts. Payouts can also be utilised by controlling shareholders to off-set the minority shareholders' concern in an environment where expropriation by controlling shareholders prevails (Faccio et al., 2001). However, in the presence of large shareholders, lower fund distributions can be observed as payouts are not needed to function as an alternative agency control device (Goergen et al., 2005). Payouts are viewed as a substitute mechanism to large shareholder ownership in mitigating agency conflicts. A high level of payout distributions could result in underinvestment risk and unnecessary liquidity constraints. Contrarily, lower payouts might be due to agency conflicts between large controlling shareholders and minority investors (Gugler and Yurtoglu, 2003).

Several studies have examined the relationship between the largest shareholder and payout policy. A negative relationship between the largest shareholder and payouts are observed by Gugler and Yurtoglu (2003), Maury and Pajuste (2002), Mancinelli and Ozkan (2006), Renneboog and Szilagyi (2006) and Renneboog and Trojanowski (2007) for companies from Germany, Finland, Italy, Netherland and UK, respectively. While a positive association between the largest shareholder and dividend payouts is observed by Truong and Heaney (2007) based on the sample drawn from 37 countries.

The relationship between the largest shareholder and payouts, however, might not be linear at all levels of ownership holdings. Based on managerial entrenchment hypothesis (Morck et al., 1988), a non-linear relationship between managerial ownership and payout policy has been observed by Schooley and Barney (1994) and Farinha (2003). A non-linear relationship also have been observed between the largest shareholder ownership and dividend policy (Gugler and Yurtoglu, 2003, Correia da Silva et al., 2004, Truong and Heaney, 2007).

Recent studies also has analyse the effect of other large shareholders, beside the largest one, on companies based from agency perspectives. Other large shareholders could monitor the controlling shareholder (Bolton and von Thadden, 1998, Pagano and Roell, 1998). The monitoring role play by the other large shareholders thus, could limit the expropriation of minority shareholders' resources. However, other large shareholders may collude with the controlling shareholder in expropriating corporate resources and share the private benefits (Faccio et al., 2001, Pagano and Roell, 1998). Empirical evidence on the impact of other large shareholders on payout policy has been limited. Faccio et al. (2001) find that the presence of multiple large shareholders in Europe minimizes the expropriation activity of the controlling shareholder, thus resulting in higher dividend payments, while in Asia, lower dividend rates are being observed. They conclude that the controlling shareholder collaborate with other large shareholders to expropriate the minority shareholders in Asia.

The existence of controlling shareholders in East-Asian companies had been related to the conflicts between large shareholders and minority shareholder, which lead to expropriation of minority shareholders (Claessens et al., 1999). Faccio et al. (2001) provide evidence that large shareholders in Asia expropriate companies' resources for their own private benefits. As results, the study finds that payouts of Asian companies are lower compared to European companies. However, the minority shareholders in countries with stronger legal protection system (i.e. common law system) will use their power to force controlling shareholders to pay higher dividends to limit expropriation. In line with the above discussion, the hypotheses of this study are as follows:

Hypothesis 1. The payout policy of Malaysian companies is negatively related to the ownership interest of the largest shareholder.

Hypothesis 2. The payout policy of Malaysian companies is negatively related to the ownership of the largest shareholder below a specific level of holding, and positively related to the ownership of the largest shareholder beyond that level of holding.

Hypothesis 3. The payout policy of Malaysian companies is positively related to the second largest shareholder ownership.

The recent developments in CG in Malaysia have led to the establishment of The Minority Shareholders Watchdog Group (MSWG) in 2001 with an objective to promote shareholder activism by institutional shareholders. As a body that advocates good CG, they may function as a monitoring tool and, thus, demand the controlling shareholder to distribute corporate resources in the form of payouts. Therefore, the following hypothesis is tested when examining the impact of the second largest who is a MSWG member with company's payout policy.

Hypothesis 4. The payout policy of Malaysian companies is positively related to the second largest shareholder being a MSWG member.

The category into which the largest shareholder falls may influence dividend decisions (Gugler and Yurtoglu, 2003). Gugler (2003) views that as large family shareholders have more incentive to monitor the company directly, the function of dividends as a monitoring tool become limited. Gugler (2003) also suggests that agency problems in Government owned companies are more severe than other companies due to the double principal-agent relationship. The author explains that the ultimate owners of Government-owned companies are the citizens, and the citizens have fewer incentives to monitor the companies. Furthermore, the representatives of citizens do not actively monitor the companies, as they are also not strongly monitored by the citizens. Higher payout levels therefore, can be expected in Government-owned companies, as payouts can act as a device to mitigate agency concerns.

Institutional shareholders and payout distributions can be viewed as a substitute in monitoring a company (Zeckhauser and Pound, 1990). Payouts for companies controlled by an institutional investor can be expected to be low as payouts are not required as a governance mechanism. However, as a large shareholder with strong monitoring skill, institutional investors would encourage company to distribute higher payouts to avoid being expropriated (Renneboog and Szilagyi, 2006). Institutional investors may also think that their role in monitoring the company is not enough or their efforts are very costly, and thus prefer the company to be monitored by external capital markets (Farinha, 2003). Therefore, the hypothesis relating to types of the largest shareholder are as follows:

Hypothesis 5. The payout policy of Malaysian companies is negatively related to the largest shareholder that is categorized as a family group and institutional shareholder, respectively and positively related the largest shareholder that is categorized as the Government.

The Malaysian Government involvement in corporate sector represents an important socio-political agenda due to Government's policy to rationalise the distribution of economic resources among different ethnic citizens. The Government implemented the New Economic Policy (NEP) in June 1971 with its main objective to narrow the economic gap between the Bumiputeras and the Non-Bumiputeras. One of NEP aimed was to achieve 30 percent ownership and management for the Bumiputeras by 1990 (Malaysia, 1971)[2]. The policy gave rise to the involvement of the Malays ethnics in the economic sector (Gomez and Jomo, 1997). Another primary consequence of NEP is the utilization of domestic institutional investors to increase Bumiputera ownership in the capital market (Gomez and Jomo, 1997). Previous research had shown that the ethnic differences in Malaysia, namely the Bumiputera and Non-Bumiputera, could affect the accounting disclosure practices, corporate financing and audit fees of listed companies (Haniffa and Cooke, 2002, Suto, 2003, Yatim et al., 2006). These studies indicate that an element of ethnicity can be considered as another dimension of agency problems. Johnson and Mitton (2003) and Gomez and Jomo (1997) argue that Bumiputera-owned companies are perceived to have poor CG practices and have greater agency problems. The differences in the ethnicity of the largest shareholder are also likely to influence the payout policy. Bumiputera-owned companies might be prone to expropriate the minority shareholders as the companies are associated with severe agency conflicts. Thus, it is expected that:

Hypothesis 6. The payout policy of Malaysian companies are negatively related to the the largest shareholder that is categorized as Bumiputera).

[2] One of the conditions for companies to be listed in Malaysia is that they need to have 30 percent Bumiputera ownership. However, starting 30 June 2009, the rule is no longer applied.

3. DATA AND METHODOLOGY

This study consists of non-financial public listed companies (PLCs) of Bursa Malaysia (Malaysian Stock Exchange), which consistently listed over the period of 2002 to 2006. This study applies a systematic random sampling of one for every two companies in the population. Financial, trusts and closed-end funds companies are excluded, as they are subjected to a regulatory framework that does not apply to other listed companies. In addition, companies that were classified under Practice Note 4/2001 during 2002 to 2006 are excluded (distressed companies/companies with negative shareholders' funds). The final sample contains 245 companies, which covers 1,225 firms-years observations.

3.1 Sources and collection of data

Data on the ownership of the sample companies are hand-collected from the annual reports, which are downloaded from the website of Bursa Malaysia (http://www.klse.com.my). The process of collecting the ownership data is started with the list of the 30 largest shareholders of each of the listed companies, which are found from the respective companies' annual reports. Two categories of large shareholders are the focus of this study, namely the largest and the second largest shareholder. The largest shareholder is defined as a shareholder who owns 5 percent or more of the total equity holding of the company. The study scrutinizes thoroughly each of the company's annual reports to collect relevant information on the direct and indirect holdings.

The largest shareholder is classified into four mutually exclusive groups, namely individual/family, Government, trust funds/institutional investors and a foreign company/individual. The study do not distinguished between family members. The study use the family group as a unit of analysis, as it is assumed that they vote as a coalition. Family includes people that are related through blood or marriage. This study assumes that people with the same surname and people that have the same father's name[3] belong to the same family.

A largest shareholder is categorized as the Government if it can be categorized as representing one of the following bodies: 1) the Federal Government; 2) the State agencies; and 3) the Federal Government-Linked agencies/Government-Linked Investment Companies (GLICs). While trust funds/institutional investors include insurance companies, pension funds, professional fund managers and licensed banking institutions. A company with the largest shareholder is a foreign company or foreign individual, is classified as foreigners. For companies which the largest shareholder is a private company, the study looked at the ultimate owner of the private company until the largest shareholder can be classified into one of the above type of the largest shareholder. In order to enhance data accuracy, the type of ownership classification is verified with the classification of ownership from the OSIRIS database[4].

The largest shareholder is also classified according to the ethnicity of the largest shareholder. Following Yatim et al. (2006), the ethnicity of the largest shareholder is determined by examining the name of the largest shareholder. If the names are of Chinese origin, for example, having the surname of Yap or Kwok, the criterion is satisfied, that is the largest shareholder is a Chinese (Non-Bumiputera). A similar approach is also used for the largest shareholder who is with Bumiputera/Malay name or other ethnicities other than Bumiputera.

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[3] For Muslims in Malaysia, their name will include their father's name after the word 'Bin' or 'Binti' which mean 'the son of' or 'the daughter of', respectively.
[4] OSIRIS database only provided ownership data starting from 2004.

The main source for financial data is OSIRIS database, except for data related to share-bubacks activity. Apart from that, companies' annual reports and Thomson One Analytical database are used. The main source is confirmed by reference to other sources whenever this is possible to improve accuracy. Data on share-buybacks are obtained manually from the individual company's annual reports.

3.2 Model Specifications

The study use random-effects tobit regressions to analyse the influence of large shareholders on the level of payouts. The model to be estimated can be expressed as:

$$Y_{it} = \alpha + \beta_1 \text{LARGE SHAREHOLDERS}_{it} + \beta_2 \text{TYPE}_{it} + \beta_3 \text{ETHNICITY}_{it} + \beta_4 \text{CONTROL}_{it} + \beta_5 \text{TIME}_{it} + \beta_6 I\text{NDUSTRIES}_{it} + \mu_{it} + \qquad \text{Equation 1}$$

where:
μ_i = the unobserved error component
Y_{it} = the dividend payout ratio

$$Y_{it} = \begin{cases} Y^*_{it} \text{ if } Y^*_{it} > 0 \\ 0 \text{ if } Y^*_{it} \leq 0 \end{cases}$$

Details of the dependent and independent variables use are explained in Table 1.

Table 1: Summary of variables measurement

Variables	Notation		Explanation	Expected Sign
DEPENDENT VARIABLE				
	TPE	:	Total payouts (dividends plus amount of shares buy-back) divided with the earnings after taxes and interest but before extraordinary items	n.a
INDEPENDENT VARIABLES				
LARGE SHAREHOLDERS				
	LARGEST	:	The proportional holding of the largest shareholder	-
	SQLARGEST	:	LARGEST raised to the power of 2	+
	SECOND	:	The proportional holding of the second largest shareholder	+
	SECOND5%	:	Dummy variable takes the value of 1 if the second largest shareholding is equal or more than 5 percent, 0 if otherwise	+
	SECOND10 %	:	Dummy variable takes the value of 1 if the second largest shareholding is equal or more than 10 percent, 0 if otherwise	+
	MSWG	:	Dummy variable equal to 1 if the second largest shareholder is a MSWG member	+
TYPES OF THE LARGEST SHAREHOLDER				
	FAMILY	:	Dummy variable equal to 1 if the largest shareholder is a family group, 0 if otherwise	-
	GOVERNMENT	:	Dummy variable equal to 1 if the largest shareholder is the Government, 0 if otherwise	+
	INSTITUTIONAL	:	Dummy variable equal to 1 if the largest shareholder is an institutional shareholder, 0 if otherwise	-
	FOREIGN	:	Dummy variable equal to 1 if the largest shareholder is a foreign company, 0 if otherwise	-
ETHNICITY OF THE LARGEST SHAREHOLDER				
	BUMIPUTERA	:	Dummy variable equal to 1 if the largest shareholder is a Bumiputera, 0 if otherwise	-
CONTROL VARIABLES				
	ROA	:	is the ratio of earnings before interest and taxes to total assets	+
	SIZE	:	is the natural log of total assets	+
	INV	:	is the ratio of market capitalization to total assets	-
	DEBT	:	is the ratio of the book value of total debt to total assets	-
	RISK	:	is the standard deviation of monthly share returns	-
	TIME	:	years dummies that, respectively take a value of 1 for 2002, 2003, 2004, 2005,2006, or 0 if otherwise	
	INDUSTRY	:	industry dummies that take a value of 1 for companies involved in construction, consumer, industrial, infrastructure project companies, hotels, plantations, properties, technology and trading/services, or 0 if otherwise	

4. RESULTS AND DISCUSSION

4.1 Descriptive statistics

Table 2 summarizes the financial characteristics of the companies in this study. There is considerable skewness in the total assets, with the mean and median values of RM1, 772 million and RM467 million respectively. The leverage of the companies is moderate; with the average percentage of the total debt over the total assets is 21.8 percent. The mean and median of profitability level is also reasonably moderate with an average ROA level of 5.40 percent and a median ROA level of 6 percent. The mean and median of investment opportunities ratio are 0.691 and 0.458, respectively.

Table 2: Firm's characteristics of 245 Malaysian listed companies, 2002-2006

Variables	N	Mean	Median	Minimum	Maximum	Standard Deviation
Total assets (RM Mil)	1225	1,772	467	2	65,092	5,458
Total debt/total assets	1225	0.218	0.198	0.000	1.646	0.198
Investment (Tobin's Q)	1225	0.691	0.458	0.024	13.784	0.865
Return on assets	1225	5.40%	6.00%	-129.03%	79.62%	0.122
Firm's risks	1225	0.091	0.079	0.015	0.549	0.058
Dividends by dividend paying firms (RM 000)	878	38,520	7,600	78	1,013,300	102,026

Table 3 shows the distribution of the sample companies' ownership. The largest shareholder on average holds 40.21 percent of the company's total equity holding. The second largest shareholder also holds a substantial holding; with a mean value of 10.79 percent. Panel A of Table 4 highlights the largest shareholder ownership based on type of ownership and ethnicity. The results show that 73.71 percent of the sample companies are owned by a family group. The institutional-owned companies and foreign-owned companies are relatively smaller in the sample, where 4.90 percent and 7.51 percent are owned by an institutional shareholder and a foreigner, respectively. On average the holding of the largest shareholder which is categorized as a FAMILY is 37.68 percent. Even though FAMILY has a large presence as a large shareholder in the sample companies, the mean value of the shareholding is lower than the mean value of the holding of the largest shareholder that is categorized as GOVERMENT, INSTITUTIONAL and FOREIGN. In addition, the Bumiputera largest shareholding is substantially higher than the Non-Bumiputera largest shareholding, with the average holding of 42.08 percent and 38.72 percent, respectively. Panel B shows that the number of companies with significant second largest shareholding is high; where more than 75 percent of the observations have a second largest shareholder that owns more than 5 percent of equity holding. There are also 401 companies that have a MSWG member as the second largest shareholder.

Table 3: The largest and the second largest shareholding of 245 Malaysian companies, 2002-2006

		Percentage Holding					
		LARGEST			SECOND		
	N	Mean	Median	Standard Deviation	Mean	Median	Standard Deviation
Average 2002-2006	1225	40.21%	40.41%	0.163	10.79%	9.18%	0.071
2002	245	40.50%	41.25%	0.161	11.23%	9.67%	0.075
2003	245	39.71%	39.87%	0.161	11.25%	10.42%	0.073
2004	245	40.13%	40.39%	0.165	10.49%	8.82%	0.069
2005	245	40.46%	40.54%	0.165	10.50%	8.73%	0.071
2006	245	40.26%	40.56%	0.164	10.46%	9.05%	0.068

Table 4: The largest shareholder ownership based on the types, ethnicity and concentration for 245 Malaysian companies, 2002-2006

		Percentage Holding		
PANEL A	N	Mean	Median	Standard Deviation
Type of largest shareholder				
FAMILY	903	37.68%	37.62%	0.158
GOVERNMENT	170	46.82%	45.88%	0.154
INSTITUTIONAL	60	49.33%	52.89%	0.177
FOREIGN	92	46.89%	40.41%	0.148
Ethnicity of largest shareholder				
BUMIPUTERA	416	42.08%	40.29%	0.165
NON-BUMIPUTERA	809	38.27%	39.38%	0.160
PANEL B	Frequencies			
The presence of other large shareholder				
SECOND5%	929			
SECOND10%	582			
MSWG	401			

Malaysian companies seem to prefer to choose dividends as the method of distributing their funds compared to buying back their shares. Less than 14 percent of the sample companies opt for share buy-backs as the channel of distribution. However, the number of companies that buy-back their shares seems to have increased sharply from 2002 to 2006. This indicates that more companies are choosing to buy-back their shares from the shareholders as a means of distributing companies' funds. The number of dividend paying companies, however, is still stable during the period under review. This shows that the buy-back option complements, rather than substitutes for dividends, as the channel of distribution. Indeed, column four of Table 5 shows that the percentage of companies that distribute funds in some form (either through dividends or share buy-backs) has increased from 2002 to 2006.

Table 5: The likelihood of fund distribution - percentage of payers

Year	Dividends	Share buy-back	Total payout
2002	70.61%	6.94%	71.02%
2003	73.88%	8.57%	74.69%
2004	71.02%	10.20%	71.84%
2005	70.20%	20.41%	74.29%
2006	72.65%	22.45%	75.51%
Average 2002-2006	71.67%	13.71%	73.47%

The average amounts spent by companies on dividends, share buy-backs and total payouts are presented in Table 6. The average amount of dividends paid by the companies is RM38 million (median=RM7 million). The average amount of share buy-backs is RM15 million (median=RM1 million). Indeed, share buy-backs are not only less popular than dividends as a form of payout, but the amounts are much lower than the amount distributed by dividend-paying companies. The amounts distribute by companies to their shareholders using dividends and share buy-backs are shown in the last column of Table 6, with the average and median value of RM40 million and RM7 million, respectively. The trend concerning the average amount of dividends by dividend-paying companies has risen during the years 2002 to 2006. A similar pattern has been observed for the average amount spent on total payouts by reimbursing companies. The amount spent on share buy-backs has not shown a consistent trend for the period under review, even though the number of companies that chose share buy-backs as a form of reimbursement had increased from 2002 to 2006 (see Table 5).

Table 6: Amount spent on dividends, share buy-backs and total payouts by dividend-paying companies, repurchasing companies and reimbursing companies, respectively

Year	Average amount spent on dividends by dividend-paying companies (RM 000)		Average amount spent on share buy-backs by repurchasing companies (RM 000)		Average amount spent on total payouts by reimbursing companies (RM 000)	
	Mean	Median	Mean	Median	Mean	Median
2002	29,062.69	5,962.00	8,729.22	1,719.00	29,748.52	5,981.00
2003	31,944.50	5,867.00	3,630.93	600.00	31,837.48	5,836.00
2004	39,410.72	7,965.00	13,433.72	1,272.00	40,871.07	7,965.65
2005	39,637.92	8,439.00	27,709.58	1,566.85	45,072.54	8,249.50
2006	52,410.53	10,406.50	12,270.30	1,654.00	54,075.36	10,341.00
Average 2002-2006	38,520.09	7,600.00	15,600.21	1,352.00	40,447.73	7,530.00

4.3 Regression analysis

This section examines the influence of the large shareholders on the TPE (see Table 7). Consistent with prior studies, the analysis finds that the debt ratio is negatively and significantly associated with the TPE. There are also evidences that the profitability level and company size are positively related with TPE, and the relationships are significant at the 1 percent level and 10 percent level, respectively. The analysis also finds that the coefficient of the RISK variable is negative and statistically significant at the 1 percent level of confidence. However, companies' investment opportunities have no statistically significant impact on TPE.

In the model specification 1, the analysis finds that the coefficient of the TPE variable is positive and statistically significant at the 5 percent level. This suggests that the greater the largest shareholding in Malaysian companies, the higher the total payout ratio. The model specification 1 also presents that the SECOND variable has a positive sign, but the coefficient is not statistically significant. The analysis also finds that the coefficient of the MSWG variable has a positive and significant effect on TPE at the 10 percent level of confidence. Model specification 2 presents the results of the analysis of the non-linear association between the largest shareholding and TPE. The analysis observes that there is no evidence of a non-linear relationship between the largest shareholding and TPE. However, by including SQLARGEST in the model, the magnitude of the second largest shareholding become statistically significant at the 10 percent level.

The analysis incorporates the interaction between the large shareholders variables in model specification 3. In contrast to model specification 2, we find that the presence of a MSWG member, as the second largest shareholder, has a negative and statistically significant influence on the TPE variable. The MSWG member seems to provide valuable monitoring services, thus, reducing the function of payout in alleviating agency problems. In addition, we also find that the interaction terms between the LARGEST and MSWG variables are positively related with the TPE variable (significant at the 1 percent level). This result confirms the role of the MSWG member as a monitoring tool, where they encourage a higher payout in companies with a more dominant largest shareholding.

In model specification 4 and 5, the study replaces the SECOND variable with the SECOND5% variable. The results show that the substantial second largest shareholder has a positive influence on the TPE. The coefficients for SECOND5% variable in both models are statistically significant at the 1 percent level. In model 5, the analysis is extended by including interactions between variables of interest. The study finds that the coefficient of the MSWG variable is negative and statistically significant at the 5 percent level. We also find that the interaction between the LARGEST variable and MSWG variable is positive and statistically significant at the 1 percent level. Interestingly, the coefficient of the interaction between the LARGEST variable and SECOND5% variable is negative and statistically significant at the 5 percent level. This indicates that companies with a higher largest shareholding and a substantial second largest shareholder, have a lower magnitude of total payout. A possible explanation may be that the largest shareholder collaborates with the second largest shareholder in expropriating the corporate resources for their own private benefit. This reduces the pro-rata payout to all shareholders. The interaction term also says that the greater is the largest shareholding in the presence of a second substantial shareholder, the less is the incentive to demand the corporate payout. This might suggest that greater largest shareholding might have a bonding effect.

In model specification 6 and 7, the analysis substitutes the SECOND5% variable with the SECOND10% variable. There is no statistically significant evidence that the presence of a second largest shareholder with a shareholding equal or more than 10 percent of the total paid-up capital has any influence on TPE. The analysis is extended by including the interaction between SECOND10% and LARGEST variables, and we also observe that the coefficient of the interaction variable is not statistically significant. Nevertheless, the coefficients of the MSWG and the LARGEST*MSWG variables remains significantly negative and positive, respectively.

Table 7: The influence of large shareholders on total payout to earnings ratio

This table presents Tobit regressions to test the influence of large shareholders on total payout to earnings ratio. The sample consists of 245 listed companies on the Bursa Malaysia between 2002 and 2006. TPE is total payout divided by earnings after taxes and interest but before extraordinary items. DEBT is total debt over total assets. INV is the ratio of market capitalization to total assets. ROA is the ratio of earnings before interest and taxes to total assets. SIZE is the natural log of total assets. RISK is the standard deviation of the monthly share return. LARGEST is the proportional holding of the largest shareholder. SECOND is the proportional holding of the second largest shareholder. SECOND5% is a dummy variable equal to 1 if the second largest shareholder owns equal or more than 5 percent of the paid-up capital. SECOND10% is a dummy variable equal to 1 if the second largest shareholder owns equal or more than 10 percent of the paid-up capital. SQLARGEST is LARGEST raised to the power of 2. MSWG is a dummy variable equal to 1 if the second largest shareholder is a MSWG member, 0 if otherwise. BUMIPUTERA is a dummy variable equal to 1 if the largest shareholder is a Bumiputera, 0 if otherwise. z statistics are italicised. *, ** and *** denote 10%, 5% and 1% statistical significance level, respectively.

	Dependent variable: TPE						
Independent Variables	1	2	3	4	5	6	7
INTERCEPT	-1.930	-1.415	-1.579	-2.274	-2.555	-1.716	-1.295
	-2.03 **	-1.40	-1.57	***-2.38*** **	***-2.44*** **	***-1.82*** *	-1.34
DEBT	-0.920	-0.923	-0.914	-1.069	-1.063	-0.969	-0.964
	-2.13 **	***-2.14*** **	***-2.12*** **	***-2.46*** **	***-2.45*** **	***-2.24*** **	***-2.24*** **
INV	-	-	-	-	-	-	-

	0.047	0.042	0.044	0.058	0.053	0.518	0.046
	-0.46	-0.41	-0.42	-0.55	-0.50	-0.50	-0.45
ROA	1.959	2.048	2.101	1.890	1.986	1.948	2.084
	2.75***	2.84***	2.91***	2.66***	2.78***	2.74***	2.89***
SIZE	0.115	0.113	0.109	0.107	0.107	0.118	0.112
	1.67*	1.63	1.58	1.54	1.53	1.71*	1.63
RISK	-3.320	-3.355	-3.223	-3.166	-3.006	-3.401	-3.318
	-3.08***	-3.11***	-3.00***	-2.96***	-2.82***	-3.15***	1.70***
LARGEST	1.232	-1.706	0.424	1.632	1.971	1.083	0.105
	2.50**	-0.85	0.48	3.23***	2.11**	2.18**	0.15
SECOND	1.324	1.675	2.772				
	1.38	1.69*	0.91				
MSWG	0.236	0.231	-0.733	0.173	-0.764	0.230	-0.779
	1.71*	1.67*	-1.96**	1.25	-2.07**	1.66*	-2.10**
BUMIPUTERA	-0.194	-0.203	-0.602	-0.205	-0.583	-0.164	-0.497
	-1.29	-1.35	-1.58	-1.37	-1.55	-1.09	-1.30
SQLARGEST		3.582					
		1.50					
Table 7 continued:							
LARGEST*SECOND			-3.556				
			-0.51				
LARGEST*MSWG			2.285		2.231		2.371
			2.81***		2.77***		2.93***
LARGEST*BUMIPUTERA			0.932		0.845		0.753
			1.11		1.02		0.90
SECOND5%				0.605	1.476		
				3.94***	3.29***		
SECOND10%						-0.073	0.043
						-0.57	0.13
LARGEST*SECOND5%					-1.945		
					-2.13**		
LARGEST*SECOND10%							-0.298
							-0.37
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes

No. of observations	1225	1225	1225	1225	1225	1225	1225
Left-censored observations	374	374	374	374	374	374	374
Wald test	67.02***	69.10***	76.51***	79.66***	91.34***	65.47***	75.00***
Log-likelihood	-1741.709	-1740.583	-1736.834	-1734.829	-1728.221	-1742.493	-1737.655
Sigma u	1.054	1.055	1.059	1.064	1.077	1.057	1.048
Sigma e	1.326	1.324	1.320	1.314	1.302	1.326	1.320
Rho	0.387	0.389	0.387	0.396	0.406	0.388	0.386

Table 8 shows the results on the determinant of total payout with particular emphasis on types of the largest shareholder. In model 8, the study re-estimates the basic model by including the FAMILY, GOVERNMENT and INSTITUTIONAL variables in the model. The dummy variable of a foreign shareholder (FOREIGN) is excluded from the analysis to avoid the circularity problem. The study does not find any evidences that the identity of the largest shareholder have any influence on TPE. The coefficients of the dummy variables of interest, are negative, but not statistically significant. The analysis further tests the notion that the types of controlling shareholder have influences on the magnitude of total payout by replacing the dummy variables that represent the types of the largest shareholder with the interaction between the LARGEST variable and FAMILY, GOVERNMENT and INSTITUTIONAL, respectively. The results in model 11 to 13 demonstrate that the interaction variables are not statistically significant.

The evidence does not provide support for the argument that the payout ratio is linked to the types of the controlling shareholder, particularly as suggested by Gugler (2003), Correia da Silva et al. (2004) Truong and Heaney (2007). A possible reason for the inconsistent results between our study and previous research is the difference in the institutional background of the countries and sample of the studies. Gugler (2003) use Austrian companies in his analysis, however, more than 80 percent of the sample are non-listed companies, with an average largest shareholding of 78.5 percent. Our study, on the other hand, focus on Malaysian listed companies with an average largest shareholding of 40.21 percent. Additionally, the influence of German banks are substantial on German companies, even though only 5.9 percent of companies are controlled (i.e. with largest shareholding more than 25 percent) by banks, (Correia da Silva et al., 2004).

Table 8: The influence of types of the largest shareholder on total payout to earnings ratio

This table presents Tobit regressions to test the influence of types of the largest shareholder on total payouts to earnings ratio The sample consists of 245 listed companies on the Bursa Malaysia between 2002 and 2006. TPE is total payouts divided by earnings after taxes and interest but before extraordinary items. DEBT is total debt over total assets. INV is the ratio of market capitalization to total assets. ROA is the ratio of earnings before interest and taxes to total assets. SIZE is the natural log of total assets. RISK is the standard deviation of the monthly share return. LARGEST is the proportional holding of the largest shareholder. SECOND is the proportional holding of the second largest shareholder. SECOND5% is a dummy variable equal to 1 if the second largest shareholder owns equal or more than 5 percent of the paid-up capital. SECOND10% is a dummy variable equal to 1 if the second largest shareholder owns equal or more than 10 percent of the paid-up capital. MSWG is a dummy variable equal to 1 if the second largest shareholder is a MSWG member, 0 if otherwise. BUMIPUTERA is a dummy variable equal to 1 if the largest shareholder is a Bumiputera, 0 if otherwise. FAMILY is a dummy variable equal to 1 if the largest shareholder is a family group, 0 otherwise. GOVERNMENT is a dummy variable equal to 1 if the largest shareholder is the Government, 0 otherwise. INSTITUTIONAL is a dummy variable equal to 1 if the largest shareholder is an institutional shareholder, 0 otherwise. z statistics are italicised. *, ** and *** denote 10%, 5% and 1% statistical significance level, respectively.

	Dependent variable: TPE					
Independent Variables	8	9	10	11	12	13

INTERCEPT	-1.721	-2.123	-1.530	-1.918	-2.273	-1.708
	-1.71 *	-2.09 **	-1.53	-2.01 **	-2.37 **	-1.80 *
DEBT	-0.919	-1.063	-0.969	-0.911	-1.058	-0.960
	-2.12 **	-2.45 **	-2.23 **	-2.10 **	-2.44 **	-2.22 **
INV	-0.048	-0.057	-0.052	-0.045	-0.055	-0.050
	-0.46	-0.54	-0.50	-0.44	-0.53	-0.48
ROA	1.937	1.876	1.928	1.956	1.893	1.948
	2.71 ***	2.64 ***	2.70 ***	2.74 ***	2.66 ***	2.73 ***
SIZE	0.114	0.106	0.117	0.114	0.106	0.117
	1.64	1.53	1.69 *	1.64 *	1.53	1.69 *
RISK	-3.295	-3.143	-3.378	-3.309	-0.154	-3.392
	-3.05 ***	-2.93 ***	-3.13 ***	-3.07 ***	-2.95 ***	-3.14 ***
LARGEST	1.240	1.631	1.091	1.531	1.861	1.310
	2.50 **	3.22 ***	2.19 **	1.89 *	2.28 **	1.61
SECOND	1.349			1.356		
	1.40			1.41		
MSWG	0.237	0.174	0.230	0.235	0.171	0.228
	1.71 *	1.26	1.67 *	1.70 *	1.23	1.65 *
BUMIPUTERA	-0.187	-0.196	-0.158	-0.185	-0.193	-0.156
	-1.24	-1.3	-1.05	-1.22	-1.28	-1.03

Table 8 continued:

FAMILY	-0.202	-0.150	-0.180			
	-0.67	-0.50	-0.60			
GOVERNMENT	-0.166	-0.154	-0.142			
	-0.47	-0.43	-0.40			
INSTITUTIONAL	-0.331	-0.358	-0.308			
	-0.75	-0.81	-0.70			
FAMILY*LARGEST				-0.295	-0.208	-0.219
				-0.43	-0.31	-0.32
GOVERNMENT*LARGEST				-0.460	-0.459	-3.718
				-0.55	-0.55	-0.45
INSTITUTIONAL*LARGEST				-0.688	-0.788	-0.596
				-0.65	-0.75	-0.56
SECOND5%		0.608			0.612	
		3.94 ***			3.97 ***	
SECOND10%			-0.070			-0.068
			-0.54			-0.53
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	1225	1225	1225	1225	1225	1225
Left-censored observations	374	374	374	374	374	374
Wald test	67.59 ***	80.18 ***	65.96 ***	67.44 ***	80.3 ***	65.78 ***
Log-likelihood	-1741.3	-1734.5	-1742.2	-1741.4	-1734.45	-1742.29

	76	00	10	48	7	9
Sigma u	1.054	1.063	1.056	1.053	1.062	1.056
Sigma e	1.326	1.314	1.326	1.326	1.314	1.326
Rho	0.387	0.396	0.388	0.387	0.392	0.388

5. CONCLUSION

Based on agency perspective, this paper examines the relationship between large shareholders and payout policy of Malaysian listed companies. Malaysia provides an excellent setting to investigate the relationship as the corporate ownership structure is characterized as concentrated in nature. Furthermore, this paper provides evidence from East-Asian country, where this region is describe with severe agency conflicts between controlling shareholders and minority shareholders. Majority of existing evidences on this topic are based on European countries. In addition, this paper also exploits the institutional setting of Malaysia, where the ownership structure can be characterized into two ethnic groups.

The paper finds that large shareholders do influence the payout policy of Malaysian listed companies. It is observes that the higher the largest shareholding, the higher the total payout of the company. This does not support the classical agency view that large shareholder ownership and payouts substitute for each other to reduce agency conflicts. The results also reject the notion that large shareholders in Malaysia expropriate corporate resources for their own private benefit by reducing the level of payout ratio. The presence of the substantial second largest shareholder, who owns a minimum of 5 percent of the total paid-up capital, also has a positive and statistically significant influence on the total payout ratio. This indicates that the presence of other large shareholders encourages the companies to distribute higher payouts. This finding supports the argument about the positive monitoring role of other large shareholders, as proposed by Faccio et al. (2001) and Gugler and Yurtoglu (2003). The paper also observes that the presence of a MSWG member, as the second largest shareholder have a significant influence on the payout ratio. However, the study does not find significant evidence on the influence of the largest shareholder's identity and ethnicity on companies' payout level.

Overall, the paper finds that large shareholders in Malaysia have effects on the magnitude of total payout distribution. However, further tests are needed to ensure that this study's findings are robust and valid. Hence the result of this paper should be interpreted with caution. Future research can tests whether the concentration level of the largest shareholder have an impact on payout policy. Beside that, instead of focusing on the decision on how much to pay dividend/distribute funds, it is suggested that future research also focus on the decision of whether to distribute or not the funds of the corporation.

It is hoped that this study will add to the literature and enhance the understanding of the subject by providing evidence from an Asian country. In addition, the ongoing CG reform in Malaysia may result in payout policy being used as a CG tool, especially in an environment where conventional governance instruments have proven unsuccessful with regard to their monitoring function (Tam and Tan, 2007). Thus, this study may also provide insights and additional guidance for policy makers in improving the design of CG features.

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Patterns and Determinants of China's Outward Foreign Direct Investment in 2008

Michiko Miyamoto[1], Xin Lu[1], Yoshiaki Shimazaki[1,*]
[1]Akita Prefectural University
84-4 Ebinokuchi, Yurihonjo, Akita 015-0055, Japan

[*]Corresponding author. Tel.: +81 184 27 2163; Fax: +81 184 27 2189
E-mail: miyamoto@ism.ac.jp

Abstract
Helped by the substantial amount of foreign direct investment (FDI) inflow, Chinese economy has been growing rapidly after the economic modernization of 1978. On the other hand, China's outward FDI was strictly regulated by the government and the amount was limited for many years. Recently, China's outward FDI has been increasing fast, as the country's policies over industrialization and national security change. This study empirically investigates the patterns and determinants of China's outward FDI. The financial data of 230 Chinese enterprises with overseas subsidiaries are analyzed using the Tobit and the multiple regression models. The analysis indicates that the state ownership of the enterprises is a strong factor of FDI in some regions of the world. But the traditional driving factors of FDI such as capital-labor ratio, profitability, and growth potential do not appear to be much relevant. Further, the tendency of the Chinese manufacturing industry to invest to North America or Europe indicates that the FDI is a strategic one focusing on acquisition of advanced manufacturing technology. Finally, the recent subprime mortgage crisis might have affected the pattern of China's outward FDI.

Keywords
Outward foreign direct investment, China, Empirical study

1. Introduction

After the economic modernization of December 1978, Chinese economy grew almost 9% annually from 1980 to present. Export from China has been increased by 22% between 2005 and the first half of 2008. A promotion of investment from foreign countries, especially the foreign direct investment (FDI) by overseas corporations, is considered as one of the important reasons for China's high growth (Ji 2006). On the other hand, China's outward FDI, strictly regulated by the country's capital regulation, was limited to a small amount for many years. However, because of government decisions over industrial policies and national security, not of profit seeking activities of private firms, the amount of China's outward FDI has been rapidly increasing recently (Guan 2008). According to the Bulletin of Chinese Foreign Direct Investment Statistics 2006, China's outward FDI increased 43.8% from previous year to approximately $17.6 billion. The amount more than triples the recorded amount of $5.5 billion in 2004.

Japan experienced an increase of its FDI toward the manufacturing industry in the United States from 1976 to 1987; however, the reason for the increase was considered as Japan's comparative advantages in technology and technological assets in the industry (Kogut and Chang 1991). Kogut and Chang (1991) discuss relationships between FDI and several factors like marketing ability as intangible worth, policies of home country, and magnitude of economic activities by subsidiaries in the United States.

What are the patterns of FDI by Chinese enterprises? Do they act differently depending on different counterparts and industries? How China's outward FDI differ in different locations such as in Europe, in Japan, and in the United States? Does the FDI outflow of China resemble that of developed countries? What is the focus of Chinese corporations seeking investment overseas? This study tries to answer these questions using the FDI theory by Ozawa (1979), and discusses the patterns and determinants of China's outward FDI. This study also investigates the effect of state-owned enterprises on FDI, as this type of corporate entity is common in China.

2. Patterns of China's Outward FDI

According to the White Paper on International Trade and Economy 2005 by Japan's Ministry of Economy, Trade and Industry (METI), China promoted an internationalization of overseas investment and conduct of a business by major local corporations in its 10th 5-year Plan (2001-2005). The Chinese government exercised the plan by easing its foreign currency control and simplifying the licensing process for foreign investment. Ke (2005) points out several factors that drive outward FDI by Chinese corporations such as 1) their advancement to a new phase of economic growth, 2) their desire for competitive strength in the technologically lagging field through mergers and acquisitions of foreign corporations, and 3) their needs for securement of natural resources to maintain a high growth.

A large-scale M&A by Chinese enterprises is still in the early stage as the FDI accounts for only a small fraction (4%) of China's total investment ($56.4 billion) in 2008; however, it has been increasing at an unprecedented pace.

In 2003, about 48% of China's total outward FDI was directed toward mining industry and 22% was directed toward manufacturing industry. The composition of the FDI had changed in 2005 such that manufacturing and mining industries each makes up about 29% and the computer related industry including IT and software industries is about 26% of the total FDI. Chinese enterprises are starting to invest in various industries including services, wholesale and retail sales, transportation, agriculture and fisheries, and construction. Some cases of large-scale M&A, such as the purchase of IBM's PC operation by Lenovo Group Limited and capital participation of Shanghai Automotive Industry Corporation in Daewoo, are drawing people's attention. Although the number is still small, there are few cases of large state-owned enterprises purchasing Japanese corporation.

Table 1 Chinese Outward FDI Flows by Regions

Year	2003		2004		2005		2006		2007		2008	
Regions	Flows ($ million)	%	Flows ($ million)	%	Flows ($ million)	%	Flows ($ million)	%	Flows ($ million)	%	Flows ($ million)	%
Hong Kong/Macao	11.81	41.37	26.55	48.30	34.28	27.96	68.88	39.06	137.8	51.99	392.83	70.26
Asia	3.24	11.35	3.59	6.53	10.56	8.61	7.75	4.39	28.13	10.61	42.67	7.64
Africa	0.75	2.63	3.17	5.77	3.92	3.20	5.20	2.95	15.74	5.94	54.90	9.80
Europe	1.45	5.08	1.57	2.86	3.95	3.22	5.98	3.39	15.4	5.81	8.80	1.60
North America	0.58	2.03	1.26	2.29	3.21	2.62	2.58	1.46	11.26	4.25	3.60	0.60
Latin America	10.38	36.36	17.63	32.07	64.66	52.74	84.69	48.03	49.02	18.49	36.80	6.60
Oceania	0.34	1.19	1.20	2.18	2.03	1.66	1.26	0.71	7.70	2.91	19.50	3.50
Total	28.55	100%	54.97	100%	122.61	100%	176.34	100%	265.05	100%	559.1	100%

Figure 1 shows the change in the stock and the flow of China's outward FDI from 1979 to 2008. Both the total and the stock were slowly increasing until the mid 2000s and they started to increase sharply since 2004.

According to the Bulletin of Chinese Foreign Direct Investment Statistics published by the Chinese government, China's FDI is directed toward 139 different countries. Table 1 shows China's outward FDI flow by regions of the world from 2003 to 2008. Hong Kong and Macau was the region with the highest FDI outflow, accounting for 41% and 48% of the total FDI in 2003 and 2004. Latin America was the second highest region with 36% and 32% in 2003 and 2004. Latin America region became the highest FDI outflow region with 53% and 48% in 2005 and 2006. For these consecutive years, Hong Kong and Macau lowered its rank to second, accounting for 28% and 39% of each respective year's total. However, the FDI flow toward Hong Kong and Macau bounced back to the highest in 2007 and 2008 with 52% and 70%. Although the proportion of outward FDI to Asia remains relatively small at 4% to 11%, the measured value increased more than tenfold from US$324 million in 2003 to US$4,267 million in 2008. The proportion of FDI to Africa, accounting for about 3% to 5% over the period 2003 to 2007, remarkably increased to 10% becoming the second highest among all regions in 2008. The FDI to Europe and North America were relatively small over time, ranging from 1% to 6% of total FDI outflow.

[*insert Table 1 here*]

Figure 2 shows the change in China's FDI outflow from 2003 to 2008 by industry. China's FDI in most industry was increased after 2006 and the increase was especially large for the service and leasing industry.

[*insert Figure 2 here*]

3. FDI theories and research framework

Theories of FDI are developed from various perspectives such as capital mobility, monopolistic competition, internalization, leader-follower game, and eclectic choice. More recent and integrated theories like the Hymer-Kindleberger theory argue that enterprises chose to invest in foreign countries must possess some degree of strategic advantages in excess of the disadvantages arising form operating in an unaccustomed foreign environment.[1] The strategic advantages consist of intangible assets such as technological innovation, product differentiation, and management skills. The intangible nature of the strategic advantages requires relatively low marginal transfer cost, and enables the enterprise to operate in foreign environment efficiently as in home country.

An enterprise under FDI operation can lower its cost by internalizing the assets among parent company and subsidiaries. It decides whether to conduct its business in the form of FDI or export by comparing the benefit of location factors between home and overseas production. The location factors are important determinants of FDI in addition to the strategic advantages explained in the main stream FDI theories.

Previous studies describes that the FDI strategy of China is similar to that of ordinary transnational corporations (TNCs): investments in developed counties are oriented toward M&A involving product distribution, sales and marketing, and R&A, whereas investments in developing countries are new and production oriented.

Zhu (2006) categorizes China's FDI patterns into 1) the low-cost (economy of scale) type, 2) the technology/market/resource acquisition type, and 3) the mixed type. On the other hand, Wan (2007) classifies China's FDI patterns into four, namely 1) the Greenfield (new comer) type, 2) the takeover type, 3) the R&D type, and 4) the strategic partner type. The Greenfield type is characterized by investment style similar to manufacturing enterprises of industrialized countries like Japan. Today, some of China's home electronics, electronics, and textile enterprises are of this type, and they are typical in the industry with a substantial degree of competitiveness and manufacturing technology. Enterprises typically in the automobile and the IT industries, trying to acquire overseas name brand and advanced technology, are characterized by the takeover type. Although, this type includes the FDI by enterprises in the oil industry that are largely affected by the high return after the Iraq war and the Chinese government policy seeking secure energy for the national security reasons. The R&D type investments are typical among firms in the IT industry, and they resemble the FDI by Korean IT firms during 1980s in that firms gain access to

[1] See Caves (2007), Kobayashi et al. (2003), and Dunning (1980) for details of FDI theories.

advanced information and take advantage of highly-skilled human resources by establishing their subsidiaries in a high-tech center. The strategic partner type is common among home electronic and IT firms. The merit of this type of FDI is a quick access to the overseas market and appealing name brands. Depending on the firm's purpose, this type of FDI is commonly directed toward industrialized countries in the form of joint venture.

Typically, the FDI of China's manufacturing enterprises can be categorized into the one toward developed countries and the other toward developing countries. Chinese manufacturing enterprises mainly advanced in the ASEAN countries of the Southeast Asia and Eastern Europe are strongly production oriented. On the other hand, the enterprises advanced to the industrialized countries such as Western Europe, Japan, and United States are mostly non-production oriented, seeking for market cultivation, technological advance, R&D skills, and name brands.[2]

Although the characteristic of China's FDI as mentioned above is distinctive, there are some similarities with the FDI of third world countries as the competitiveness of developing countries is local market oriented (Lall 1983; Wells 1983; Huang 2004). Moreover, the FDI of China is comparable to the FDI by Japanese enterprises in its early stage, as shown in the studies of Yoshino (1976), Tsurumi (1976), and Ozawa (1979). Studies of Kojima (1978, 1982) and Ozawa (1979) are theoretical studies explaining Japan's FDI in the early stage.

In explaining the FDI outflow of Japan toward developing countries, Kojima (1978, 1982) stresses the importance of comparative advantages arising from the factor-endowment differences between home and abroad, rather than the strategic advantage of Japanese enterprises. Kojima states that Japan has a tendency to supply manufacturing bases of products with comparative advantage over the host countries of FDI, and he describes the reasons as macroeconomic and geographical differences between the countries.

Ozawa (1979) extends Kojima's theory and argues that Japanese industries relocating to overseas are the ones lost their comparative advantage in Japan, but not in the host countries. Ozawa's theory of FDI is more general as it is based on the mainstream theory of FDI with consideration of the comparative advantages arising from factor endowment differences (Kimura and Lee 1997). The Kojima-Ozawa theory implies that countries pursuing advanced technology in a relatively mature industry tend to invest in developing countries. The theory is consistent with the "Greenfield" explanation of FDI by Wan (2007).

Following the Kojima-Ozawa theory and adopting the well known analytical framework of Dunning (1980), Kimura and Lee (1997) develop a more general model for Korean outward FDI which can be used to empirically determine the factors of China's outward FDI. The model of Dunning is used widely in the analysis of FDI from developed countries, but as is evident in Ozawa's analysis, the framework can be applied to the cases of newly industrialized countries. Integrating the strategic and internalization advantages and the locational advantages, the general framework expressed in the eclectic framework is:

$$\text{FDI intensity} = (\text{Comparative and Locational Advantages, Strategic Advantages}) \qquad (1).$$

This analytical framework will be applied in this study, and our own proxies representing the comparative and locational advantages and the strategic advantages described as follows.[3]

Profitability (net profit/sales revenue):

Changing economic environment can increase the production cost and lower the profit of enterprises at home. Lower profit motivates FDI in less developed countries where comparative advantages arise. Profitability can also affect the FDI for developed countries as tariffs and non-tariff barriers can increase the cost of accessing overseas market.

Growth potential (rate of revenue growth):

The growth of revenue can indicate the degree of disadvantages for a firm at home. The lower the growth rate, the higher the motivation of exploring opportunities overseas.

Capital intensity / capital-labor ratio (net worth/number of workers):

A firm in maturing industries finds itself costly if its production activity is labor-intensive. Such a firm tries to undertake FDI at less developed countries, seeking for cheap labor.

State-owned firms:

2 See Wan (2007).

3 Advertisement intensity is considered in many previous studies as one of the important factors of FDI that represents the marketing ability and the degree of product differentiation. However, our study does not consider the factor as data of advertisement were not available for Chinese firms. The amount of export (the FDI substitutes) and R&D intensity are not considered in out study for the same reason.

In China, activities of central state-owned firms (CSO)[4] and local state-owned firms(LSO) account for a significant proportion of the economy, and this study investigates their effect on FDI.

Subsidaries:

If a firm has created a local subsidiary, it shows a serious commitment to the region.

4. Data and model assumptions

Data source is the financial data of 258 Chinese enterprises with overseas subsidiaries, collected by the SinoRating Company affiliated with the state-owned China Export & Credit Insurance Corporation. This analysis uses the data of 212 companies with complete data. The regions considered are North America, Central and South America, Africa, Europe, Asia, Scandinavia, and Pacific. Table 2 categorizes the volume of FDI in terms of sales by regions and by industries. We conduct two different analyses. The first analysis uses Tobit regression to investigate the determinants of the FDI intensity in terms of investment location, and the second analysis uses OLS to investigate that in terms of the sales performance.

1) Tobit Regression Analysis by Destination

An explained variable used in the analysis is the location of outward FDI, and we call it the "FDI intensity." For the proxy of profitability, this study uses growth rate of the sales volume between a previous year. We assume that the effect of state-owned enterprises is large in China and consider it as an explanatory variable. Also, the manufacturing industry is included in the analysis as explanatory variables for the same reason. Although, this study only investigates China's FDI in 2008, it covers a substantial number of enterprises and we believe that a recent trend of China's outward FDI can be explained in some degree from our analysis. Table 3 shows the descriptive statistics of the variables used in this study.

Yr.2008ȄUS$000ȅ	Africa		North America				South and Central America		Scandinavia				Europe						Far East and Central Asia		Oceania		Total	
			Canada		USA				Nordic States		Scandinavia		Balkan States		EastenEurope		Western Europe							
Industry	No.	Sales	No.	Sales	No.	Sales	No.	Sales	No.	Sales	No.	Sales	No.	Sales	No.	Sales	No.	Sales	No.	Sales	No.	Sales	No.	Sales
wholesale	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	4,310,670	—	—	2	4,310,670
Chemical Metal	—	—	2	12,183,794	4	2,392,066	—	—	—	—	—	—	—	—	—	—	3	2,098,168	19	24,248,295	3	20,293,307	31	61,215,630
Travel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1,169,228	—	—	2	1,169,228
Transportation, Air travel, Distribution	—	—	—	—	2	8,907,462	2	14,665,883	1	6,924,660	1	6,924,660	—	—	—	—	2	26,073,090	13	52,175,924	2	15,014,087	23	130,685,766
Service, Lease, Financing	—	—	—	—	1	430,961	—	—	—	—	—	—	—	—	—	—	—	—	6	1,197,811	—	—	7	1,628,772
Manufacturing	1	10,243,406	4	23,817,386	7	49,794,601	7	59,910,655	1	6,480,764	1	6,480,764	—	—	2	9,707,881	9	51,461,117	26	85,723,990	3	15,686,094	61	319,306,658
Petroleum & Fuel	—	—	—	—	—	—	2	211,675,876	1	1,776,687	1	1,776,687	—	—	—	—	1	1,776,687	3	366,843,364	—	—	8	583,849,301
Agriculture	—	—	—	—	3	689,674	2	1,247,853	—	—	—	—	—	—	—	—	1	298,939	5	4,199,772	1	206,834	12	6,643,072
Mining	—	—	—	—	1	1,414,566	—	—	—	—	—	—	—	—	—	—	1	1,340,665	7	29,715,231	3	7,015,946	12	39,486,408
Automobile	—	—	—	—	2	4,628,880	1	3,919,506	—	—	—	—	—	—	1	3,919,506	4	20,196,995	2	4,499,030	—	—	10	37,163,917
TextilesḿẊ Ẳ ẵ Ẻ Ấ ấ Ẫ ậ		—	—	—	4	1,442,693	2	622,910	—	—	—	—	1	327,186	1	327,186	1	327,186	6	2,514,528	—	—	15	5,561,689
Communication, IT	—	—	—	—	1	27,331,665	3	26,208,869	—	—	—	—	—	—	1	501,414	—	—	16	38,665,308	1	267,030	22	92,974,286
Real Estate, Construction	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13	40,041,914	—	—	13	40,041,914
Others	1	199,915	—	—	2	788,830	—	—	—	—	—	—	—	—	—	—	2	134,543	6	20,367,975	—	—	11	21,491,263
Total	2	10,443,321	6	36,001,180	27	97,821,398	19	318,251,552	3	15,182,111	3	15,182,111	1	327,186	5	14,455,987	24	103,707,390	126	675,673,040	13	58,483,298	229	1,345,528,574

Table 2: Volume of FDI by regions of the world and by industries

4 Central state-owned firms were called state-operated firms until their ownership and management were clearly separated in 1992.

Table 3: Descriptive statistics

Variables	N	Mean	Std. Dev.	Min.	Max.
lnsales	219	13.70924	1.9664577	7.5986173	19.162138
Profitability	217	23.597031	19.974308	-51.6444	94.9874
Growth of the firm	219	0.2095419	0.3681424	-0.721225	3.2161499
Capital-Labor Ratio	214	362.33509	602.5031	16.041487	4768.97
Central State-Owned companies	258	0.0620155	0.2416525	0	1
Local State=Owned companies	258	0.3178295	0.4665378	0	1
Asia	258	0.6627907	0.4736759	0	1
South and Central America	258	0.2325581	0.423284	0	1
North America	258	0.2906977	0.4549669	0	1
Europe	258	0.3488372	0.4775287	0	1
Scandinavia	258	0.0891473	0.2855101	0	1
Oceania	258	0.1162791	0.3211823	0	1
Africa	258	0.0271318	0.1627832	0	1
Transportation	258	0.0813953	0.2739728	0	1
Materials	258	0.1511628	0.3589037	0	1
Manufacturing	258	0.2596899	0.4393167	0	1
Mining	258	0.0581395	0.2344619	0	1
Real Estate & Constraction	258	0.0503876	0.2191686	0	1
Information	258	0.1007752	0.3016159	0	1
Finance	258	0.0271318	0.1627832	0	1
Agreculture	258	0.0465116	0.2109997	0	1
Texile	258	0.0658915	0.2485745	0	1
Automobile	258	0.0426357	0.202427	0	1
Oil	258	0.0310078	0.1736755	0	1
Subsidary	258	0.1124031	0.3164757	0	1

Our analysis considers the Tobit regression, and the specific form is as follows:

$$\text{FDI } \textit{intensity} = a_0 + a_1(\text{profitability}) + a_2(\text{revenue growth}) + a_3(\text{capital - labor ratio}) + a_4(\text{central state - owned}) + a_5(\text{local state – owned}) + a_6(\text{manufacturing industry}) + \varepsilon. \tag{2}$$

The Tobit model is used when the value under zero is truncated for an explained variable. Much of the explained variable in our study takes value of zero and it often causes a bias in the regression. The use of Tobit model can avoid such bias (Maddala 1983; Greene 1993).

2) Multiple Regression Analysis

Next, we estimate the impact of FDI on sales of parent companies using a multiple regression model. In this regression, the sales volume represents the FDI intensity. The model regresses the log of sales on dummies representing regions of the world, industry types, and parent-subsidiary status of the company as below.

$$\textit{lnSales} = a_0 + a_1(\text{asia}) + a_2(\text{North America}) + a_3(\text{South and Central America}) + a_4(\text{Scandinavia}) + a_5(\text{Oceania}) + a_6(\text{Africa}) + a_7(\text{Subsidary}) + a_8(\text{Transportation}) + a_8(\text{Materials}) + ... + a_{18}(\text{Oil}) + \varepsilon. \tag{3}$$

5. Results

Table 4 shows the estimation results for the Tobit regression model, and we find that the central state-owned enterprises are significant in investing Central and South America. In North America, state-owned enterprises are negatively significant investors, implying that they tend not to invest in the region. The manufacturing industry is positively significant in Europe, and negatively significant in Asia. No explanatory variables are significant for Africa, as there are not many firms investing in the region as of 2008.

Table 4: Tobit Regression Results by Destinations

	North America		South and Central Ameri		Africa		Europe	
Constant	-0.423462	(-1.69*)	-1.547256	(-4.5***)	-3.896852	(-1.7*)	-1.063826	(-4.06***)
Profitability	-0.005543	(-0.87)	0.010341	(1.63)	-0.050565	(-0.97)	0.002314	(0.42)
Growth of the firm	-0.886491	(-2.11**)	-0.350018	(-0.86)	2.128073	(1.27)	-0.086849	(-0.3)
Capital-labor ratio	-0.00014	(-0.69)	-0.000525	(-1.48)	-0.003928	(-0.96)	-0.000172	(-0.84)
CSO	0.316452	(0.67)	1.517621	(3.24***)	-9.973208	(-)	0.808651	(1.86*)
LSO	0.063765	(0.27)	0.791177	(3.04***)	1.09989	(1.02)	0.75853	(3.54***)
Manufacturing	0.58508	(2.49**)	1.097423	(4.14***)	1.232021	(1.19)	0.995672	(4.52***)
Subsidiary	-0.469753	(-1.03)	0.034678	(0.08)	-8.255393	(-)	-0.303952	(-0.77)
Log Likelihood	-161.07057		-143.14488		-18.24896		-163.7644	
Number of Observations	212		212		212		212	

	Asia		Scandinavia		Oceania	
Constant	0.627693	(7.03***)	-3.148079	(-3.98***)	-0.776363	(-1.66*)
Profitability	-3.052E-05	(-0.01)	0.02957	(2.43**)	-0.036922	(-2.41**)
Growth of the firm	0.080484	(0.69)	-0.540707	(-0.69)	0.35553	(0.6)
Capital-labor ratio	-6.699E-05	(-0.92)	-0.001498	(-1.39)	-0.001649	(-1.98**)
CSO	0.046041	(0.26)	1.80578	(2.02**)	0.953653	(1.34)
LSO	0.071413	(0.79)	1.358283	(2.71***)	0.349185	(0.94)
Manufacturing	0.062858	(0.66)	0.702698	(1.53)	-0.253168	(-0.64)
Subsidiary	-0.123453	(-0.81)	0.103187	(0.14)	-0.153556	(-0.22)
Log Likelihood	-200.30084		-82.94585		-95.2732	
Number of Observations	212		212		212	

Note: figures in parentheses are t-values. *** Coefficient is significant at 99% level ** Coefficient is significant at 95% level * Coefficient is significant at 90% level.

Table 5: Multiple Regression results for 2008 (Dependent Variable: lnSales)

Variables	Coefficient	t-value
Intercept	11.93031	(27.18***)
Asia	1.09059	(3.85***)
North America	0.99033	(3.23***)
South and Central America	0.95963	(2.69***)
Europe	1.29816	(4.01***)
Scandinavia	-1.71839	(-3.33***)
Oceania	1.14732	(3.03***)
Africa	1.41444	(1.62)
Subsidary	1.53132	(4.08***)
Transpotation	0.39794	(0.72)
Materials	-0.18455	(-0.38)
Manufacturing	-0.02778	(-0.06)
Mining	1.03006	(1.64)
Real Estate & Constraction	-0.16662	(-0.29)
Information	-0.3215	(-0.64)
Finance	-1.93322	(-2.59**)
Agriculture	-0.82625	(-1.39)
Texile	-0.72843	(-1.28)
Automobile	0.09525	(0.13)
Oil	1.74847	(2.3**)
R^2	0.4413	
Adjusted R^2	0.388	
Number of Observations	219	

*** Coefficient is significant at 99% level ** Coefficient is significant at 95% level * Coefficient is significant at 90% level.

Table 5 shows estimation results of the multiple regression model. As far as regions where Chinese FDI are conducted, the results suggest that the FDI to every region except for Scandinavia and Africa is positively and significantly related to the sales of its parent company. The FDI to Africa is also positively related to the parent's sales, but is not significant at 5% level. Among different industries, only the oil industry is positively and significantly related to their parents' sales. The finance related industry is also significant, but negatively related to their parents' sales.

6. Concluding remarks and discussions

This study empirically investigates the patterns and determinants of China's outward FDI. From the regression results, we observed different patterns of FDI by enterprises depending on where FDI is directed. Tobit regression of the FDI intensity indicates that the traditional driving factors of FDI such as capital-labor ratio, profitability, and growth potential do not appear to be relevant to overall outward FDI of China. A state ownership of the enterprises is a strong factor of FDI in some regions of the world, reflecting the importance of national policy in Chinese outward FDI. Moreover, the significance of the manufacturing industry on FDI toward North America and Europe could be the sign of strategic FDI in acquisition of advanced manufacturing technology. The multiple regression results indicate the possible effect of world-wide credit crunch caused by the sub-prime loan defaults in the United States.

This study uses financial data of the year 2008 only. The use of time-series data, as a possible extension of this study, would enrich the study by adding a time dimension to the analysis.

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The Attack of Asian Companies in the Global Market

by

Cacik Rut Damayanti, S.Sos, M.ProfAcc

Business Administration Department,
Administrative Science Faculty,
University of Brawijaya, Indonesia

Email: cacikr@yahoo.com

Topic: The Impact of Asian Economies on Global Business

The Attack of Asian Companies in the Global Market

Cacik Rut Damayanti
Business Administration Department, Administrative Science Faculty,
University of Brawijaya, Indonesia

Abstract

When global financial crisis affected the world economy, Asian's showed their power by presenting positive economy growth during 2008-2010, such as India, China, Indonesia and Vietnam. They tends have capability to recover the plummeted crisis faster than capitalist countries. Moreover, during a decade, the global companies from Asian rose dramatically and contributed to the global market. Emirates has sponsored Arsenal, the big soccer club in UK since 2004, then Mahindra Satyam, IT Business Consulting services company from India succeed to be a sponsorship on World Club 2010, Sony from Japan has been developed it's innovation and be the larger electronic company in the world. Asian products space in the world market grows significantly. With their capability and great strategy, they coped the global battle including Indonesia. The aim of this paper is to elaborate the growth of Asian product in the global market with case study in Indonesia. This study analyzes the case before global financial crisis (2000-2007) and compare to the condition after global financial crisis (2008- now). With the prototype that high quality products are produced by developed countries, Indonesian market is penetrated by Asian product from India, China, Hongkong and Korea with a growing space market rapidly year by year. By producing resemble products with lower price in almost all economic sectors such as technology, communication, fabric, transportation; Asian product has dominated the Indonesian market recently.

Key Words: finance, crisis, products, Asia, global, compete, market.

Background

The products from developed countries such as America, UK, Europe and Japan become the favorites in Indonesia market. They have prestige by providing high quality on their products and service after sales. That is the reason why their companies survived and had high market share in the Indonesian economy. Their companies spread their products and had ability to capture customer's interest in several sectors. In the mining sector, Chevron from USA and Freeport take a space Indonesia mining area, Nokia from Finland dominated mobile phone market as well as Toshiba from Japan in the PC and laptop sector. However, there is a changing in the Indonesian market atmosphere when the global financial crisis hit world economy. Several developed countries struggled to survive. Their economy plummeted in the recession that caused several companies had to make efficiency in their product. Even in USA, several companies failed to survive and faced bankruptcy. The effect of financial crisis also influenced the Asian economy. Japan has lower economy growth in 2008 and 2009 by presenting 1.4% and 1.5% respectively (IMF, 2008). Singapore faced similar condition. However, several countries in Asia had capability to survive by performing positive economy growth in the crisis such as China, Indonesia, Vietnam and India. Moreover, Asian companies used that situation by penetrating the market that used to be dominated by industrial countries. They published and distributed similar products with lower prices and good quality. When Indonesian economy affected by global financial crisis, there was an increase on unemployment rate. Therefore, purchasing power of Indonesian customer reduced significantly. As a result, people tend to find alternative product that have lower prices. Then, they find it on the Asian products. Asian product has stolen the market share on industrial countries.

Furthermore, the strength of Asian companies in the recession is not only produces products in lower price, but they also show their capability in capital power by acquiring several familiar companies that have difficulty in finance. For example, the PC and Laptop leading company from USA, IBM is bought by China. The new brand has been released, namely Lenovo. Emirates have sponsored Arsenal, the big soccer club in UK since 2004. China Construction Bank took Bank of America (Asia) when it faced financial trouble. Moreover, Zhejiang Geely Holding Co smashed the world economy by buying Volvo and Ford Motor on the price of US$1.8 million (Pambudi, 2010). There are several achievements provided by Asian companies especially China's since they can show as the new economy leader at the moment.

The strength of Asian market continues in Indonesia. When the developed countries decided to reduced their investment in Indonesia, China, Japan, South Korea and India are strongly optimist to invest by opening new factories. They invested million US dollar to produce their product in Indonesia because they believe that Indonesia is a potential market for them.

In order to capture the changing of economy atmosphere in Indonesia after the financial crisis, this study is established. This research attempts to investigate the development of Asian companies in the global market with case study in Indonesia. The benchmark of this research is global financial crisis. Therefore, this study analyzes the penetration of Asian product after recession in 2008 and compare to the condition before crisis.

Research Methodology

In order to analyze the development of Asian companies in the global market after global financial crisis, this study investigates Indonesian market as a study place. Therefore, this research identify as a case study research design. A case study is an in-depth, detailed investigation of a single instance or one setting, although more than one case at a time may be conducted (Tharenou, P, Donohue, R, Cooper, B, 2007). Moreover, they elaborate that case study are empirical inquiries conducted to explain processes to do with units as small as individuals or as large as countries.

The data collection on this study is observation by the researcher. In this study, the researcher observed the Indonesian market by visiting the market in the several places in

Indonesia on several sectors, such as electronic market, mobile phone market. Furthermore in order to investigate the penetration of Asian companies in Indonesia, the researcher also use documentation data collection, because there is a limitation to investigate several sectors such as mining. The information based on the reliable sources such as Bank Indonesia, Central Bureau of Statistics (BPS) and IMF report released.

Indonesian Economy

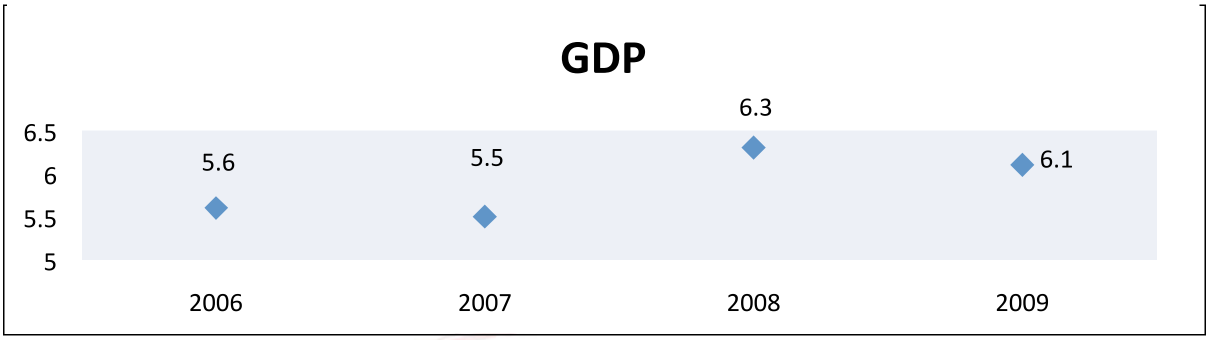
Indonesia is a country in South East Asia. It has 237.556.363 populations and became the fourth largest population in the world (Statistics Indonesia, 2010). This country faced deepest recession and chaos on 1997-1998 when the crisis hit Asia. This crisis affected the economy and political situation by performing the changing of President and conducting reformation. Step by step, Indonesia recovers its economy and performs positive economy growth. On June 2010, 314 companies are listed on the Indonesia Stock Exchange with market capitalization of $269.9 billion. It indicates the improvement on business and investment environment (Doing Business, 2010). During 2006-2008, there was a fluctuated on the Indonesian economy growth. Based on the Bank Indonesia data, on 2007, the growth of economy reached 6.3% and slightly decreased on 2008.

Figure 1
Indonesian Economic Growth
(On percentage)

Source: Bank Indonesia, 2010

However, when global financial crisis occurred in USA and influence another developed countries, Indonesian economy are affected. During the October-December 2008 period, the country's economy experienced deteriorating economic performance at an unprecedented speed; quarterly economic growth fell from 6.1% to 5.2% on a yearly basis and export growth was at only 1.82%, the slowest since 1986 (Titiheruw,IS; Soesastro, H, 2009). Moreover, Titiheruw elaborated that unemployment and poverty reduction will be affected, but not as severely as in 1997-1998, owing to the existence of favorable factors such as relatively low fuel and commodity prices and a good rainy season so far. Even, the volume of domestic production remained the same, however, the export value decrease significantly because of the drops in commodity prices since mid-year and weakened external demand after September 2008. This condition is caused by the reduction of economy power on export destination countries. The Indonesian export destinations are USA, Japan and Europe. Since those countries were facing a deep downturn, they tended to reduce their import products.

Figure 2
Indonesia GDP
(On percentage)



Source: Index Mundi, 2010

Before a deep downturn in global economy, Indonesian market is dominated by products from industrial countries. Moreover, Indonesia has imported products and raw material from developed countries such as Europe, USA, Japan and Singapore. Those countries were became the highest importer countries from 2004-2006 (Bank Indonesia, 2010).

Figure 3
Indonesian Import Value

2004		2005		2006	
Europe	$ 6.4 M	Japan	$ 10.2	Singapore	$ 11.06
Japan	$6.01M	Singapore	$9.7	Japan	$ 9.23
USA	$ 4.8M	Europe	$ 7.8	Europe	$ 9.075

Source: Bank Indonesia, 2010

Figure 4
Imports by economic category, 2008-2009
Value (US$m) (cost, insurance and freight)

Economic category	Jan 2008	Dec 2008*	Jan 2009**	Change of Jan 2009 over Dec 2008	% change of Jan 2009 over Jan 2008	% share in imports total, Jan 2009
Total imports	9608.1	7699.9	6342.6	-1357.3	-33.99	100.00
Consumption goods	648.4	499.1	477.9	-21.2	-26.30	7.54
Raw materials/auxiliary goods	7354.5	5007.5	4535.6	-471.7	-38.33	71.51
Capital goods	1605.2	2193.3	1328.9	-864.4	-17.21	20.95

*Notes: * Preliminary figures; ** Very preliminary figures.*
Source: CBS (March 2009).

In the Indonesian market, especially in the consumption good segment, the products from Japan and USA have dominated in the electronic sector as well as PC and laptop area. In 2006, Toshiba from Japan successfully reached 42.4% market share. It followed by IBM (USA) and Compaq (USA) by performing 27.5% and 10.5% respectively (SwaSembada, 2006). When the PC and laptop are dominated by USA and Japans products, the different condition are presented by electronic sector with showing a majority of Asian products such as LG and Samsung (South Korea), Sony and Panasonic from Japan. Only Electrolux from USA that have ability to faces Asia domination.

Furthermore, in the mining area, companies from industrial countries have invested billion US dollars to the Indonesian resources. They captured the natural resources in several areas in Indonesia and explore it, such as Freeport (USA), Total (France), Exxon (USA), Chevron (USA). In 2004, the central government, through the Ministry of Energy and Mineral Resources, issued Ministerial Instruction No. 1614 to provide guidance in processing ongoing Contract of Work (COW) and Work Agreements for foreign investors engaged in coal mining (Purba, 2008). The Ministerial Instruction was intended to be used by Governors and Regents as a guide for local governments until the new Mining Law comes into force. From 2005 to 2006 gold production increased from 143 tons to 150 tons, copper from 1,064,000 tons to 1,085,000 tons, and tin from 67,000 tons to 72,000 tons. However, based on the Indonesian regulation, national mining company such as Pertamina, PT Bumi Resources, PT Adaro Indonesia are take a big portion on exploring Indonesia.
There are several main coal firms including

a. PT Bumi Resources with production capacity around 50 million tonnes/year
b. PT Adaro Indonesia (34 million tonnes/year)
c. PT Bukit Asam - state owned (11.2 million tonnes/year)

d. PT Arutmin Indonesia (11 million tonnes/year)
e. PT Kideco Jaya Agung (10 million tonnes/year)
f. PT Berau Coal (8 million million tonnes/year)

Foreign investors, especially from China and India, have been very active in exploring coal sources in Indonesia. Both countries have demonstrated their interest in directly producing coal in Indonesia by buying coal mining companies. In April 2007 India's Tata Power Company Ltd signed an agreement to purchase 30% stakes in leading Indonesian coal firm PT Bumi Resources Tbk. for $1.3 billion.

Moreover, Vale INCO has been operating since the early 1970's in Sulawesi and currently has an annual production capacity of 160,000 tons of nickel. It is expanding its processing plant and is building a new hydroelectric facility which will increase capacity by 25% by 2009. Freeport McMoran has operated since the late 1960's in Papua province and Newmont Pacific has operated since the 1990s in West Nusa Tenggara province. Both companies produce copper and gold. State- owned PT Aneka Tambang is active in mining minerals throughout Indonesia and is aggressively expanding its mining operations.

Global Financial Crisis

The effects of recession that hit USA and Europe in 2008 created mass problems. The number of unemployment increase dramatically, after several companies cut their employee due to efficiency policy. Several large companies in USA faced bankruptcy such as Lehmand Brothers, Fanny Mae. The world economy growth decreased from 4.9% in 2007 to 3.7% in 2008 and 3.8% in 2009 (Bank Indonesia, 2010). That condition is caused by the plummet of USA economy from 2.2% in 2007 to be 0.5% and 0.6% on 2008 and 2009 respectively. As a result, in the same time, the economy growth of several countries followed the trend. The developed countries had a decrease on the growth from 2.7% in average to be 1.3% in rough. Moreover, the developing countries also affected from the crisis by performing the reduction of their economy from 7.9% in 2007 to be 6.7% in 2009. Based on the data, it indicated that the developing countries have more power to face the recession than industrial countries by performing 15% deduction compare to around 50% deduction.

Figure 5
The World Economy Growth, in the Developed and Developing Countries

	2006	2007	2008	2009
Developed Countries:				
USA	2.9	2.2	0.5	0.6
Japan	2.4	2.1	1.4	1.5
Germany	2.4	2.5	1.4	1.0
France	2.0	1.9	1.4	1.5
Italy	1.8	1.5	0.3	0.3
Developing Countries				
Brazil	3.8	5.4	4.8	3.7
Mexico	4.8	3.3	3.0	2.3
India	9.7	9.2	7.9	8.0

Source: IMF, World Economy Outlook, 2008

When the global economy hit almost all countries in the world, the effect also impacted to the Indonesian economy. There was a decrease in economy growth from 6.1% in 2008 to be 4.5% in 2009. Several large companies' especially international companies cut the number of employees; therefore it created the increase of unemployment. Many banks also faced the difficulty since they have affiliation with overseas bank such as America, Japan and England. As a result, Indonesian government regulated new policy regarding the crisis by performing fund recovery. However, it was not working perfectly, but it leads to create several problems such as Century Gate.

Even though Indonesian economy got an impact to the world downturn, however, it still has good economy performance by creating positive economy growth. The good news not only came from Indonesia itself, but also several countries in Asia. Most of them except Japan and Singapore have booked positive growth in the recession. Some experts believed that that capability to survive is come from their experience to solve the Asian crisis on 1997-1998. They have learnt how to cope the crisis and get the advantages. The extraordinary achievement is presented by China. It built great economic structure and succeeded achieving the highest economic growth in the world in 2008. Moreover, on 2009 the growth was remained the same.

Figure 6
Asian Economy Growth in the Crisis

	2007	2008	2009
China	11.4%	9.4%	9.2%
India	9.2%	7.9%	8.0%
Vietnam	8.5%	8.0%	8.5%
Filipina	7.3%	6.9%	7.1%

Korea	4.9%	4.6%	5.0%

Source: World Bank, "East Asia: Testing Times Ahead, April, 2008

The capability of Asian countries to protect they economy component from bankruptcy is believed on the movement of economy power on China and Middle East. The dependency of world economy on USA decreased significantly from 34% on 2001 to 29% on 2006 (Bank Indonesia, 2010). China companies have spread their products almost around the world. Emirates industry has proved their capital power by acquiring several big companies in the world such as Arsenal, a big soccer group from England.

The China power has influenced the Indonesian economy. In a couple of years ago, most of import value came from Japan, Europe and Singapore. However, since 2007 until 2010, China dominated the import value. It has been the larger importer in Indonesia.

Figure 7
Indonesian Import Value

2007		2008		2009	
China	$11.2 M	China	$17.59M	China	$14.79M
Europe	$10.9 M	Japan	$14.96M	Europe	$11.94M
Singapore	$10.4 M	Europe	$13.81	USA	$10.57M

Source: Bank Indonesia, 2010

The domination of Asian product in Indonesia is shown in the first quarter in 2010. The largest importer is China by take 17.36% on total Indonesian import value. Secondly, Japan has achieved 14.99% and Singapore succeeds to get 10.55%. With the lower price, China product has stolen the market share on textile segment. The cloths made in China have dominated the Indonesian market especially in lower class. On customers' perspective, they are very welcome to those products because they have great opportunity to choose the variety of style. However, for small and medium enterprises that concern in textile area, this is a big threat because they have a limitation to compete with China products that tends to create mass production in lower cost of wages. Therefore, they can sell the lower price products.

On the other sectors, product from China, India, Japan and South Korea take a place to the Indonesian customers. On mobile phone segment, HTC from China and Fujitsu from Japan got a space by stealing 6% and 3% respectively, even though Nokia still take the majority shares. China has an ability to produce the similar product with the previous player such as Nokia and apple with lower price. Therefore, customers in middle and lower class prefer to buy this kind of products. Moreover, China becomes the favorite place to produce the phone factory. For example, Nexian from Indonesia are produced in China, and all of the components are made in China, even the design and idea came from Indonesia (Sudarmadi; Saputra, AY, 2010). Another attacked from China is presented in the PC and Laptop sectors. China that has bought IBM and embarked new brand, Lenovo

succeed to steal 8.6% market share (SwaSembada, 2006). Even though HP from USA take a chance in the first rank by performing 22.2% share, and take Toshiba in the fifth place, Acer from Taiwan can compete the power of USA in the PC and laptop.
Asian companies take a majority of the electronic segment. The high level competition is performed by all Asian products such as LG, Samsung, Panasonic, etc. Moreover, Changhong and TCL from China tried to fight with Asian competitor. Several new players are identified in the market. Bajaj from India slowly but sure has a space in the motor area. Even though Bajaj come to Indonesia on 2006, it indicates having 4% shares recently. On 2011, the Indonesian transportation sector will be penetrated by China product. Since China acquired Ford and Volvo share, that companies create new car, Geely.

In mining sector, China Investment Corporation (CIC) invested US$ 1,9 billion in BUMI in the form of a debt-like instrument on 2009 (PT. Bumi Resources, Tbk, 2009). The US$ 1,9 billion investment consists of US$ 600 million repayable in year four, US$ 600 million in year five, and remaining US$ 700 million in year six. The investment attracts a 12% annual cash coupon with a total IRR of 19%, the balance payable at the time of final maturities. The funds will be used for debt restructuring and capital expenditure.

The achievement of Asian companies in the world is presented in several sectors. At World Cup 2010 in South Africa, one-third of the sponsors came from Asia companies such as Sony, Emirates.com, Hyundai-KIA, Mahindra Satyam from India and Yingli Solar from China. Become a sponsorship in the world even is not easy. They have to prove their capability in finance and great strategy. Selecting as World Cup sponsors indicate that that companies have good performance in finance.

Furthermore, based on the IMF data, on 2010 China has the highest foreign exchange reserves in the world by providing US $ 2454.275 billion (China State Administration of Foreign Exchange, 2010). It has proven that China economy is growing well and able to capture the advantages on the recession. The second country is Japan with having US $1 T. This is the first time that China acquires the biggest foreign exchange reserves since their movement to be open economy policy.

Conclusion

The penetration of Asian products in Indonesia indicated that there is a new economy power from Asia. Besides survived from the crisis, Asian companies succeed to take an advance from the downturn of their competitor especially from industrial countries. Before the crisis smashed the industrial countries, their products took the majority on the market. However, since their capability in finance reduced, the Asian products have stolen their market share. This condition remained the same and tends to increase. Therefore, it is not impossible that Asian companies become more powerful in the future and take a place as a leader market.

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Analysis of customer behavior focused on time information

Takashi Togawa[1], Yumi Asahi[2], Toshikazu Yamaguchi[3]

[1]Department of Engineering, Management Science,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
togawatk@ms.kagu.tus.ac.jp

[2]Department of Management Science,Faculty of Engineering,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
asahi@ms.kagu.tus.ac.jp

[3]Department of Management Science,Faculty of Engineering,
Tokyo University of Science
1-3,Kagura-zaka, Shinjuku-ku, Tokyo, 162-8601
yama@ms.kagu.tus.ac.jp

Abstract.

Sales of Japanese department stores have drop for 21 months as of November 2009. According to the Japan Department stores association, the reason for the drop in sales is because of the economic depression which leads to low end consumers. In addition to this fact, sells of women's clothes, which represent almost 25 percent of total sales has been dropping. Therefore, it is essential for Japanese department stores to make women's clothes more appealing to consumers in order to recover sales. Japanese retail business has recently introduced a system to collect purchase data. By analyzing the data, stores would have more knowledge of what customers would most likely purchase. The new information and knowledge from the analysis are used to improve customer satisfaction which increases sales. Through this study, we are able to analyze data of a department store located in Tokyo. The purpose of this study is to find out characteristic behavior of customers shopping habits that can be used for promoting products to further understand the needs of the customers. Firstly, we choose the important customers who contribute to the sales by establishing some indicators and secondly, try to discover some purchase patters in terms of time. Lastly, we find out which pattern tends to buy which product. Through basic analysis it has been confirmed that women's commodities has the high rate of total sales and there are segments of time when customers would most likely shop.

Keywords: POS, CRM, Two step cluster, association analysis, customer behavior

1. Introduction

Sales of Japanese department stores have drop for 21 months as of November 2009. According to the Japan Department stores association, the reason for the drop in sales is because of the economic depression which leads to low end consumers. In addition to this fact, sells of women's clothes, which represent almost 25 percent of total sales has been dropping. Therefore, it is essential for Japanese department stores to make women's clothes more appealing to consumers in order to recover sales (Japan Department Stores Association 2010).

Japanese retail business has recently introduced point of sales system for collecting purchase data of customers and makes it impossible to find what kind of item customers would like to purchase and keep track of each customer by analyzing those data. They can figure out customer behavior or needs for customers based on time information as well by considering when customers come to a store (Furubayashi, n.d.).The way that they keep long term relationship with customers and make their royalty to the store improve using point of sales system have attracted attention recently because they need a system of reflecting purchase data from customers instead of nonfunctional marketing methods that manufacturers controlled(Nakamura 2008) (wisdom, n.d.).

Therefore, it is meaningful to figure out customer behavior based on time information from point of sales system (Seki 2003).By analyzing purchase data, Japanese retail business would have more knowledge of what customers would most likely purchase. The new information and knowledge from the analysis are used to improve customer satisfaction which increases sales. Through this study, we analyze data of a department store located in Tokyo. The purpose of this study is to find out characteristic temporal behavior and shopping habits that can be used for promoting products to further understand the needs of the customers. And target of this study is female customer.

2. Compendium of data on this study

In this study, we use data that Data Competition at Tokyo in 2010 offered and analyze one of three stores in the data. Z store located at center of Tokyo and the location of the Z store is known as famous business city. It has also shopping area. Span of data is from on April 1, 2008 to on March 31, 2009 which means 1 year. People who became object in the data are customers who buy commodities using credit card issued by a department store. Transaction information is as follows: Customer number, purchase date, transaction number, purchase commodities, commodity brand, item price, number of pieces, which store, transaction time and purchase time.

3. analytical flame in this study

Fig. 1 shows an analytical flame in this study. Purchase tendency of commodities depends on how frequent each female customer comes to department to buy commodities.

At a phase 1, we classify female customers who come to Z store into some purchase levels using a clustering method with how much money each customer spent during a year, how many commodities each customer buy during a year, average paid money of each customer per day and average brought piece of each customer per day.

At a phase 2, we decide which level of customers from phase 1 should be analyzed and figure out the purchase tendency of commodities of the customers who have the level using market basket analysis.

At a phase 3, we try to discover temporal purchase patters using a clustering method with how many times each customer come to Z store at e setup day and time. The target to be analyzed at a phase 3 is the important customers for Z store in a way of contribution to the sales.

At a phase 4, we decide which temporal pattern that was discovered by a phase 3 should be analyzed and use a market basket analysis to discover the purchase tendency of commodities through a year.

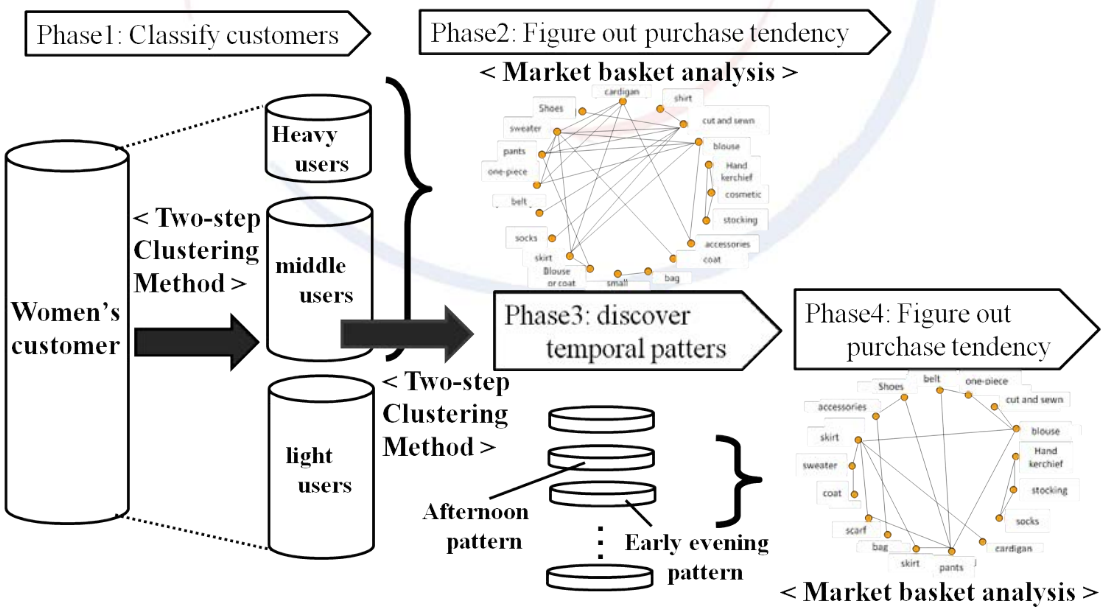

Figure 1: Analysis flow in this study

3-1. Select commodities used in this study

Firstly we select commodities used in this study because there are 187 commodities in this data, however appealing commodities are not all of them. So we tally up the amount of sales and quantities of each commodity. We decided that commodity as a target accounts for 90% of the accumulated sales and quantities of Z store. The reason why we included the accumulated of quantities is that commodities bought relatively large numbers would have an effect of attracting customers for Z store even though those commodities don’t account for 90% of the accumulated sales. 54 commodities were selected from the above-mentioned reason. Selected commodities include 39 women's commodities such as a women’s dress, 9 men's commodities such as men’s socks and the men’s shirts and 6 other commodities such as interiors and clocks.

3-2. output of phase 1

There are a lot of purchase styles in Z store. One of the ways of judging whether customers are alive or not for retail business is RFM analysis. RFM analysis is a method used for analyzing customer behavior and segment customers as well. This analysis has three indicators which are how recently a customer has purchased (recency), how often they purchase (frequency), and how much the customer spends (monetary). An analyst put rank of each indicator on each customer based on threshold of each indicator (Konno, Itou, and Kato 2003).

However RFM analysis is a controversial way of segment customers in some ways. One of the reasons is how to set threshold of the rank of each indication because this threshold is subjectively-determined (Abe 2004). In this study we use two-step clustering method to segment customers instead of RFM analysis to avoid the above problem. While segmenting customers by the clustering method, the Bayesian information criterion (BIC) is used. So it is possible to make objective segments by this method (SPSS Japan Inc 2001).

We used total 4 variables for this two-step clustering. Those variables are amount of money paid during a year, number of commodities purchased during a year, amount of money paid by an average of a day and number of commodities purchased by an average of a day. We use those four variables for two-step analysis and segment customers. By two-step clustering method it was found that there are three purchase levels of female customers. Table 1 showed values of the four variables of each cluster.

Table 1: Classification of the customer who uses Y store

cluster	Amount of money paid during a year	Number of commodities purchased during a year	Amount of money paid by an average of a day	Number of commodities purchased by an average of a day	Ratio of Number of people	Ratio of Number of sales
1	13,585 (yen)	2.96(piece)	7,110 (yen)	1.55 (piece)	67.23%	26.86%
2	59,319 (yen)	10.98(piece)	14,660 (yen)	2.71 (piece)	28.75%	50.15%
3	195,419 (yen)	34.57(piece)	20,626 (yen)	3.65 (piece)	4.00%	23.01%

Table 1 shows that Cluster 1 accounts for 67.23% of Ratio of Number of people, and values of the four variables of cluster 1 are smaller compared with other clusters. Therefore a female customer of classified cluster 1 was named a light user in this study, similarly a female customer of cluster 2 was named a middle user and a female customer of cluster 3 was named a heavy user in this study.

Moreover, number of people of the middle users and the heavy users is the entire 32.71% (78889 people), and sales of female customers of those 2 cluster is entire 73.3% (5,885,979,859 yen). It is found that those middle users and heavy users are excellent customers, which means customers who considerably contribute to sales for Z store, according to the Pareto principle “70% of your business comes from 30%”.

3-3. Search for purchase tendency by market basket analysis

It is necessary to attach importance to behavior of excellent customers who contribute to sales more than usual customers for the department store (Kitaguchi, Hamuro, and Kato 2004). Then we find the purchase tendencies of the heavy users and the middle users who have high contribution of sales by using the market basket analysis. This analysis is often used to analyze receipt data of point of sales system, and it is technique for finding the relativity between commodities from data base.

Table 2: a part of heavy user's association rules

Antecedent	Consequent	Confidence	Support	Lift
Men’s socks	Men’s under	34.36	1.20	8.71
Men’s under	Men’s socks	30.46	1.20	8.71
Necktie	Men’s shirt	37.15	1.54	7.10

Table 2 is a part of the association rules led by the association analysis. The output of a market basket analysis is a series of association rules. Each association rule consists of an antecedent and a consequent. For example, consider the association rule, “If a female consumer purchases men's socks, she also tend to purchase men's under." Here men's socks is the antecedent while men's under is the consequent. None that both antecedent and consequent can contain multiple commodities. There are three most popular criteria evaluating the quality or the strength of an association rule: support, confidence and lift. Lift greater than 1 indicates that the item A and item B tend to occur together more often would be predicted by random chance. Similarly, Lift smaller than 1 indicates that the item A and item B are purchased together less likely than would be predicted by random chance (Kato, Hamuro, and Yada 2008). In this study, we derive very characteristic association rules that have 2.5 of lift.

Table 3: Heavy user's association rule

Antecedent	Consequent	Confidence	support	Lift
Men's under	Men's socks	49.798	2.914	7.101
Men's socks	Men's under	41.554	2.914	7.101
Necktie	Men's shirt	53.571	3.198	5.163
Men's shirt	Necktie	30.822	3.198	5.163
Men's blouson	Men's T-shirt	55.83	3.743	4.34
Men's T-shirt	Men's blouson	29.098	3.743	4.34
Men's shirt	Men's T-shirt	52.511	5.449	4.082
Men's T-shirt	Men's shirt	42.357	5.449	4.082
Men's blouson	Men's shoes	36.042	2.416	4.079
Men's shoes	Men's blouson	27.346	2.416	4.079

Table 4: Middle user's association rule

Antecedent	Consequent	Confidence	support	Lift
Men's shirt	Men's T-shirt	38.436	1.525	6.588
Men's T-shirt	Men's shirt	26.131	1.525	6.588
Women's scarf	Women's dress	40.153	2.079	6.164
Women's dress	Women's scarf	31.915	2.079	6.164
Repair item	Women's pants	82.763	7.019	3.282
Women's pants	Repair item	27.833	7.019	3.282
Care goods	Pumps	68.083	5.92	3.258
Pumps	Care goods	28.332	5.92	3.258
Ring	Necklace	28.52	1.317	2.995
Necklace	Ring	13.825	1.317	2.995

Table 5: light user's association rule

Antecedent	Consequent	Confidence	support	Lift
Repair item	Women's pants	56.734	1.082	8.824
Women's pants	Repair item	16.831	1.082	8.824
Care goods	Pumps	61.328	1.95	5.836
Pumps	Care goods	18.559	1.95	5.836
Women's socks	Women's stockings	24.177	1.03	3.331
Women's stockings	Women's socks	14.199	1.03	3.331
Women's shirt	Women's cut and sewn	47.398	1.371	3.004
Women's cut and sewn	Women's shirt	8.693	1.371	3.004
Women's skirt	Women's sweater	26.926	1.512	2.731
Women's sweater	Women's skirt	15.334	1.512	2.731

Table 3, Table 4 and Table 5 show that each ten rules with high value of Lift are extracted from led association rules of the heavy users, the middle users and the light users. It is found that the heavy users tend to buy two or more men's commodities throughout a year from Table 3. In the middle users, the number of association rule with men's commodities is fewer than that in the heavy users. And the light users don't have association rules with men's item. A feature point of the middle users is that they tend to buy commodities comparatively small commodities such as care goods, ring and necklace in addition to women's clothes goods.

Therefore, it would say that middle users also have loyalty to commodities other than clothes commodities. In light users, it seems that they basically buy main commodities such as Women's pants and Women's cut and sewn. Moreover, a feature point of light users is that they buy comparatively cheap commodities worn every day by women such as Women's stockings and Women's socks.

3-4. Search for the temporal purchase tendency of middle users in terms of pattern of coming to Z store

Women stop by a department on their way home from work after 17:00 on weekdays and Japanese college students who can make flexible schedule stop by in the morning and early afternoon on weekdays. It is though that life patterns reflect on what time customers come to Z store given the above fact. We decided to analyze middle users because the number of people of middle users is the biggest compared with others and the amount sales of the users is high as well so that it would be anticipated that if customers of middle users buy more commodities than now, it will be huge impact on sales.

We made time zones to calculate frequency of each time zone. We made four time zones which are morning zone from 9 o'clock, afternoon zone from 12 o'clock to 17 o'clock, early evening zone from 17 o'clock to 20 o'clock and late evening zone from 20 o'clock to 22 o'clock. Given that a week is divided into weekday and weekend, we finally make up 8 time zones (4 time zones multiply by 2 kinds of day equals 8 time zones). We tally up frequency of each customer of each time zone and calculate a ratio of each time zone in each customer. After that, we use a two-step clustering method with those ratios that show when each customer tends to come to Z store.

Table 6: temporal pattern of coming to Z store in Middle users

Middle user's cluster	weekday				weekend					
	9-12	12-17	17-20	20-22	9-12	12-17	17-20	20-22	Number of people	ratio of Number of people
Cluster-M4	2%	26%	27%	1%	0%	24%	20%	0%	10,014	32%
Cluster-M2	2%	10%	32%	37%	0%	8%	10%	0%	3,580	11%
Cluster-M8	47%	28%	7%	0%	4%	9%	24%	0%	2,807	9%
Cluster-M3	2%	9%	18%	8%	1%	9%	22%	30%	2,704	8%
Cluster-M5	1%	13%	12%	3%	38%	24%	8%	1%	2,687	8%
Cluster-M6	0%	0%	0%	0%	0%	100%	0%	0%	2,516	8%
Cluster-M9	0%	**100%**	0%	0%	0%	0%	0%	0%	2,437	7%
Cluster-M1	0%	0%	**99%**	0%	0%	0%	0%	0%	2,428	7%
Cluster-M7	0%	0%	0%	0%	0%	0%	100%	0%	1,781	5%

Table 6 shows the result of the two-step clustering method. Nine patterns of coming to a store were discovered in middle users. According to table 5, especially cluster-M1 and cluster-M8 are feature temporal patterns of coming to Z store in the middle users because those two clusters has very high ratio of coming to store in only time zone. Cluster-M9 has 100% in an afternoon zone and cluster-M1 has 99% in an early evening zone. On the other hand, customers of cluster-M4 don't come to Z store at a specific time.

In this study, we decided the targets to analyze are cluster-M1, cluster-M9 and cluster-M4. It is easier to imagine the life patterns of both cluster-M1 and cluster-M9 because customers of those cluster-M1 and cluster-M9 come to Z store in only one time zone. For example, customers of cluster-M1 come to Z store at only evening (from 17o'clock to 20 o'clock) on only weekday so that they tend to come to Z store after work given that usually working hours in Japan is until 17 o'clock. In this study, we named cluster-M1 afternoon pattern, similarly cluster-M9 early evening pattern and cluster-M4 all round pattern.

3-6. Temporal Purchase tendencies of targets

We analyze the above targets to lead purchase tendency using market basket analysis as same way as a paragraph 3-2. Table 7, Table 8 and Table9 show association rules of each purchase pattern.

Table 7: all round pattern's association rule (Cluste-M4)

Antecedent	Consequent	Confidence	Support	Lift
Men's shirt	Men's T-shirt	39.65	1.508	7.286
Men's T-shirt	Men's shirt	27.71	1.508	7.286
Women's dress	Women's scarf	36.25	1.902	6.142
Women's scarf	Women's dress	32.22	1.902	6.142
Ring	Necklace	32.87	1.574	3.742
Necklace	Ring	17.91	1.574	3.742
Necklace	Stud earrings	41.04	3.607	3.177
Stud earrings	Necklace	27.92	3.607	3.177
Sundry good	Leather small articles of Women's	40.98	1.639	3.173
Leather small articles of Women's	Sundry good	12.70	1.639	3.173

The number of people of the all round pattern's customers is largest in middle users and they tend not to come to Z store at specific time. There are 2 rules with men's commodities in this purchase pattern. However, almost all rules have women's item as an antecedent and a consequent. Men's shirt and men's T-shirt are bought easily by women given that this pattern has a lot of people in middle users.

Table 8: afternoon pattern's association rule (Cluster-M1)

Antecedent	Consequent	Confidence	support	Lift
Necktie	Men' s shirt	47.82	1.33	12.759
Men' s shirt	Necktie	35.48	1.33	12.759
Men' s shirt	Men' s T-shirt	38.71	1.45	7.808
Men' s T-shirt	Men' s shirt	29.27	1.45	7.808
Repair item	Women's pants	84.75	6.05	3.215
Women's pants	Repair item	22.94	6.05	3.215
Ring	Necklace	25.64	1.21	3.213
Necklace	Ring	15.15	1.21	3.213
Necklace	Stud earrings	30.30	2.42	3.133
Stud earrings	Necklace	25.00	2.42	3.133

This pattern has more rules with men's commodities than all round pattern. Necktie doesn't appear in rules of all round pattern. Men' s shirt is a good match with necktie as well for women of this pattern.

Table 9: early evening pattern's association rule (Cluster-M9)

Antecedent	Consequent	Confidence	support	Lift
Men' s socks	Men' s shirt	75.00	1.30	13.327
Men' s shirt	Men' s socks	23.08	1.30	13.327
Ring	Hair accessories	66.67	1.73	6.696
Hair accessories	Ring	17.39	1.73	6.696
Men' s blouson	Men' s shirt	37.50	1.30	6.663
Men' s shirt	Men' s blouson	23.08	1.30	6.663
Leather small articles of men' s	Men' s T-shirt	41.67	2.17	5.662
Men' s T-shirt	Leather small articles of men' s	29.41	2.167	5.662
Men' s shirt	Men' s T-shirt	38.46	2.17	5.226
Men' s T-shirt	Men' s shirt	29.41	2.17	5.226

Table 9 has many rules with men's commodities. There are only 2 rules with women's commodities. It is found that women of this pattern tend to buy men’s commodities compared with other pattern in middle users. Especially, men’s blouson and leather small articles of men’s are used with ordinary clothes not business commodities. It is also found that the rules are pretty different between patterns even if they are customers of the same middle users. Therefore, it is important to search temporal patterns of coming to a store to discover a purchase tendency.

4. Summary and consideration

In this study, we classified customers using a two-step clustering method with customer information such as how much each customer spent money at Z store and how many commodities each customer buy at Z store and led the purchase tendency of commodities using market basket analysis. Afterwards, we decided to analyze middle users and led temporal patterns of coming to Z store using the frequency in each time zone that we set given that customer's life pattern influences the time when they come to Z store and finally discover the purchase pattern of the commodities using market basket analysis.

It is found that the female customers of the heavy users and the middle users purchase men's commodities from the result of a market basket analysis. This is attributed to the fact that customers with high royalty to the department store purchase not only women's commodities but also men's commodities because they trust a lot of commodities that Z store sells. In addition to that, especially customers of heavy user tend to buy men’s commodities through a year compared with middle users and light users.

Therefore it is thought that those who engage in marketing at a store of the department store could find the heavy users by searching out women who purchase a lot of men's commodities. It is informative for the department store to find heavy users by just counting how many men’s commodities each female customer purchased because it costs a lot of time and money for them to search customer behavior and find heavy users.

Given above discoveries, it is anticipated that sales of a department store would increase by a way of sending direct mail that aims at cross-selling of men's commodities and women's commodities to female customers who tend to purchase men's commodities. Moreover, it is possible to draw up appealing direct mail with time and commodity information that suit each temporal pattern.

5. Future tasks

In this study, it should be needed to analyze other purchase types in the same way because we analyze middle users and heavy users and some patterns of coming to a store. Moreover, it is possible to materialize customer image using information than we didn't use for this paper.

We use the data of Z store which is a part of original data in this study. Therefore it is possible to analyze rest of the original data that are X store and Y store in the same analytical flame and we can compare outputs of three stores. It can be predicted that those three store's outputs are infected by the place where those stores are located and what those location have. Therefore it is thought that we can figure out how the places infect customer behavior as well by comparing the outputs.

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Ecological Attitudes and Knowledge Affect Future Purchase Intentions: The Elaboration Likelihood Model for Environmentally Friendly Products

Wen-Lung Sung
Postgraduate Programs in Management, I-Shou University
1, Section 1, Hsueh-Cheng Rd., Ta-Hsu Hsiang, Kaohsiung County, 840, Taiwan, R.O.C.
Tel: (886)75919582
Fax: (886)75919018
E-mail: wayne246380@yahoo.com.tw

Tsu-Wu Tien
Department of Business Administration, I-Shou University
1, Section 1, Hsueh-Cheng Rd., Ta-Hsu Hsiang, Kaohsiung County, 840, Taiwan, R.O.C
E-mail:twtien@isu.edu.tw

Julia L. Lin
Department of International Business, I-Shou University
1, Section 1, Hsueh-Cheng Rd., Ta-Hsu Hsiang, Kaohsiung County, 840, Taiwan, R.O.C.
E-mail: julia@isu.edu.tw

Jun-Ying Huang
College of Management, I-Shou University
1, Section 1, Hsueh-Cheng Rd., Ta-Hsu Hsiang, Kaohsiung County, 840, Taiwan, R.O.C.
E-mail: jyhuang@isu.edu.tw

Abstract

The environmental characteristics of products have become increasingly important to consumers. The more closely a product's image matches the buyers' self-concept, the higher the purchase intention is for that product. Thus, Concerns related to the environment are evident in the increasingly environmentally conscious marketplace. Targeting consumers are willing to pay more for environmentally friendly products. The elaboration process of advertising data among consumers can take two separate routes depending on the level of involvement. This article discusses conceptualization of the ecological attitudes and knowledge will affect future purchase intention by Elaboration Likelihood Model, and the external price willingness which moderate the relationship.

key words: ecological attitudes, ELM, Environmentally Friendly Product

Introduction

The attitude-behavior relationship is defined in many theories or models (Fishbein, 1967). Kassarjian (1979) were led to the conclusion that "attitudes clearly have become the central focus of consumer behavior research". Not only are there a large number of empirical studies on consumer attitude formation and change, but there are also a large number of different theories of persuasion vying for the attention of the discipline (Kassarjian 1982; Petty, et al., 1983). By disclosing their personal information such as name, address, and personal preference, consumers assist the firm to design and produce better quality and tailor-made products. In return, customers expect to receive better products and other related benefits (Wu, 2008). Ecological Concern cover three different dimensions of knowledge, affection, and commitment over environmental issues, The Ecological attitudes and Knowledge Scale (EAKS) developed by Maloney, Ward, and Braucht (1975) was adapted. This scale has proven criterion validity and high reliability (Hong and Zinkhan, 1995).

Although research pertaining to the effect of self-concept on purchase intention is rare, Landon (1974) and Belch (1978) found that both actual and ideal self-concept influence purchase intention (though their degree of relative impact is different). That is, the more closely a product's image matches the buyers' self-concept, the higher the purchase intention is for that product (Petty, et al., 1983). Zaichkowsky (1986) related to the relationship between the concept of involvement and the cognitive elaboration of the advertisement. In her view, this variable takes on considerable importance in the study of advertising effectiveness, as involvement serves as a mediating variable in determining the degree of the advertisement's influence on the receiver (Te'eni-Harari, 2007). Customers adapted to this new threatening situation by considering environmental issues when shopping (e.g., checking if the product is wrapped in recycled material) and by purchasing only ecologically compatible products (e.g., biodegradable paint, CFC-free hairspray or unbleached coffee filters). Perhaps the most convincing evidence supporting the growth of ecologically favorable consumer behavior is the increasing number of individuals who are willing to pay more for environmentally friendly product (Laroche, et al., 2007).

Eco-labeling may be defined as making relevant environmental information about a product available to the appropriate consumers through the product label to promote an environmental goal, cause or objective through consumer choice (Truffer, et al., 2001). Products may be labeled based on a wide range of environmental considerations, such as recycled content, biodegradability, toxic emissions, waste generation, harm to wildlife, etc. By contributing to the decision-making process inherent in product selection, purchasing, use and disposal, eco-labeling has wide implications for consumers, businesses and government (Banerjee and Solomon, 2003). According to Banerjee and McKeage (1994), green consumers strongly believe that current environmental conditions are deteriorating and represent serious problems facing the security of the world. Conversely, consumers who do not engage in environmentally friendly behavior perceive that ecological problems will “resolve themselves,”. Therefore, an individual’s perception about the severity of ecological problems might influence his/her willingness to pay more for ecologically compatible products (Laroche, et al., 2007).

Conceptual Framework

A proposed conceptual framework for the study of design is presented in Figure 1. The framework draws on four key literature bases and illustrates four categories of the ecological attitudes and knowledge, involvement, price variance, and consumers purchase intention. There have propositional that involvement mediating effect of ecological attitudes and knowledge between consume purchase intention, and moderating effect of the price willingness.

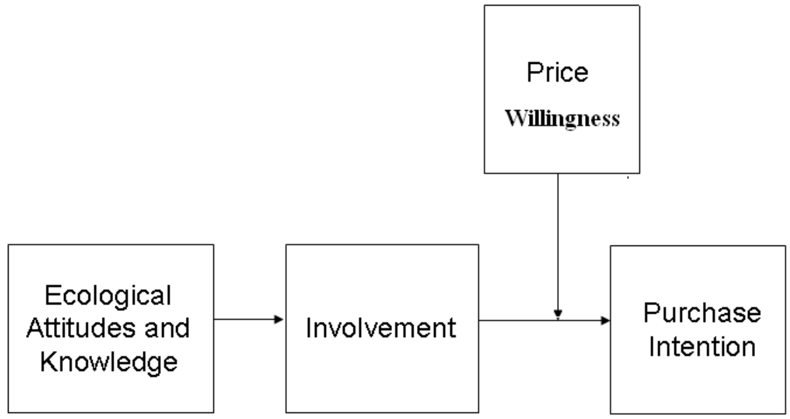

Figure1. A conceptual framework is involvement mediating effect of ecological attitudes and knowledge between consume purchase intention, and moderating effect of the price willingness.

Literature review

Ecological Attitudes and Knowledge

Ecological concern refers to the degree of emotionality, the amount of specific factual knowledge, the level of willingness, as well as the extent of actual behavior on pollution-environment issues (Maloney and Ward, 1973).

Maloney, Ward, and Braucht (1975) develop the EAKS scale consisting of four subscales: affection (A), knowledge (K), verbal commitment (VC), and actual commitment (AC) to measure ecological concern. In their formulation of the Ecological Concern Index, Kinnear and Taylor (1973) also emphasize that the level of ecological concern a person demonstrates will be a function of both his attitude and her behaviors (Li, 1997).

Involvement

Zaichkowsky (1986) related to the relationship between the concept of involvement and the cognitive elaboration of the advertisement. In her view, this variable takes on considerable importance in the study of advertising effectiveness, as involvement serves as a mediating variable in determining the degree of the advertisement's influence on the receiver. Yet despite the considerable research on involvement, many researchers are convinced that no complete understanding of the involvement concept has yet been formulated. In the view of some, it is very important that additional work be conducted to examine the issue of involvement (Day, Stafford, and Camacho, 1995; Zaichkowsky, 1986). Krugman (1965) has proposed an alternative view that has achieved considerable recognition among consumer researchers. According to this view, increasing involvement does not increase resistance to persuasion, but instead shifts the sequence of communication impact. Krugman (1965) argues that under high involvement, a communication is likely to affect cognitions, then attitudes, and then behaviors, whereas under low involvement, a communication is more likely to affect cognitions, then behaviors, then attitudes (see also Ray et al. 1973; Petty and Cacioppo, 1983).

This view stems from our Elaboration Likelihood Model (ELM) of attitude change (Petty and Cacioppo 1981). The basic tenet of the ELM is that different methods of inducing persuasion may work best depending on whether the elaboration likelihood of the communication situation (i.e., the probability of message- or issue-relevant thought occurring) is high or low. When the elaboration likelihood is high, the central route to persuasion should be particularly effective, but when the elaboration likelihood is low, the peripheral route should be better.

The ELM contends that as an issue or product increases in personal relevance or consequences, it becomes more important and adaptive to forming a reasoned and veridical opinion. Thus, people are more motivated to devote the cognitive effort required to evaluate the true merits of an issue or product when involvement is high rather than low. If increased involvement increases one's propensity to think about the true merits of an issue or product, then manipulations that require extensive issue- or product-relevant thought in order to be effective should have a greater impact under high rather than low involvement conditions. On the other hand, manipulations that allow a person to evaluate an issue or product without engaging in extensive issue- or product-relevant thinking should have a greater impact under low rather than high involvement.(Petty and Cacioppo, 1983)

Central Routes

The different theories of persuasion possess different terminologies, postulates, underlying motives, and particular "effects" that they specialize in explaining-these theories emphasize one of two distinct routes to attitude change (Petty and Cacioppo 1981, 1983). One, called the central route, views attitude change as resulting from a person's diligent consideration of information that s/he feels is central to the true merits of a particular attitudinal position. The theoretical approaches following this route emphasize factors such as (1) the cognitive justification of attitude discrepant behavior (Cummings and Venkatesan, 1976; Festinger, 1957); (2) the comprehension, learning, and retention of issue- or product- relevant information (Bettman, 1979; Hovland, Janis, and Kelly, 1953; McGuire, 1976); (3) the nature of a person's idiosyncratic cognitive responses to external communications (Cacioppo and Petty, 1980a; Greenwald, 1968; Petty, Ostrom, and Brock, 1981; Wright, 1980); and (4) the manner in which a person combines and integrates issue- or product-relevant beliefs into an overall evaluative reaction (Ajzen and Fishbein, 1980; Lutz and Bettman, 1977; Troutman and Shanteau, 1976; Petty, et al., 1983). This logic results in the following proposition:

Proposition 1: The high ecological attitudes and knowledge consumer is positively and significantly related to the purchase intention for environmentally friendly products.

Peripheral Routes

A second group of theoretical approaches to persuasion emphasizes a more peripheral route to attitude change. Attitude changes that occur via the peripheral route do not occur because an individual has personally considered the pros and cons of the issue, but because the attitude issue or object is associated with positive or negative cuesor because the person makes a simple inference about the merits of the advocated position based on various simple cues in the persuasion context (Petty and Cacioppo, 1983).

The theoretical approaches following the peripheral route emphasize factors such as (1) whether a simple attitudinal inference can be made based on observing one's own behavior (Bem, 1972; Scott, 1978); (2) whether the advocacy falls within one's latitude of acceptance or rejection (Newman and Dolich, 1979; Sherif and Nebergall, 1965); (3) whether some transient situational utility is associated with adopting a particular attitude (Schlenker, 1978, 1980); and (4) whether an advocated position or product is classically conditioned to basic but issue irrelevant cues, such as food and pain (Janis, Kaye, and Kirschner, 1965; Stemthal and Craig, 1974), or is associated with secondary cues, such as pleasant pictures and attractive endorsers (Kelman, 1961; Mitchell and Olson, 1981; Mowen ,1980; Petty, et al., 1983). Attitude changes induced under the peripheral route are postulated to be relatively temporary and un-predictive of behavior (Petty and Cacioppo,1983).

Proposition 2: The low ecological attitudes and knowledge consumer is no significantly related to the purchase intention for environmentally friendly products.

Price Willingness

Concerns related to the environment are evident in the increasingly environmentally conscious marketplace. Over the years, a majority of consumers have realized that their purchasing behavior had a direct impact on many ecological problems (Laroche, et al., 2007). Customers adapted to this new threatening situation by considering environmental issues when shopping (e.g., checking if the product is wrapped in recycled material) and by purchasing only ecologically compatible products (e.g., biodegradable paint, CFC-free hairspray or unbleached coffee filters). Perhaps the most convincing evidence supporting the growth of ecologically favorable consumer behavior is the increasing number of individuals who are willing to pay more for environmentally friendly product (Laroche, et al., 2007).

In 1989, 67 percent of Americans stated that they were willing to pay 5-10 percent more for ecologically compatible products (Coddington, 1990). By 1991, environmentally conscious individuals were willing to pay between 15-20 percent more for green products (Suchard and Polonsky, 1991). By 1993, Myburgh-Louw and O'Shaughnessy (1994) conducted a mail survey of female consumers in the UK to examine their perceptions of environmental claims on the packaging of clothes detergents. They found that 79 percent of their sample agreed to pay up to 40 percent more for a product which was identical in every respect to their own brand and which had been proven to be green (Laroche, et al., 2007). I argue this point when over psychological price ceiling will be have the reverse effect.

Proposition 3: Price willingness moderate the relationship between involvement and consume purchase intention. When price more height the effect will be reduce.

Purchase Intention

Although research pertaining to the effect of self-concept on purchase intention is rare, Landon (1974) and Belch (1978) found that both actual and ideal self-concept influence purchase intention (though their degree of relative impact is different). That is, the more closely a product's image matches the buyers' self-concept, the higher the purchase intention is for that product. The projection of these findings into an advertising setting leads to the prediction that a product described as being congruent with viewers' self-concept would elicit higher purchase intention than a similar product that does not match viewers' self-concept quite so well. Moreover, studies of the attitude-behavior relationship suggest that purchase intentions are highly related with product attitudes (Ryan and Bonfield, 1975). As such, advertising expression congruent with one's self-concept is expected to elicit both a positive attitude toward the advertised product and a favorable purchase intention (Hong and Zinkhan, 1995).

Methodology

Subjects and Design

In this study data will be collected by using two steps. First steps used Ecological attitudes and Knowledge Scale to measure participates' environment attitudes. Second steps used experiment test the involvement and purchase intention.

A total of 200 male and female undergraduates at the University of I-shu university participated in the course; 50 subjects were randomly assigned to each of the cells in a 2 (involvement: high or low) x 2 (argument quality: strong or weak) factorial design. The subjects were isolated from each other so that they could complete the experiment independently, and subjects in a single session participated in different experimental conditions.

Involvement with purchase decisions is conceptualized as a behavior change in decision strategy and resulting choice that occurs only when the consumer sees the purchase or consumption situation as personally relevant or important (Zaichkowsky, 1986). Involvement with purchase decisions was studied experimentally in the context of selection of a product for a gift (Clarke and Russel, 1978).

Subjects reported they would spend more money, shop more stores and spend more time when shopping for a low-involvement product for a gift. The amount of search and money expended for the high-involvement products was the same regardless of whether the product was for themselves or for a gift. Additional work investigated and confirmed
the hypothesis that gift-giving situations differ in involvement and that these differences directly influence the amount of effort devoted to the purchase selection process (Belk, 1982). Thus, the high involvement product we choose MP3, and the low involvement product we choose shampoo. Other way the argument quality we separate the product was for oneself or for a gift.

Measures

Independent Variable

The Ecological attitudes and Knowledge Scale (EAKS) has proven criterion validity and high reliability. The original true/false and multiple-choice question formats of the EAKS were, however, replaced by interval scales. To reduce the burden on respondents, the scale was shortened to a 16-item Likert scale, with responses ranging from 1, " strongly disagree," to 7," strongly agree."

Dependent Variable

Three dependent measures were assessed: memory, the evaluation of product preference, and purchase intention. Memory was measured using aided and unaided recall, and recognition of the brand presented in the ads. Product preference was measured in two ways. Under the first method, respondents indicated their preference toward the brand advertised on a 7-point Likert-type scale. Following Mitchell and Olson (1981), this scale consisted of four bipolar evaluative items (bad-good, unpleasant-pleasant, poor quality-good quality, and dislike very much-like very much). The reliability (Cronbach's alpha) of this scale ranged from 0.79 to 0.92, depending upon the types of appeals used to advertise each brand. The mean value of these four items was used as an indicator of product preference. Another method was a rank-order measure in which subjects ordered the two brands along with two actual brands according to the degree to which they preferred each brand. Behavioral intention toward each brand was assessed on two scales. One was a composite scale of two subscales. One subscale was a global 7-point bipolar scale with end points labeled "definitely would not" and "definitely would buy" (coded 1-7). This subscale parallels one used in previous studies (e.g., Mitchell & Olson, 1981). Another subscale involved use of the Juster (1964) scale, which is distinct from Likert-type scales in that it provides a verbal description, along with a numerical probability in parentheses, for each of the 11 anchors of the scale. This scale primarily operationalizes purchase intention as a probability measure, and in this sense, is similar to the likelihood scale used in past studies (e.g.. Smith & Swinyard, 1983). These two subscales were combined, and the resulting Cronbach's alpha was 0.87. The second method was a rank-order measure similar to the one used to assess brand preference. (Hong and Zinkhan, 1995). This article chooses the Smith and Swinyard, (1983) scales.

Price willingness

According to Laroche (2001), three questions were used measure respondents' willingness to pay more for environmentally friendly products. Each question was measured on a nine-point Likert scale (strongly disagree to strongly agree). Laroche scale only measure 10 percent more for environmentally friendly products. In this article I used 10 percent, 20 percent, 30 percent, and 40 percent to test the consumer's willingness limit for environmentally friendly products.

Conclusion

This article provides a conceptualization of the high degree ecological attitudes and knowledge people for green products despite the relatively high purchase intention. The more closely a product's image matches the buyers' self-concept, the higher the purchase intention is for that product. That will coincide with the ELM theory, but the price will be an important regulator of variables, when over psychological price ceiling will be have the reverse effect.

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Cover Page

Author: Dr Richard Hu

Affiliation: University of Canberra, Australia

Correspondence address: Faculty of Business and Government, University of Canberra, Bruce, ACT, 2601, Australia

Email: Richard.Hu@canberra.edu.au

Topic: China’s Law Reforms on Land and Real Estate Property and the Paradoxes

China's Law Reforms on Land and Real Estate Property and the Paradoxes

Dr Richard Hu
University of Canberra, Australia

1. Introduction

Real estate property has arguably been the most contested issue during China's transformation towards a market economy. It touches the very heart of China's socialist doctrine: the state/collective ownership of land. This paper analyses the evolutions of land and real estate property laws in contemporary China including their outcomes and implications for overseas investors. Real estate property fixed on land has been mostly privatised during China's unprecedented process of urbanisation along with its market economy reforms. Driven by the dual tropes of market economy and urbanisation, China's government has reformed laws to 'marketise' real estate property for investment, ownership and transaction and the reforms have differentiated implications for different social groups. There are constantly new winners and losers. The drivers of and impediments to these reforms are identified including the inherent political paradoxes embedded within them: state/collective ownership of land vs. market transaction of land use right; state ownership of land vs. private ownership of real estate property fixed on the land. The paper argues that these paradoxes are challenging China's socialist system of public ownership and the continuing legitimacy of the Communist Party of China (CPC). Leaving them unresolved may provoke a pessimistic tenor to China's buoyant expectations of growth in its developing market economy. However, judging from the historic tracks of China' reforms towards a market economy and its current dilemma, China is very likely to further reform its laws on land and real estate property in a manner 'with Chinese characteristics'.

2. Law Reforms on Land and Real Estate Property

China's land market and real estate market have been developing concurrently since China's 'reform and opening up' (*gai ge kai fang*) in 1978. Strictly speaking, China's does not have a land market. Constitutionally the land ownership belongs to the state in urban areas and the collectives in rural areas. When people talk about China's land market, they actual refer to China's land use right market. China's land market reform and real estate market reform are naturally interlinked given their inherent bondage that real estate property is fixed on land. However, the two concurrent and bound reforms have been proceeding along different tracks in the past three decades. For the land market, the overarching reformist theme is being from non-transferable land use right to transferable land use right; for the real estate property market, the overarching reformist theme is being from public provision and ownership to privatisation.

Land is a particularly important issue in China's contemporary political and economic context. Public ownership of land is one of the few fundamentalist principles of the CPC. Land reform which was marked by confiscation of private lands for redistribution in rural areas appealed to peasants and played an important role in the CPC's victory over the

Chinese Nationalists (*guo ming dang*) in the civil war before 1949. Based on the ideology that all land was common property, the large-scale nationalisation was carried out after the People's Republic of China (PRC) was established. For this purpose, the PRC Land Reform Law was announced in June 1950 with a focus on land confiscation and redistribution mainly in rural areas. In the same year, the Regulation on Urban and Urban Fringe Land Reform stipulated that urban land was to become state land and would be managed by city governments. This nationalised urban land system was in force from the early 1950s until the mid 1980s. During the period between the 1950s and the 1980s, China's urban land system was characterised by three features as summarised by Li (1999):

- The administrative allocation of land: Land was allocated for purposes determined by the administrative authorities. Land users such as the state authorities, army, schools or state enterprises could lodge land use applications to the relevant levels of governments. Land was then granted when the land use application was approved.
- Land use without charge and compensation: When land was granted through the administrative allocation, no charge or compensation was made for land use. The period of land use was not specified either. Theoretically the users could occupy the land for an unlimited time unless future state construction was going to take place on the same site.
- No transfer right: Land users had no right to transfer the land through selling, leasing, mortgaging, donating, or exchanging. Constitutionally land could not be transferred in any form. Land had to be returned back to the relevant levels of government agents if land users did not need any particular piece of land, though this seldom occurred.

China's current land system has been resulting from a series of land law reforms from the early 1980s, moving from allocating land use rights administratively to a hierarchical system of primary and secondary land use markets (Ho and Lin, 2003). The breakthrough was the amendment to the Article 10 of the Constitution which added the clause that 'the right to use land may be transferred in accordance with the provisions of law' in 1988. This was aimed to eliminate the constitutional binding on land use for private purposes such as foreign or private enterprises and private real estate development. It separated the ownership and use rights pertaining to urban land in order to establish a land use right market for private purposes (Hsing, 2006). Thus a 'dual track' land use system is in practice in China determined by the purposes of the land: Allocation (*hua bo*) is used to grant land use rights to state or non-profit users; Conveyance (*chu rang*) is used to transfer land use rights to commercial users for fixed terms (40 years for commercial land, 50 years for industrial land and 70 years for residential land). Major land reforms have been centred on defining and granting land use rights through the second track of conveyance.

There are two tiers of land use right markets in China. The allocation and conveyance of land use rights from the state form the 'primary market' (*yi ji shi chang*) of land use rights. Land use rights through allocation are obtained by paying an 'allocation price' consisting of three major parts: the expropriation fee of land (*zheng di fei*); stipulated land fees (*tu di gui fei*); and allocation fee (*hua bo fei*). Land use rights through conveyance are obtained by paying a 'conveyance price' consisting of three major parts too. The first two parts are identical to those in the allocation price. The third differentiating part is a conveyance fee (*chu rang jin*), which is the largest as well as the most important portion of price paid to obtain land use rights through conveyance. The conveyance fee is supposed to be the market price of land use rights which could be determined by negotiation (*xie yi*) or tender (*zhao biao*) or auction (*pai mai*). As a counter measure to curb corruption in determining the conveyance fee through negotiation between the government and the land users, in 2002 the State Council promulgated the Regulation of Granting State-Owned Land Use Rights by Tender, Auction and Quotation (also known as No. 11 Decree) to put an end on obtaining land use rights through negotiating the conveyance fee.

Land use right holders who have obtained the land use rights through paying the conveyance fee in the primary market can transact or circulate (*liu zhuan*) their land use rights through transfer (*zhuan rang*), rent (*chu zu*) or collateral (*di ya*), forming a secondary market of land use rights. Circulating land use rights in the secondary market adds significant value to the land use rights. But land use rights obtained through allocation in the primary market cannot be circulated in the secondary market.

Land market reforms directly impacted on the formation and evolution of the real estate market. China's real estate market has also developed along two tracks, but in a different sense from the land market. One track has been developing in parallel with the land market evolution as described above. The commercialisation of land use rights was the first step to build a real estate market. The land use rights for real estate development can be obtained in both the primary land market and the secondary land market. Real estate developers can be public (state enterprises) or private (private investors from home or overseas). The other track has been the process of privatisation and marketisation of housing, which represented a transition from an administrative system to a market system under a top-down reform package (Lee, 2000, Zhang, 2000). There was not a housing market in China before the early 1980s. Housing was provided by the state as a social welfare through the work units (*dan wei*) for which individuals worked. The ownership of housing belonged to the state and could not be circulated or transacted. Public provision of housing proved to be a major barrier to alleviating financial burdens on the state or state enterprises and enhancing residents' living conditions. The solution was dual: on the one hand, the public owned housing were privatised; on the other hand, real estate development through multiple modes of investment was allowed and encouraged. This extensive housing privatisation was then supported by a system of urban housing property rights and a growing mortgage financing (Stephens, 2010).

The year of 1998 was a dividing line in the evolution of China's real estate market. The State Council issued the Notice on Further Deepening Urban Housing Reform and Accelerating Housing Construction to formally cease all forms of public provision of housing as a form of welfare from work units (both government departments and state enterprises). The Notice marked a complete transition to the provision of market based housing (Ye et al., 2006). To purchase from the market thus became the only source to obtain housing. This was a significant impetus to the real estate market in China to sustain a property boom for almost two decades. It needs to be pointed out that the property boom mainly refers to housing development, while in some leading cities (Beijing, Shanghai, Shenzhen, Guangzhou, and etc.), it also includes commercial property development such as office, hotel, and retail. Commercial property boom more reflected the macro economic growth in China in order to provide facilities for economic activities.

3. Drivers and Impediments

China's land and real estate property law reforms were facilitated by economic drivers while its further reforms are restricted by political impediments.

The economic driver is a dual process interwoven with non-state investment and urbanisation. The non-state investment refers to both foreign investment and domestic private investment. One important aim of the 'opening up and reform' policy in the early 1980s was to attract foreign investment as well as so called 'advanced technology and management experience' to grow Chinese economy first in the coastal cities. Foreign investment in China in the 1980s mainly came from Hong Kong, Taiwan, and Singapore which had traditional links with mainland China in the beginning, and then from other East Asian countries like Japan, South Korea, and some Southeast Asian countries, and lastly from North American and European countries. The first problem arising from the foreign investment in China was related to the land use right and real estate property right, may it be the enterprises completely invested by foreign investors or joint ventures shared between foreign investors and Chinese partners. In the early stage, one common practice was that the Chinese local governments provided land use rights as contribution and share in the joint ventures with foreign investment (Wu et al., 2007). However, to clarify and define the land use rights as well as the real estate property on the land in relation to foreign investment made it an urgent law reform issue in the early 1980s.

Domestic private investment in China constituted the other important part of China's non-state investment. In the 1980s, domestic private investment did not impose a strong push on law reforms on land and real estate property in China because it did not evolve into a power force in the politic-economic sphere in terms of scale or influence yet. Private investment was mostly made in the form of individual household business (*ge ti hu*) largely of vendor retailing or small scale manufacturing workshops. In the 1990s, especially after Deng Xiaoping's Southern Tour Talk in 1992, private investment grew massively along with foreign investment. Two factors well justified the rapid growth of private investment in the 1990s. First is the favourable and encouraging investment policies carried out by all level of governments after Deng's pro-market 'theory of building a Socialist market system with Chinese characteristics' was enthroned as the CPC's ideological doctrines. Secondly, some individual household businesses which commenced and accumulated in the 1980s were able to improve their strength and scale at an accelerating speed in the 1990s. Coupled with those who could access power in the transition from a planned economy system to a market economy system to grasp their 'first bucket of gold' (*di yi tong jin*), the domestic private investors were able to invest in enterprises with scales which involved land use rights and real estate property, such as factories, farming, and real estate development projects. Thus domestic private investment joined the force requesting law reforms on land and real estate property.

The other driver of China's law reforms on land and real estate property was its massive urbanisation process. China's urbanisation rate was 45 per cent in 2008 growing from 20 per cent in 1980, while the central government's target was set to be 60 per cent in 2020 (Hu, 2008). The magnitude and speed of China's urbanisation were unprecedented and unparalleled in its 'ambition of urbanism' (Campanella, 2008). China's urbanisation is a concurrent dual process of urban population growth and urban construction growth. Urban population growth has been largely a result of rural population moving into cities for employment, education and residence under the context of macro economy boom. Urban construction growth has been more than a process of providing accommodation for the burgeoning urban population. It was first of all to provide spaces for production and business activities in factories, offices and commercial facilities of hotels, exhibition and conference centres, and etc, in addition to the infrastructures which support the urban systems. It then involved the massive urban housing construction to provide shelters for people who work and live in cities. For local governments, one important fiscal source has been from leasing land for urban housing development to fund the expanding public services since the 1980s (Tang et al., 2010). This is a factor of urban growth driven by local governments.

The massive and rapid process of urbanisation imposes imperatives on law reforms on land use and real estate properties in two senses. One is related to urban housing which was previously provided by the state as an in-kind welfare for workers, but now is privatised and commoditised. Private ownership and transferability of real estate properties required that relevant law reforms must be made. The other is related to the private corporate subjects which invested in the urban properties for business purposes, may the investment be foreign or domestic. As part of the corporate assets, the real estate property as well as the land which they invested in, occupied and used needed to be legally clarified and defined. Therefore, for either individual subjects or corporate subjects in China's urbanisation, it was very important to reform land and real estate property laws to adapt to new economic settings and actors.

However, there are a few deeply-rooted impediments restricting further law reforms on land and real estate properties which are mostly political factors in China. The first impediment is the practice of the rule of party (the CPC) despite the rhetoric of the rule of law. People, including cadres and ordinary citizens in China, tend to attribute Chinese contemporary problems to so called 'systematic problem', which is essentially about the centralised governing system by one party. After an attempt to liberalise the political system in the late 1980s which culminated in the Tiananmen Square Incident in the spring of 1989, the CPC tightened its control in the political sphere throughout the 1990s, and encroached into the economic sphere too in recent years as seen in the strengthened dominance of the state-owned enterprises in Chinese economy. The effort to build a market economy and the rhetoric of the rule of law are not the ultimate aims of the CPC, but means for the CPC to justify and sustain its rule. The rule of party in political, economic and judicial spheres fundamentally restricts further law reforms on land and real estate property which are supposed to be geared towards the rule of law, transparency and accountability as characterised in a market economy system.

The second impediment is the ambiguity in the interpretation and implementation of the rule of law in China. This ambiguity is partly related to the first impediment of the rule of party as stated above. Without logically sound philosophy and well accepted doctrines, the CPC is at ideological crossroads which are caught between its forward vision and its historical links. This is evident in the fact that every generation of CPC leaders had to generate their own governing 'concepts' and 'theories', like the Mao Zedong Thought, the Deng Xiaping Theory, the Three Represents Theory, and the Scientific Outlook on Development. The party's ideological variation and oscillation has impaired the rule of law as both rhetoric and practice. In 2001, Jiang Zeming, the CPC's Secretary General and China's National president then, expanded the rule of law (*yi fa zhi guo*) to incorporate the rule of virtue (*yi de zhi guo*) so as to 'run the country by combining the rule of law with the rule of virtue'. This statement was highly praised by the mainstream media as it has always been the case in the CPC's propaganda mechanism, however, some independent intellectuals alluded that it was very problematic since the criteria of virtue could be very arbitrary. Feeling the contradictory nature between the rule of law and the rule of virtue, the latter has been subtly underplayed in the mainstream propaganda since the present generation of CPC leaders headed by Hu Jintao went into power in 2002. Without a clear cut definition and adherence to the rule of law, future law reforms on land and real estate property in China could be in uncertainty.

The third impediment is the power-wealth coalition which has been developing along with China's economic growth in the past three decades. As vested interest groups, this power-wealth coalition grew through corruption and illegal power rent during China's transition from a planned economy to a market economy. The centralised power structure and liberalised market reform have enhanced the possibility and profitability of transactions between power and wealth. The formation of such a power-wealth coalition has been accelerating during the last decade since both parties had completed their primitive accumulation of power or wealth. It is generally acknowledged that the power-wealth coalition has been firmly established in contemporary China, which is regarded as the largest barrier to further reforming China's political-economic structures. The power-wealth coalition is an exclusive force and tries to protect what they have obtained, while its legitimacy is problematic and often challenged. The members of the coalition access and control the power and wealth which could be changed under pressure from other social groups, however, they are unwilling to let it happen. A good example is that a few numbers of the current CPC leaders are the offspring of the older generation of leaders, including Xi Jingping, the current National Vice President, who is likely to succeed Hu Jintao as the CPC Secretary General and China's National President, Bo Xilai, the Party Secretary of the Chongqing Municipality, Wang Qishan, the Vice Premier, and Li Xiaopeng, the Vice Governor of the Shanxi Province, to name only a few. They are so called 'Prince Party' (*tai zi dang*) and are appointed to occupy top political positions to guard their vested interests. With these people in power now and in the future, it is not easy that China will deepen its law reforms on land and real estate property which might impair their vested interests.

4. Paradoxical Issues

What is a concern for investing in Chinese real estate property, may it be foreign investment and domestic investment, is the paradoxical issues which are inherently embedded in the Chinese land and real estate property law system. One paradoxical issue is the state/collective ownership of land and the transferability of land use rights in the market. As stated in the very beginning, strictly speaking China does not have a land market but a land use right market since only land use right within certain amount of years can be transacted in the market depending on the categories of land uses. The current land occupiers do not really own the lands, but the land use rights, that is, the land occupiers rent the lands by paying land allocation fees and land use fees. The land use rights can be transferred in the primary land market which involves transactions between the government and the land users and the secondary land market which involves transactions between different land users. No matter how the land use right is transacted and who owns the land use right, the land ownership remains to be with the state. This separation between land ownership and land use right is a fundamental legal problem in the Chinese land system. This problem is well understood and debated, however, it has not eventuated since Chinese land reforms were carried out in the past three decades and none of the land use right contracts has expired yet. How to terminate or renew the land use right when the land use right terms expire is not legally clarified and defined. How to address the real estate property fixed on the land when the land use terms expire is not clarified and defined either. This leads to the second paradoxical issue.

The second paradoxical issue in the Chinese land system is the relationship between the state ownership of land and the private ownership of real estate property fixed on the land. One central theme of Chinese housing reform in the past three decades is privatisation. Nowadays, most housing provision is privatised and belongs to private ownership, which can be transacted freely in the market. However, the housing owners do not really own the land where the property is fixed, but rent the land use right for certain years as discussed above. This separation of ownership of the land and ownership of the real estate property is legally problematic. For example, the land use right for residential land use is 70 years, but for a residential unit which is transacted in the 20th year, the new owner will only have a land use right of 50 years though the new owner has full ownership of the residential unit. The Property Law released in 2007 echoes the long standing principle in the Chinese Constitution that land belongs to the state or collectives (Wong and Arkel, 2007). It stipulates that the land use right for residential will automatically renew when the 70 years of land use right term expires, but it leaves open the issue of land premiums for such renews (Howlett and Hong, 2007). How to renew the land use rights for other land use types are not clarified either. Like the first paradox, the second paradox has not eventuated either since none of the land use right terms has expired yet.

These paradoxical issues inherent in Chinese political and legal systems with regard to land and real estate property constitute an intrinsic barrier for foreign investment to come into China. Here it is necessary to differentiate the foreign investment between those areas which have traditional links with China and those which do not have traditional links with China. The former refers to the countries or areas which have Chinese cultural roots and speak the same languages with China, such as Hong Kong, Taiwan and Singapore. They are active actors in the Chinese real estate market as foreign investors given their natural advantages over other foreign investors. The latter category of foreign investment refers to the investment from countries which do not have Chinese cultural links and do not share common political systems with China, such as American and European countries. It is for this category of foreign investment that Chinese paradoxical legal systems on land and property form an intrinsic barrier. Given different cultural traditions and political systems, it is very hard for this category of foreign investors to understand and feel confident of the assurance of property rights in China. There is commercial investment in the Chinese real estate property in the form of real estate investment trust (REIT) out of this category of foreign investment, however, they are short-term investment performances aiming at profits for overseas investors. They are very cautious of holding and owning real estate property in China in a long term either as end users or strategic investors.

Addressing these paradoxes lies in privatisation of land and transferability of its ownership in the land market. The discussion of the possibility and feasibility of privatising Chinese land has been going on among academics, but its eventuation will not be as easy as people expect. This is because privatisation of the land is fundamentally contradictory to the ideological foundation of the CPC, that is, the public ownership system. Land is the pivotal part of the publish ownership system. Privatisation of the land will mean the collapse of one ideological fundamentalism on which the CPC and the current central government are based. However, this should not necessarily be interpreted as zero possibility of land privatisation in China. Like the housing privatisation and constitutional recognition of private property ownership which were thought of as unimaginative 30 years in China, land privatisation is possible in the long run. This optimism is supported by two arguments. One is that all stakeholders in the Chinese political-economic sphere are fully aware of this problem and are trying to find out constructive solutions, among which, land privatisation is one of the consensuses in principle. The other is the flexibility of the CPC in adjusting its ideological doctrines to justify its legitimacy to continue to govern. The CPC could carry out an essentially capitalist reform in the name of building a ‘Socialist market economy with Chinese characteristics’. It may also carry out a reform of ‘privatisation of land with Chinese characteristics’ (in another euphemism of course).

5. Conclusion

China has made significant law reforms on land and real estate property since its genesis of the ‘reform and opening up’ policy three decades ago. These reforms have been centred on the thematic thread of privatisation of housing and real estate property ownership, transferability of real estate property and the land use rights in the market. They are a giant step liberalising Chinese land market and real estate market from its planned economy under the Stalinist style of governance. China’s law reforms on land and real estate property has been an important facilitator of China’s rapid economic growth and social and political transformation in the post-reform era. However, these law reforms are far from complete yet. Fundamental paradoxes exist in its current land and real estate property law system which is still in a transitory state. However, the further the reforms proceed, the closer the reforms will touch upon the core contradiction embedded in Chinese legal and political system: privatisation of land vs. public ownership system. Privatisation of land is required by the increasingly liberalised market economy – so called ‘Socialist market economy with Chinese characteristics’ in Chinese discourse. However, the public ownership system with public ownership of land as a pivot remains to be the CPC’s ideological fundamentalism though it has been reinterpreted and readjusted constantly. Any attempt to essentially solve this problem needs political courage and even boldness as well as creative institutional arrangement, and creative phrasing ‘with Chinese characteristics’. It is not an easy task for Chinese future law reforms to aim at privatisation of land. However, optimism should be attached to this vision judging from the consensus on the nature of the problem among stakeholders and the CPC’s track record of flexibility in adjusting its ideologies and policies to fit the new socio, economic and political settings.

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Title: Hyper-rich and hyper-luxury in China: the case of the most expensive gated communities

Author: Guillaume GIROIR, Professor of Human Geography
Affiliation: University of Orléans, France
Contact information: guillaume.giroir@univ-orleans.fr
Topic of submission: China; rich; hyperluxury; gated communities.

Hyper-rich and hyper-luxury in China: the case of the most expensive gated communities

Guillaume GIROIR (University of Orléans)

Introduction

Whereas in the world the number of poor is still huge and social inequalities tend to worsen, a tiny minority of society increasingly enriched, that of the very rich, even very very rich people. To meet the demand for these hyper–rich, the sector of the hyper-luxury is rapidly emerging in the world of luxury. This worldwide trend is observed in developed countries but also and perhaps even more in emerging countries. In fact, since the mid-2000s, became a very spectacular phenomenon in China, that of over-enrichment and the hyper-luxury. If the numerical weight of super-rich Chinese is minimal, their financial role is considerable. According to a joint survey conducted in 2009 by the China Merchants Bank and Consultancy Bain & Company, 320,000 wealthy Chinese have at least 10 million yuan ($ 1.46 million) each; collectively, they represent a combined wealth of 8.8 trillion yuan, equivalent to 29% of Chinese GDP (30 trillion yuan). Moreover, the accelerated emergence of *nouveau riches* and extreme forms of consumption has heavy social, political and even ethical stakes for a Confucian society and a still officially Communist regime. It raises the central issue of elites, their practices, their values, their role in a society just escaped from thirty years of Maoism.

The main objective of this study is to try to identify the specific world of hyper-rich in China, particularly through their residential practices. It aims to describe, classify, understand and interpret the phenomenon of "residential hyper-luxury". Initially, that topic will be put into a general perspective. This will involve trying to define the concept of hyper-luxury emphasizing its vagueness. The analysis will also present the special world of millionaires and billionaires, and the hyper-luxury in China. Details will be provided on the practices of consumption but also on the special status of super-rich in China and their contrasted perception by the society.

In a second part, we will focus on habitat type and residential practices of super-rich Chinese, that is on areas of private, secure and ultra-luxurious villas. While gated communities as a whole are beginning to be knowed (G. Giroir; Pow Choon-Piew; Wu

Fulong…), the hyper-luxurious gated communities don't have been so far the subject of any specific study. By definition much less numerous than the gated community of more affordable luxury, their case is a particular methodological problem. Are these borderline cases, totally unique, marginal, or do they represent a market segment whose heuristic value goes far beyond their limited number? We will stand here in the second hypothesis, assuming that these exceptional private residential spaces allow to understand the practices, values, dreams, the imagination of the rich in their most extreme expression, but also to clearly reveal the dysfunction of transitional China.

1. Hyper-rich and hyper-luxury: the case of China

1.1 The concept of "hyper-luxury"

As for luxury goods in general, the concept of hyper-luxury is poorly defined and definable. There is no unit of measurement to identify with certainty what distinguishes the ultra-luxury to the rest of the luxury sector. The hyper-luxury is part of neologisms coined by the media as "new luxury", "mega-rich", "hyper-rich" to describe the new phenomena of extreme forms of enrichment and consumption patterns. Unlike the process of democratization of luxury when the products become more accessible to the middle class, hyper-luxury represents a sanctuary of products and services virtually inaccessible, except for a tiny minority of society. It refers to tailor-made products, limited edition, premium, totally different from the "mass luxury". The super-luxury is the reign of extravagance, extreme and superlatives. It goes back to some of the very origins of the term "luxury": etymologically, it derived from the Latin "luxus" adjective meaning "excess, debauchery, excessive sumptuousness". The ultra-luxury renews with the values of perfection, excellence and rarity that affordable luxury has come to trivialize.

The ultra-luxury is a universal trend, but takes particular forms in emerging countries like Russia, India, Brazil or China. While the old wealthy European or American is increasing at a rate of slow and largely mature economies and societies, explosive economies of emerging countries allow accelerated growth of personal wealth. In China, the phenomenon of the *nouveau riches* is all the more spectacular since the level of development has long been very low. The hyper-luxury is the product of international star system. The considerable income from certain movie stars or pop stars give rise to forms of property investment or consumption patterns of off-standard. Overstatement, whims and exuberance converge to make these international stars of the pillars of an entire industry of media and entertainment.

1.2 Millionaires and billionaires in China: towards a "new aristocracy"?

The increase in the number of millionaires and billionaires is a very recent phenomenon in China. It goes above the mid-2000s and has since seen strong acceleration. According to the *Outlook Weekly* of *Hurun Rich List*, the number of billionaires in the yuan does not exceed one hundred in 2004 but reached a thousand in 2009. According to the *2010 Hurun Wealth Report*, wealthy Chinese show a clear differentiation according to level of income. The report estimates at 875,000 the number of dollar millionaires in China in 2009, 6.1% more than in 2008. Among them, there are 55,000 "super rich" (income above 100 million yuan) and about 1,900 yuan billionaires (€ 110 million), twice more than in 2008. At the top of the pyramid, 140 people have over 10 billion yuan. China has more dollar billionaires than any other country except the United States (130 instead of 359).

The phenomenon of super-rich in China must nevertheless be relativized. The total assets of the richest Chinese are still only one-tenth those of the richest American. Although hyper-enrichment in China takes some spectacular and transgressive features relatively to the regime and the Maoist period, it is yet a phenomenon only emerging. However, the potential for creation and accumulation of wealth is considerable. The average age of wealthy Chinese is indeed much lower than elsewhere in the world, with 39 years, nearly 15 years younger. Their wealth also increases more rapidly.

The example of some figures of super-rich highlights the unique dynamics of enrichment in a very short period. The richest Chinese in 2009 was Wang Chuanfu, chairman of BYD Co. Ltd., maker of electric cars and batteries, at the head of more than $ 5.1 billion; still embryonic, the electric car industry has already resulted in an considerable personal enrichment. He has won more than 102 places compared to 2008. Zhang Yin and her family, owner of the paper recycling company Nine Dragons Paper, is in second place. Xu Rongmao, owner of Shimao Property Holdings Ltd.., occupies third place. Note that Huang Guangyu, the first place in 2008, fells to 17th in 2009, suffered serious legal troubles.

Table: Distribution of millionaires in China (2009)

Rank	Geographical area	Total number of millionaires (in yuan)	whose millionaires owing 100 million yuan
1	BEIJING	151,000	9,400
2	GUANGDONG	145,000	8,200
	Guangzhou	49,200	3,810
	Shenzhen	45,600	3,160
3	SHANGHAI	122,000	7,300
4	ZHEJIANG	116,500	6,760
	Hangzhou	47,300	2,590
	Wenzhou	20,400	2,130
	Ningbo	13,500	860
5	JIANGSU	62,600	4,300
	Nanjing	22,100	1,680
	Suzhou	15,600	930
6	FUJIAN	33,500	2,100
	Xiamen	11,500	640
	Fuzhou	10,200	540
7	SHANDONG	30,500	1,720
	Qingdao	11,100	570
8	LIAONING	26,800	1,710
	Dalian	11,000	690
	Shenyang	7,660	510
9	SICHUAN	22,100	1,520
	Chengdu	13,500	730
10	HENAN	15,200	1,040

11	HEBEI	14,500	1,110
11	TIANJIN	14,500	1,030
13	SHANXI	13,300	1,110
14	HUBEI	12,500	900
14	HUNAN	12,500	670
16	SHAANXI	11,000	680
17	INNER MONGOLIA	10,200	700
18	CHONGQING	9,700	650
19	HEILONGJIANG	9,600	670
	Harbin	5,790	370
20	JIANGXI	8,200	680
21	ANHUI	7,100	760
22	JILIN	6,300	430
23	YUNNAN	4,800	430
24	GUANGXI	4,600	330
25	HAINAN	3,500	130
26	GUIZHOU	2,700	240
27	XINJIANG	2,600	210
28	NINGXIA	700	80
29	GANSU	650	70
30	QINGHAI	500	40
31	TIBET	350	30
	TOTAL	875,000	55,000

Source: *2010 HurunWealth Report,* Hurun Research Institute, April 2010

The table shows the ubiquitous presence of the rich and even super-rich in all regions and cities of China. Even as very poor regions like Tibet and Guizhou have their rich. Of the 875,000 Chinese millionaires, 151,000 reside in Beijing, the principal place of concentration of wealthy in China, followed by Guangdong and Shanghai. In the whole, these three focus areas gather 48% of the rich in China. In detail, the table shows a distribution far to be related with the demographic weight of regions or cities. The two mega-cities of Beijing and Shanghai are clearly over-represented, one being the political capital of the country, the other its economic capital. This is also the case of cities such as Shenzhen (45,600), boomtown to the explosive growth thanks to its

Special economic zone, Hangzhou (47,300), Mecca of Chinese culture, or Wenzhou (20,400), cradle of private entrepreneurship in China. Conversely, some big cities show a very significant under-representation of the rich. These include Tianjin, almost as populated as neighboring Beijing, but with only 14,500 rich, ten times less. This category also includes Chongqing (9,700) or Shenyang (7,660).

The origin of the fortune of the hyper-rich is not always easy to ascertain because of the confidentiality and sensitivity of the subject. Some are obtained through legal channels, some not. The property has been one of the principal means of wealth accumulation. Industrial and commercial sectors (paper industry, electronics ...) have also helped to build enormous fortunes. More recently, new energy have enriched a few pioneers. Thus, the leader of the solar Jiangxi Province is ranked fourth for his fortune.

The hyper-rich have very typical consumption patterns of the *nouveau riches*. They practice sometimes hyper-conspicuous consumption. The general logic is that the accumulation of luxury goods: luxury cars (Ferrari, Bentley ...), jewelry (Cartier, Bulgari, Montblanc), timepieces (Piaget, Cartier ...), designer clothes (Armani, Boss), leather (Vuitton, Gucci), perfume (Dior), yachts, antiques, art. According to the survey *Hurun*, the richest Chinese have an average of three cars and 4.4 luxury watches. Ferrari, established in China since 2004, has sold 206 cars in 2009, still far from the 1,467 U.S. market (or European: 2,752). The number one jewelry, Cartier has 32 stores in China, and 55 to run. Super-rich take their vacation in Hainan (Sanya), Yunnan and Hong Kong or abroad (USA, France…). Their favorite pastime is golf. They send their children to Britain for the school and the U.S. for the University. Some buy homes abroad, notably in the United States.

The super-rich Chinese have rapidly embraced the club practices and the international institutions of their foreign counterparts. As illustrated by the success of ultra-exclusive concierge company Quintessentially. Originally established in London in 2001, it has established subsidiaries in Beijing, Shanghai and Hong Kong. One major motivation for super-rich here is to maintain or create relationships, in line with the tradition of *guanxi*. They attend the most exclusive clubs like the famous Yongfoo

Elite in Shanghai or Chang An Club in Beijing. Dating sites for super-rich are beginning to emerge. This is the case of Golden Bachelor[1].

In total, the term "*nouveau riches*" or "hyper-rich" seems restrictive. According to the monthly magazine *Hurun Report* quoted by *China Daily*, the millionaires and billionaires do not just want to be rich, but to become a sort of "upper class" or "new aristocracy"[2].

1.3 Being hyper-rich in a "market socialist economy": a status at risk

In a Confucian society and a still Communist regime, it is obvious that the phenomenon of super-rich and ultra-luxury features heavy social and political issues. Released statistical figures represent only mere estimates because some of the rich under-declared his assets. Everyone remembers that in 1999 published by Forbes magazine list of richest Chinese, nicknamed the "death list" has been followed by a wave of tax adjustments and imprisonment.

Being a hyper-rich in China is still far from a comfortable situation. More and more rich people tend to emigrate abroad to enjoy greater political security and provide better educational opportunities for their children. Some of them aim at a second citizenship (eg with St. Kitts and Nevis) to get a visa to the United States or Great Britain. Indeed, the new rich Chinese are limited by their passport that makes it difficult conditions for obtaining visa. Moreover, buying a property abroad is a way to secure their wealth. More generally, the super-rich face a major contradiction: to do business in China, they need government help, but it often involves committing economic crimes. It captures all the specificity of this phenomenon of hyper-enrichment in a hybrid context of "market socialist economy."

The meteoric rise and subsequent fall of billionaires has become a classic phenomenon in China. The woes of Huang Guangyu, a symbol of success in private

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[1] L. Farrar (2010), "China's super-rich look for love online", *CNN*, 26 January.

[2] Yu Tianyu (2009) "Beijing tops Hurun list with 143,000 millionaires", *China Daily*, 24 August.

and more widely of "Chinese dream", resulted in a bombshell. Starting from nothing, the son of small rice farmers in Guangdong founded the company Gome (Guomei), the No. 1 Chinese distribution of electronic equipment, with 1,100 stores and over 300,000 employees. Barely 40, he became the richest man in China (estimated fortune of 5 billion €), before being arrested in November 2008 and be sentenced in May 2010 to 14 years in prison. The super-rich are taking advantage of the system so far, they can also be victims.

1.4 The perception of hyper-rich and the ultra-luxury in China: an ambivalent image

The famous slogan of Deng Xiaoping in 1992 "It is glorious to get rich" does not mean that the phenomenon of the rich, and all the more so the super-rich, has a broad social acceptance.

But the rich also generate a negative reaction, even violent response from the public. This resentment led to a common expression in the media: *fenfu* or *choufu* ("hate of the rich"). Other terms are often used: "rich corrupt", "stinking rich". A poll by the newspaper *China Youth Daily* and Sina.com website conducted in September 2007 reveals that over 70% of respondents believe that the rich are immoral and do not deserve respect. Only 4% believe that the rich are good. It is obvious that the hatred of the rich finds a part of its origin in the enormous social inequalities observed in China. Similarly, hyper-conspicuous consumption appears as a provocation in a society still characterized by low wages, difficult working conditions and sometimes unemployment.

Wealth in itself does not seem to be the heart of the criticism, but rather the values of the rich and the conditions for obtaining their wealth. Traditionally, Chinese society values education more than wealth. Lack of education and training of many *nouveau riches* worsens the problem. The idea prevails that the rich have accumulated their fortunes on the backs of the rest of society. This is particularly true of fortunes from real estate speculation, one of whose effects is to increase the cost of housing prices for the rest of society. Businessmen are well qualified to fast "highwaymen" (*jianghu haoke*) and are charged with looting the country. Research by Xiao Zhao (University of Science and Technology, Beijing), one of the leading economists in China, have fully supported this view by demonstrating that persons having getting rich the fastest are those who have relationships with power.

The image of the rich in China is even worse than several scandals have involved CEOs part of the largest fortunes in China. The Chinese opinion is not anti-wealth but anti-corruption; in addition, it apprehends enrichment through personal behavior. It raises the question of ethics but also of humans, including solidarity and compassion. Half of the richest does not form part of the most generous philanthropic donors. The scandal caused by the non-payment (real or perceived), and all the more so, the suspected diversion of fund-raising by film star Zhang Ziyi to earthquake victims in Sichuan in May 2008 show the great sensitivity of the subject. The other big scandal over the racy photos of the actress with her boyfriend on the island of St. Bart reflects the social pressure in China's morals.

The behavior of some ostentatious *nouveau riches* also arouses disapproval. The producer of blockbusters Wang Zhongjun may serve as an archetypal example. He drives a silver Mercedes and a red Ferrari, he owns a villa in 6,000 m^2 in the northern suburb of Beijing and an art collection worth more than $ 30 million, he also maintained a stable 60 horses in Ireland, France and Kentucky. In late 2009, a girl from a wealthy family of Chongqing has spent millions of yuan to welcome home his dog. In Nanjing, young people organized racing cars blocking the traffic.

2. The hyper-luxurious gated communities: a typology

One of the most spectacular consumption of hyper-rich are buying hyper-luxurious villas. This "residential hyper-luxury" is an subject of scientific study in itself. These hyper-luxurious residential complexes of villas are grouped into closed and secure gated communities but differ significantly from common luxury gated communities. Beyond their architectural aspect, these extreme forms of residential offer the opportunity to capture some elements of the imagination of the rich, their dreams and their values.

2.1 The most expensive gated communities in China: methodological elements

The concept of hyper-luxurious gated communities has no specific limit. A restrictive way to identify is to refer to the list of the ten most expensive villas in China. In recent years, a list of the ten zones of the most expensive villas is published by the official Chinese press. The distribution by the Chinese government of such a result not very politically correct is not easy to interpret. It may function to inspire the public, maintain the "Chinese dream", or more cynically draw up real estate prices. The table shows the list of the most luxurious villas of China in 2006. But the concept of "the most expensive villa" is ambiguous: it does not specify if this is the highest average price of a zone of luxury villas, the maximum cost of one or a few villas, or the price per m^2. The emergence of new real estate programs to an ever more extreme luxury partially modifies the overall standings. In 2010, the most luxurious villa would be in the new complex Guangzhou The World (yuan/m^2 60,000).

List of the most expensive gated communities in China (2006)

1. Sunville (Ziyuan Shanghai, Shanghai)
2. Sandalwood (Tangong, Shanghai)
3. Mission Hills (Guanlanhu, Shenzhen)
4. Beijing Rose Garden (Meigui yuan, Beijing)
5. Favorview Palace (Huijing Xincheng, Guangzhou)
6. Forest Hills (Dongshan shu, Beijing)
7. Shanghai Forest Manor (Xijiao zhuangyuan, Shanghai)
8. Palace of Fortune (Caifu Gongguan, Beijing)
9. Green Sea Manor (Bihai Fangzhou, Beijing)
10. Purple Jade Villas (Ziyu Shanzhuang, Beijing)

Source: Anonymous (2006) "Top 10 Chinese Luxury Houses in China", *China Daily*, June 14

Given these methodological notes, the goal here is not following the list of the ten most expensive villas, but inspire them to establish a typology of the main forms of residential hyper-luxury and identify factors to explain their uniqueness.

Indeed, all these hyper-luxurious gated communities have a number of similarities (location, sale price, living area, architectural style, level of amenities…) that make them exceptional residential forms. But it is possible to classify them as distinctly different categories.

2.2 Imperial type: Longfor Summer Palace (Beijing)

One of the most obvious forms of residential hyper-luxury expressed through the reminiscence of the imperial era. The most representative example is probably Longfor Summer Palace Splendor (Longhu Yiheyuan zhu) Villas. The analysis of the advertising site reveals its uniqueness. The location of these villas is closely linked to the high places of power in imperial China. They are situated at the crossing point of three famous imperial gardens created by the Qing emperors, Kangxi, Yongzheng and Qianlong. Indeed, they are just 50 meters East of the Summer Palace, south of Yuanmingyuan and West of Guchang chunyuan. In paradoxical but symbolic continuity between imperial China and Communist China, hyper-luxurious character of Longfor is also due to its close proximity to the campus of the Central Party School (Dangxiao) which trains executives of the PRC.

It is written that "the dream of the imperial family still continues" (*zai zhi xuchuan shijiazu mengxiang*). "The Last Emperor is set at this place, with Longfor villas, glory continues." A unique historical view is added: "hidden 300 years, 60 years of fermentation (*yunniang*), finally a great celebration of the Chinese family." In other words, Longfor remained hidden for 300 years since the creation of the Summer Palace by Emperor Qianlong in 1750. Then, between 1949 and 2009, occurred the maturation phase; here the chronology is cleverly modified. The Maoist period is not mentioned as such, the period of openness and reform either. In the manner of a great wine, the project Longfor embodied the quintessence, the outcome but also the overcoming of the imperial legacy. It is stated that the developers have taken twelve years to select the ideal location according to the principles of *fengshui*, but also the "wisdom" (*zhihui*). The site has a *fengshui* with exceptional concentration of imperial shrines but also to natural elements such as the Yanshan Mountains to the North and the various lakes (eg Kunming Lake of Summer Palace) and parks.

Here, it is not houses, but "little palaces" and "houses of the king" (*xiaoxing gongdian*). The architecture is inspired by the Summer Palace through its doors, roofs and windows. But the 91 villas each also have a garage for 11 cars, a private museum of 500 m^2, a private club and three presidential suites. Their living area varies between 1,000 and 3,600 m^2, developed over four floors, and are integrated into a vast complex of 97,809 m^2. The use of limestone facade imported from France and Portugal was intended to add to the feeling of grandeur. The gardens were designed according to the principle of construction of the imperial gardens.

2.3 Type European Classic: Sandalwood (Shanghai)

Another form of super-luxury residential villas is represented by Sandalwood (in Chinese Tangong, "Palace of Sandalwood"). This is a collection of 18 up-scale villas located in Shanghai, Changning District. Opened in December 2005, it is the first complex of luxury villas located within the dense zone of Shanghai.

Since the Ming Dynasty, sandalwood became customary to make the furniture of the Imperial palaces of sandalwood. Its extremely slow growing, its hardness, density, and very dark color symbolize the nobility, the rarity and magnificence. It is also a religious value. The smoke would have the power to drive out evil spirits; chips are burned in temples during religious ceremonies.

Selling prices show very high levels of between 60 million yuan to 98 million yuan (2009). The villas are located in a site of 47,384 m^2 and 31,200 m^2 of floor space for all villas. Each villa has a living area of between 1,500-1,800 m^2, 2,500 m^2 with the garden. Each has an indoor pool and, more rarely, a private theater. The hyper-luxury classic based here on the values of grandeur, nobility, exclusivity, timelessness and permanence. Sandalwood is an ensemble of small palaces and manor concentrating 18

European classical styles. The main countries represented are: France (Fontainebleau, Riviera ...), UK (Imperial, English Park, Georgian), Italy (Florence, Tuscany). The gardens themselves, designed by the company Collin Belt (Hong Kong), are of classical type. The rate of green Sandalwood Villas is 40%.

A well-represented variation is represented in China by the hyper-luxurious villas of the French type. In this case, it is most often houses that are similar to castles. The most notable example is constituted by Palais de Fortune (Beijing), a comprehensive set of 172 nineteenth-century French chateaux of at least 1500 m^2 along the Wenyu river.

2.4 Type ecological: Sunville (Shanghai)

Several villas have their hyper-luxury features to their natural environment. This applies, for example, Forest Hills (Beijing), consisting of 155 villas in the hills with valleys, lakes, and rivers. It is the same with the 244 villas of Forest Manor (Shanghai), or the Purple Jade Villas (Beijing) (see photo 1). But the most prestigious hyper-luxurious gated communities from ecological type are represented by Sunville (Shanghai).

Photo1: The Purple Jade Villas, an oasis of nature in the heart of Beijing. G. Giroir.

The Villas Sunville (Shanghai Ziyuan) are known in China for having achieved record prices at the sale. In 2003, one of them was the most expensive of China: Sunville No.1 House, or "King House" was sold 130 million yuan to a Chinese overseas. Two Sunville villas belonging to the "second generation property king" built in 2008 were sold respectively 247 and 180 million yuan in March 2010[3]. The most expensive, Villa 99 is inspired by the architecture of the Bund.

The uniqueness of these 268 villas is largely due to their site. The Villas Sunville are indeed located in the heart of the Sheshan National Tourism Zone, including the Sheshan National Forest Park, protected area created in 1995 by the State in the Southwest of Shanghai. This residential enclave of 920,000 m^2 (20,000 m^2 of water) is located only 30 km from Shanghai in the Songjiang District. the average height of Chinese economic capital does not exceed 3 m above the sea because of its location in the Yangtze delta plain, the top of Sheshan rises to 97 m. The Shanghainese nickname it "the mountain". Unique natural hilly forest zone of the delta, the area of 64 km^2 is considered the city's backyard, which provides clean air and tranquility. The rich residents of Sunville have what Shanghainese have not: nature. Each owner of Shimao Sheshan Villas also has a private island of 1,000 m^2. In total, 13 islands are connected by bridges[4]. All waterfront villas have a private marina with a dock and the ability to have a yacht.

Some villas also have a view of the famous Roman Catholic Basilica of Sheshan, the largest in the Far East and a place of pilgrimage for Catholics from South East Asia for over 100 years. The Sheshan Mountain is also a gathering place for Buddhism and Taoism.

The architecture of the villas has been conceived by internationally renowned architects (Wright). The developer (Bestland Property Co Ltd) is owned Singaporean. Some villas reach 3,183 m^2. Some villas have an international outdoor tennis court and indoor classified "top international private pool". Residents have access to a 18 holes

[3] R. Lee (2010) "Shanghai sees more record-breaking residential transactions", *The EdgeProperty.com*, 10 March.
[4] Anonymous (2006) "Fancy a villa ? Be ready to fourk out $31.25 m", *China Economic Net*, 28 April.

golf course and at exclusive Sheshan International Golf Club, Mecca for golf in Asia. With multiple services (nursery, school, shopping center, post office, banks, health center ...), Sunville is a real autonomous city on the outskirts of Shanghai.

2.5 Hyper-luxurious gated golf communities: Mission Hills (Shenzhen)

The integration of a golf course within the gated communities is often a key element of luxury (G. Giroir 2007a). Several ultra-luxurious gated communities are special types of gated golf communities, as Favorview Palace (Guangzhou) or mostly Mission Hills (Shenzhen). Opened in 1995, Mission Hills (Guanlanhu gaoerfu julebu "Golf Club of lake Guanlan,") in an area of 20 km^2 located just 30 minutes drive North from Shenzhen and Hong Kong. With twelve golf courses of 18 holes designed by Jack Nicklaus, or 216 holes in total, it is the greatest golf in the world. The country club is the most luxurious of Asia.

Initially, there were no plans to build villas. The decision was taken both to satisfy golfers eager to indulge their passion on a daily basis, but also to make profitable the golf course itself[5].

Photo 2: Hyper-luxurious gated golf villas in Mission Hills (Shenzhen). G. Giroir.

[5] M. Taylor (2004) "Luxury living in Shenzhen simply par for the course", *South China Morning Post,* 30 March.

The construction program of 224 villas is concentrated in Mission Hills in Residence, an area of 4.6 ha open in May 2004. There are three types of villas. The most luxurious ("Presidential Commons") occupy 1,528 m^2 with 4,853 m^2 garden, for a sale price of $ 22 million (see photo 2). They mix the style of the Italian Renaissance and the "modern tropical Hawaiian". Those of 877 m^2 (with garden 2,180 m^2) are available for $ 13 million, less large (700 m^2 and 1,300 m^2 of garden) will sell $ 9 million.

One such concentration of wealth explains that this gated golf course community is highly protected. Active safety is ensured by 400 guards, former officers from the Zhongnanhai de baohan which trains military elite in Beijing, and 60 dogs. Mission Hills employs no less than 4,000 people, including about 2,000 caddies.

Other types of hyper-luxurious gated communities less represented could be distinguished, especially in the ultra-contemporary styles (eg Fragrant Hills) or seaside resort (eg Shenzhen OCT East Horizon).

Conclusion

The phenomenon of hyper-rich and the hyper-luxury is probably the most dramatic transition from the former society without class toward the current differentiated society. It has strong features related to transitional context of China today. The process of hyper-enrichment reflects the current hybrid economic system of China, with both its effectiveness at creating wealth but also its pathologies and its ambiguities.

The phenomenon of hyper-rich and residential hyper-luxury raises several questions, particularly in terms of sustainability. How a Confucian and Communist society can manage politically and long-term such a phenomenon of personal enrichment? May it possible that the pursuit of accelerated hyper-enrichment and the formation of a new super-wealthy aristocracy carried out at constant institutional framework? Does the hyper-enrichment and its associated phenomena remain an isolated and marginal phenomenon, or rather a kind of cancer that is eating the head of State and that, due to various political maneuvers and false sense of impunity among the new aristocracy, will be treated with drastic action only when it is widespread, too late? We know the Chinese proverb: "the fish rots from the head."

The Chinese government seems fully aware that the hyper-enrichment is a more and more political issue. The slogan "Allowing some get rich first" (*Rang yibufen ren xian fuqilai*) no longer seems sufficient to ease public opinion. To improve the level of social acceptance towards the rich, Li Hongmei, regular columnist official newspaper *People's Daily*, goes much further: it proposes a proactive policy towards the eradication of egalitarian attitudes in Chinese opinion[6]. In this case, one might nevertheless wonder about the true political nature of a Communist regime whose propaganda is to promote the dogma of social inequality. Can the official propaganda of a Communist regime do love the super-rich? More than a mere ideological aggiornamento, this is a true reversal of values.

The hyper-enrichment of a small minority of Chinese society poses also an ethics issue. It raises the central issue of relations between the spheres of money and power. Suffice to say that their possible disconnection goes against a very deep and widespread culture oriented toward the gift for service. This phenomenon seems to call for a transition of the pragmatic and opportunism to current business toward an ethics based on values. To be more accepted, it seems necessary that the hyper-rich appear less like players eager to accumulate face (*mianzi*) by all means, a bit boorish and selfish opportunists exploiting loopholes in the current system to incorporate more of an business ethics made of minimal transparency, virtue and solidarity with the rest of society. But the defects of the hyper-rich are the result of a State system characterized by a profound ambiguity. That is the reason for the virtue of the rich must passes first through a greater virtue of the State itself.

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China's Changing Business Model of Banking

Prof. Dr. Horst Loechel

China Europe International Business School (CEIBS)
German Centre of Banking and Finance at CEIBS
Frankfurt School of Finance & Management
699 Hongfeng Road, Pudong, Shanghai 201206, P. R. China
hloechel@ceibs.edu, h.loechel@frankfurt-school.de

Helena Xiang Li

Frankfurt School of Finance & Management
Sonnemannstrasse 9-11, D-60314 Frankfurt am Main, Germany
h.x.li@frankfurt-school.de

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China's Changing Business Model of Banking

Horst Loechel*

Helena Xiang Li#

Abstract

One of the astonishing achievements of China's banking reform is the extraordinary performance improvement in Chinese banks through the last years. In our comparative studies with European, UK and US banks based on data from 2003 to 2008, we record that large Chinese banks have reached the profitability and asset quality level comparable to top Western banks, a striking fact as the whole sector was deemed insolvent in 2003.

However, we show that there is hidden risk in Chinese banks' current business model with high reliance on lending (in average 85% compared to 55%, 64% and 72% in European, UK and US banks respectively). More severely, the guaranteed interest margin through lending rate floor and deposit rate ceiling set by the central bank impedes the loan risk pricing mechanism evident in Western peers. With the liberalization of interest rate and currency control, the current business model in Chinese banking can not sustain. Based on our risk calculation, we propose that increasing fees and commissions income instead of risk leveraging in securities trading is decisive for Chinese banks to achieve a balanced portfolio.

Backed with the above findings, this paper uniquely traces the ongoing evolution in China from segregated to universal banking model. The evaluation of the first trial of the universal model – bank's equity participation in asset management companies – reveals that bank funds generate economies of scale through larger size and expertise in bonds investment. The benefits are passed through to customers by lower management and custody fees.

Keywords: *Banking business model, China, universal banking, financial crisis*

JEL classification: G01, G20, G21, G28

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* Professor of Economics at Frankfurt School of Finance & Management and Director of German Centre of Banking and Finance at China Europe International Business School

Research Associate at Frankfurt School of Finance & Management

I. Introduction – A Post Crisis View of Business Scope in Banking

Chinese banks came as winners out of the global financial crisis with Industrial and Commercial Bank of China (ICBC) and China Construction Bank (CCB) ranked as the most and the second most profitable banks worldwide for both 2008 and 2009 and with 84 Chinese banks holding 8.9% of tier 1-capital in top 1000 banks of the world in 2009 according to *The Banker* ranking, astonishing success for a banking sector deemed wholly insolvent only a few years ago. China has done its home work of banking reform with gradual but persistent and caution steps: from separating policy lending from state-owned commercial banks (SOCBs), to the hundred billion dollar bail-outs of the whole banking system by transferring non-performing-loans (NPLs) to separate asset management companies, followed by the establishment of modern corporate governance structure and the introduction of foreign strategic equity investors as well as the subsequent IPOs,[1] with the $19.2 billion IPO of the Agriculture Bank of China (ABC) in July 2010[2] as the mile-stone of the successful closure for the first-stage SOCBs restructuring.

The celebration of Chinese banks' rapid advance is in sharp contrast to the increased suspiciousness about Western banking model in escalating bank return by inflating risk. Even in Western, a new round of debates broke out among academics and banking managers on banking business model after the crisis time.[3] Despite the high relevance of the debate of banking business scope for both bank managers and regulators, no conclusive result has yet been reached in decades of academic research in this field. Previous studies[4] generally emphasize the revenue enhancement and risk diversification gains from bank's expansion into non-interest income businesses by investigating the risk and return profile of and the market perception for diversified financial institutions. Allen and Jagtiani (2000) document that the combination of banking with securities and insurance activities reduces the overall risk. DeYoung and Rice (2004) reveal persistent outperformance in term of higher sharp ratio of diversified banking compared to traditional banking. Ebrahim and Hasan (2004) show that capital market favors banks with heavier involvement in non-interest income business.

Contradictorily, Stiroh (2004) points out that the volatility in trading revenue largely diminishes the risk reduction through diversification in non-interest income businesses and shows that interest and non-interest income become more correlated over time. Laeven and Levine (2007) argue that the diversification discount of financial conglomerates can be explained by the costs from agency problems. With more differentiation in non-interest income, Schmid and Walter (2009) reveal that the combination of commercial banking with insurance and with investment banking produces significant premium. Kwan and Ladermann (2009) conclude that both securities and insurance services are more profitable but more risky than banking and point out that securities underwriting and insurance agency businesses can reduce the overall risk of bank holding companies. De Jonghe (2009) sheds light on the impact of bank diversification on financial system stability and concludes that interest income is less risky than non-interest income in crisis time.

Concluding the above results, we propose a more differentiated view on bank's non-interest

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1 See for instance Neftci and Xu (2007), Loechel and Zhao (2006), Wu (2005) and García-Herrero, Gavilá and Santabárbara (2006) for an overview of the reform process. See Zhu, Cai, and Avery (2009) for an overview of China's financial sector.

2 See Wang (2010).

3 For competing opinions on banking business model after the crisis, see for instance Dobbs and Kuehner-Hebert (2008) and Rizzi (2009).

4 For an overview of discussions on benefits and costs in integrated financial services providers, see for instance Loechel, Brost and Li (2008).

income. We divide non-interest income in fees and commissions income and trading income. Revenue sources generating fees and commissions include both traditional commercial banking services like settlement, credit lines, credit cards and foreign currency exchange as well as investment banking services like brokerage and M&A advisory. Trading income refers to the net gains or losses (G/L) from bank's trading of foreign exchange, fixed-income, equity, derivatives and commodities products on its own account – proprietary trading. Fees and commissions generate in most cases profits for bank's value-adding in settlement and advisory whereas proprietary trading puts bank's capital on volatile capital markets and can generate large losses. The choice of the mix in business scope depends in large extent on the bank's risk attitude, resources and ability of risk management.

Against this background, the current paper compares the revenue pattern of Chinese banks in comparison with their European and Anglo-Saxon peers and evaluates its risk and return impact. We further evaluate the first trial of the Chinese universal banking model – bank's equity holding in asset management companies. To our best knowledge, this paper has the unique value to first address the business model transformation in China's banking sector in an international context. It contributes to the general debate on post-crisis banking business scope choice and gives some hint on the direction of China's transformation from segregated to universal banking system. The main hypothesis is that the gradual lifting of the current interest rate regime will diminish the benefits from guaranteed lending margin and puts pressure on Chinese banks in revenue diversification into non-interest income businesses. The expansion into fees and commissions businesses by utilizing scale economies from customer base instead of risk-leveraging in proprietary trading is the superior way to achieve the more balanced and sustainable business mix.

Our empirical results show that the profitability of Chinese banks is so far mainly driven by lending. Besides improved loan quality, the high interest margin artificially set by the central bank guarantees the high profitability level in Chinese banks. The administrated interest rate regime however impedes the risk pricing mechanism in the lending practice and provides little incentive for revenue diversification into non-interest income business lines. Compared to Western peers with strong investigation in proprietary trading, we notice that fees and commissions income instead of trading income dominate in non-interest income in Chinese banks. In our evaluation, we identify that synergies in China's first trial of universal banking - bank's majority share holding in asset management companies - are realized, mainly through economies of scale with larger funds size and sharing expertise in bonds investment. The synergies are passed through to customers through lower management and custody fee.

The paper is organized as follows: Part two deals with revenue source patterns in Chinese compared to in Western banks as well as the risk impact of diversification. Part three sets out the characteristics of the emerging universal banking model in China and evaluates the performance of bank-related funds compared to stand-alone funds. Part four concludes and points out relevant research topics.

II. China's Banking Business Model – Winner's Cause and Achilles' Heel

2.1. Business model comparison

In this section, we compare the business models of Chinese banks with their European, UK and US peers, using data both for top banks defined as the top five banks per total assets in respective countries/regions and panel data of bank annual financial reports over the period from 2003 to 2008.[5] We try to understand how differently Chinese banks operate compared to their Western peers in order to explain the over-performance of Chinese banks through the crisis and evaluate the sustainability of the current model. Data are drawn for commercial banks from the database *Bankscope*[6]. In order to capture the whole business range in universal banking, we choose the consolidated financial statements of the selected commercial banks.[7]

The sample size and overall statistics are provided in appendix in table 1 and table 2 respectively.

Table 1. Summary Sample Size

China	
SOCB	5
JSCB	12
CCB	79
RCB	6
Total	**102**

UK	
Total	**55**

USA	
Total	**101**

Euro Area	
Austria	21
Belgium	14
Finland	7
France	81
Germany	43
Greece	15
Ireland	16
Italy	39
Luxembourg	11
The Netherlands	31
Portugal	11
Slovakia	10
Spain	35
Total	**334**

Our sample contains the population of 592 commercial banks for the period from 2003 to 2008.
Data of consolidated financial statements in unviersal format are drawn from *Bankscope*.

Table 2. Summary Statistics

	China			Europe			UK			USA		
	mean	std.	obs.	mean	std.	obs.	mean	std.	obs.	mean	std.	obs.
ROAA (%)	0.68	0.45	373	0.89	2.79	1,351	0.85	1.64	239	0.97	2.86	472
Total assets (million USD)	63,612	184,423	382	90,022	263,554	1,359	174,327	479,566	239	35,955	163,305	477
Equity/total assets (%)	4.98	3.13	382	9.63	11.90	1,359	11.85	15.24	239	11.10	7.76	477
Net interest margin (%)	2.78	0.94	371	3.38	16.92	1,348	2.98	4.00	236	3.53	1.30	472
Cost income ratio (%)	43.16	13.18	371	68.53	37.76	1,339	58.65	23.99	235	62.44	33.14	469
Trading securities/total assets (%)	1.97	3.11	97	8.54	12.18	838	8.70	8.21	72	0.78	2.85	399
Available for sale securities/total assets (%)	15.31	9.50	372	10.88	12.98	996	12.05	16.41	102	15.81	13.83	87
Customer deposits/total assets (%)	80.78	9.46	382	40.87	25.68	1,277	55.57	28.20	204	70.89	19.89	455
Growth of total assets (%)	26.12	18.27	313	15.33	37.52	1,077	14.11	30.18	191	16.26	45.52	460
Impaired loans/gross loans (%)	5.05	9.05	303	3.22	3.31	573	2.20	3.19	100	0.88	1.31	449
Non-interest income/gross revenue (%)	14.25	13.50	371	45.22	41.85	1,291	36.14	35.47	225	27.99	27.13	471

Source: Bankscope
This table reports descriptive statistics of the sample data for respective countries/regions.

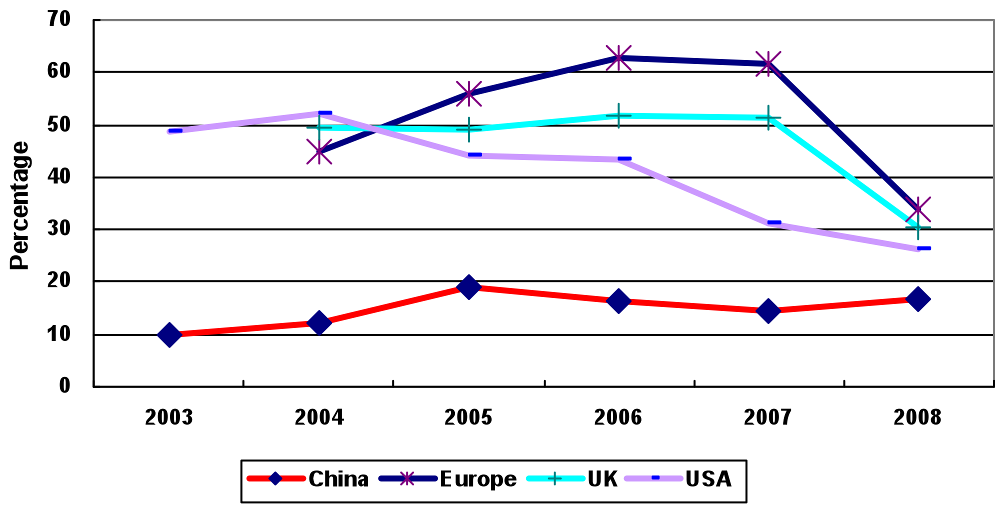
For the whole banking sector, Chinese banks with the average asset return of 0.68% still lie behind the level of European, UK and US banks with asset return of 0.89%, 0.85% and 0.97% respectively. On the aggregated level, Chinese banks are still weak in equity strength (with

[5] This period is chosen since the data availability is very limited for Chinese banks before 2003. Over the sample years, Chinese banks underwent fundamental restructurings, which could limit the explanatory power of the results.
[6] Bankscope universal format is applied to mitigate potential problems from the deviation in term definitions.
[7] Consolidated reports are only available for 17 Chinese banks. For the rest of Chinese sample banks, unconsolidated bank reports are applied. Since the majority of the banks with unconsolidated reports do not have subsidiary entities, the results are not altered with this limitation.

average equity ratio of 4.98% compared to 9.63%, 11.85% and 11.10% in Europe, the UK and the USA respectively) and asset quality (with average NPL ratio of 5.05% compared to 3.22%, 2.20% and 0.88% in Europe, the UK and the USA respectively). Regarding the business scope, revenue resources are highly concentrated in interest income with non-interest income as percentage of gross revenue of average 14.25% in China, compared to 45.22%, 36.14% and 27.99% in European, the UK and the US banks respectively. Chinese banks benefit from stable savings deposits as financing sources with 80.78% of assets from customer deposits (compared to 40.87%m 55.57% and 70.89% in European, the UK and the US banks respectively) and enjoy high asset growth with average growth rate of 26.21% (compared to 15.33%, 14.11% and 16.26% in Europe, the UK and the USA respectively). Remarkable is the very limited involvement of Chinese banks in trading with trading asset ratio as percentage of total assets of 1.97% (compared to 8.54%, 8.70% in European and the UK banks respectively). Due to the long history of segregated banking system in the US, the proportion of trading assets in sample US banks lies even lower with 0.78%. The composition of interest and non-interest income of Chinese banks in comparison with their Western peers as well as the return and risk impact of the differences in business scope are of our special interest in the following analyses.

We first explore the revenue sources in banking in order to explain the profitability pattern of Chinese banks. In comparison to top Western banks, the high reliance on lending in top Chinese banks is manifested in figure 1 in appendix.

Figure 1. Non-interest Income / Gross Revenue - Top 5



The average portion of non-interest income in gross revenue of 14.8% lies far below the level of top banks in Europe with 51.8%, in the UK with 46.5% and 41.0% in the US. The figure clearly indicates that Western commercial banks have more balanced revenue sources between interest income and non-interest income businesses to cope with the disintermediation in their operating environment, while Chinese banks still struggle for a break-through in creating value through diversifying financial services beyond lending. Based on this observation of top banks, we assume:

Hypothesis 1: Compared to Western banks, asset return in Chinese banks depends heavily on loan business.

To test hypothesis 1, we conduct the following regression analyses for the testing fields[8]. The OLS model is used for the following regression equation (China, Europe, UK and USA model 1):

$$\begin{aligned} ROAA_{it} = \alpha &+ \beta_1 * [\text{Ln (total assets)}]_{it} + \beta_2 * [\text{equity/total assets}]_{it} \\ &+ \beta_3 * [\text{net interest margin}]_{it} + \beta_4 * [\text{cost income ratio}]_{it} \\ &+ \beta_5 * [\text{growth of total assets}]_{it} + \beta_6 * [\text{impaired loans/gross loans}]_{it} \\ &+ \beta_7 * [\text{non-interest income/gross revenue}]_{it} + \varepsilon_{it} \end{aligned}$$

With the above equation, we try to test the influence of seven explanatory variables for i bank at time t on profitability measured with ROAA[9]. We choose asset return ROAA instead of equity return ROAE as profitability indicator, since Chinese banks experienced higher fluctuation in equity through asset injections and IPOs in last years, and some banks even had negative equity in early sample years. The seven explanatory variables include the natural logarithm of total assets, equity ratio (instead of tier 1 ratio which is not mandatorily disclosed for all Chinese banks), net interest margin, cost income ratio, asset growth, impaired loan ratio and non-interest income ratio. Table 3 in appendix summarizes the results.

[8] We conduct separated regressions for the four countries/regions instead use pooling data with the belief that the profitability of banks in those countries/regions follow different patterns. Robust tests show that models with pooling data do not alter our main findings.
[9] ROAA: return on average assets, ROAE: return on average equity.

Table 3. ROAA Regression Results

Variable	China		Europe		UK		USA	
	model 1	model 2	model 1	model 2	model 1	model 2	model 1	model 2
Ln total assets	0.0293 ***	0.0183	-0.0450	-0.0744	-0.0499	-0.0089	-0.0312	-0.0125
t value	*2.6500*	*0.8600*	*-1.2200*	*-1.4600*	*-1.0700*	*-0.1100*	*-1.1700*	*-0.0700*
p value	*0.0090*	*0.3910*	*0.2250*	*0.1460*	*0.2890*	*0.9120*	*0.2450*	*0.9480*
Equity/total assets	0.0197 **	0.0338 **	0.0747 ***	0.0706 ***	0.0364 *	0.0705 *	0.0256 **	-0.0811 *
t value	*2.5300*	*2.1700*	*4.7900*	*3.7200*	*1.9600*	*1.8500*	*2.5700*	*-2.2600*
p value	*0.0120*	*0.0330*	*0.0000*	*0.0000*	*0.0530*	*0.0770*	*0.0110*	*0.0860*
Net interest margin	0.1882 ***	0.1328 **	0.0450	-0.0703	0.0748 ***	-0.0215	0.1689 ***	0.5821
t value	*6.1400*	*2.0100*	*0.6000*	*-0.6500*	*2.8700*	*-0.0900*	*3.7200*	*0.7300*
p value	*0.0000*	*0.0480*	*0.5490*	*0.5170*	*0.0050*	*0.9290*	*0.0000*	*0.5060*
Cost income ratio	-0.0178 ***	-0.0288 ***	-0.0123 ***	-0.0182 ***	-0.0073 **	-0.0086 *	-0.0233 ***	-0.0383 *
t value	*-7.3400*	*-6.1100*	*-5.6800*	*-5.6100*	*-2.4200*	*-1.9000*	*-15.9300*	*-2.6700*
p value	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0180*	*0.0690*	*0.0000*	*0.0560*
Trading securities/total assets	-	0.7468	-	1.1087	-	-1.2107	-	1.8285
t value		*0.7100*		*1.1400*		*-0.6400*		*0.4100*
p value		*0.4790*		*0.2560*		*0.5270*		*0.7010*
Available for sale securities/total assets	-	0.1421	-	-1.1059	-	-0.8173	-	-0.7226
t value		*0.3000*		*-1.2000*		*-0.7800*		*-0.3300*
p value		*0.7660*		*0.2310*		*0.4410*		*0.7550*
Customer deposits/total assets	-	-0.4198	-	0.6326	-	0.1926	-	-2.5608
t value		*-0.8800*		*1.2000*		*0.2700*		*-1.5600*
p value		*0.3800*		*0.2290*		*0.7910*		*0.1930*
Growth of total assets	0.0026 **	-0.0009	0.0006	0.0011	0.0241 ***	0.0043	-0.0011	0.0038
t value	*2.2000*	*-0.4500*	*0.3300*	*0.4900*	*5.9400*	*0.9500*	*-1.0700*	*0.4600*
p value	*0.0280*	*0.6570*	*0.7420*	*0.6250*	*0.0000*	*0.3540*	*0.2830*	*0.6700*
Impaired loans/gross loans	-0.0037	-0.0058	-0.0626 ***	-0.0694 **	-0.2049 ***	-0.0028	-0.2884 ***	-0.3460 *
t value	*-1.2000*	*-0.4200*	*-2.8800*	*-2.5500*	*-6.3600*	*-0.0800*	*-7.1500*	*-2.7100*
p value	*0.2330*	*0.6790*	*0.0040*	*0.0110*	*0.0000*	*0.9370*	*0.0000*	*0.0540*
Non-interest income/gross revenue	0.0079 ***	0.0003	0.0144 ***	0.0109 **	0.0034	0.0122 *	0.0100 ***	0.0178
t value	*3.6900*	*0.0500*	*4.6200*	*2.5100*	*0.8500*	*2.0100*	*4.4900*	*0.7300*
p value	*0.0000*	*0.9570*	*0.0000*	*0.0120*	*0.3960*	*0.0560*	*0.0000*	*0.5050*
Constant	0.3569	1.5896 ***	1.0107 *	1.8818 **	1.0660 *	0.3927	1.8608 ***	3.9156
t value	*1.5300*	*2.8300*	*1.9300*	*2.4100*	*1.8700*	*0.2800*	*5.0900*	*0.9800*
p value	*0.1270*	*0.0060*	*0.0540*	*0.0160*	*0.0650*	*0.7850*	*0.0000*	*0.3850*
F value	29.4300	10.6400	22.9200	13.2700	13.1300	3.6500	63.8800	42.1500
R-squared	0.4498	0.5833	0.2513	0.2609	0.5506	0.6133	0.5145	0.9906
Adjusted R	0.4345	0.5284	0.2403	0.2412	0.5087	0.4452	0.5064	0.9671
Obs.	260	87	486	387	83	34	430	15

*** / ** / * Statistically significant at 1% / 5% / 10%

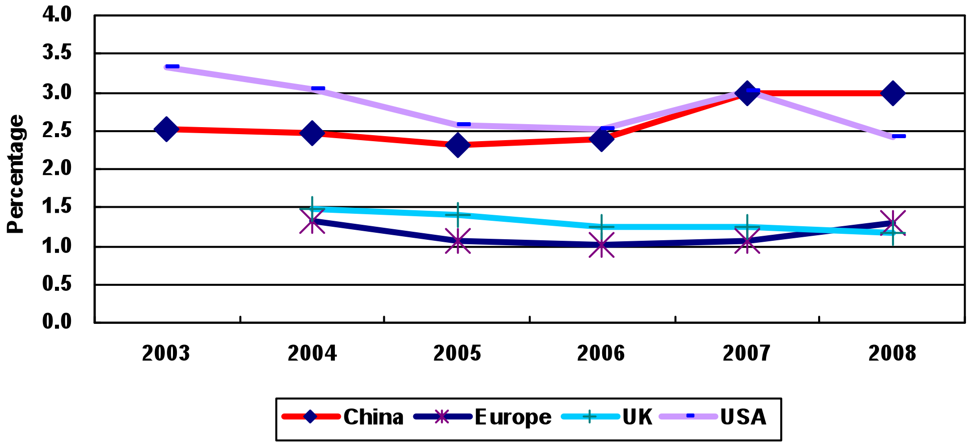
Source: Bankscope

This table reports the OLS regression results for the regression model ROAAit = α + β1 * [Ln (total assets)] it + β2 * [equity/total assets] it + β3 * [net interest margin] it + β4 * [cost income ratio] it + β5 * [growth of total assets] it + β6 * [impaired loans/gross loans] it + β7 * [non-interest income/gross revenue] it + εit for i bank at time t (model 1). In model 2, three additional variables "trading securities/total assets", "available for sale securities/total assets" and "customer deposits/total assets" are added to model 1.

The seven variables in model 1 jointly explain 43%, 24%, 51% and 51% for the return pattern in China, Europe, the UK and the USA respectively. Across the research fields, banks with equity strength (with significantly positive regression coefficients of equity ratios of 0.0197, 0.0747, 0.0364 and 0.0256 for China, Europe, the UK and the USA respectively) and favorable cost income structure (with significantly negative regression coefficients of cost income ratio of -0.0178, -0.0123, -0.0073 and -0.0233 in China, Europe, the UK and the US respectively) have significantly higher asset return. The increase of 1% in net interest margin in China contributes to 0.1882% higher asset return, compared to 0.0748% in the UK and 0.1689% in the USA. Margin increase in Europe has however no significant impact on asset return. In comparison, the increase of 1% in non-interest income ratio leads to significantly higher asset return of 0.0144% in Europe, compared to 0.0079% in China and 0.0100% in the USA. Summarizing the balance of interest income and non-interest income as revenue sources, European banks exhibit the highest level of disintermediation and the narrow banking model dominates in Chinese banks.

We take a closer look at net interest margin, one of the determinants of profitability in lending besides loan quality.

Figure 2. Net Interest Margin - Top 5



As exhibited in figure 2, Chinese top five banks enjoyed an average interest margin of 2.6%, compared to the European average of 1.1% and the UK average of 1.3%. The low margin in continental Europe and in the UK of large banks can be partially explained by the fierce competition in European banking market and the dominance of universal banking model, in which interest margin is kept low to maintain long-term client relationship for additional revenues from cross-selling in non-interest income products and services throughout client's life cycle. In the US with long tradition of separated banking system, the interest margin of large banks lies on a similar level of 2.8% as for Chinese banks.

Various factors play a role in determining margin in lending: bank's risk perception, size of banks transactions, market structure, regulatory restrictions etc. (see for instance Ho and Saunders (1981), Saunders and Schumacher (2000)). Currently, the central bank People's Bank of China (PBC) sets a ceiling of deposit rate and a floor of lending rate, which for example guarantees an official net interest margin of current 3.06% for one-year loan in local currency, independently from the loan quality and an internationally comparatively high margin. The deposit rate ceiling of 2.25% can even not compensate the current inflation of 3.1% in May 2010 for example and serves as cheap financing sources for banks. Under the current interest rate regime, we suspect

Hypothesis 2: The risk pricing mechanism in lending is distorted in Chinese banks.

We test hypothesis 2 by exploring the correlations of key financial ratios with net interest margin. The results are summarized in table 4 in appendix.

Table 4. Impact on Margin - Pairwise Correlations with Net Interest Margin

	China		Europe		UK		USA	
Ln(Total Assets)	-0.1350	***	-0.1176	***	-0.3503	***	-0.3398	***
p-value	*0.0082*		*0.0000*		*0.0000*		*0.0000*	
obs.	*383*		*1,348*		*236*		*472*	
Cost Income Ratio	-0.4608	***	0.0503	*	0.0115		-0.0223	
p-value	*0.0000*		*0.0658*		*0.8614*		*0.6304*	
obs.	*383*		*1,339*		*235*		*469*	
Trading Securities/Total Assets	0.1019		-0.1570	***	-0.5239	***	-0.1136	**
p-value	*0.3107*		*0.0000*		*0.0000*		*0.0241*	
obs.	*101*		*833*		*72*		*394*	
Available for Sale Securities/Total Assets	-0.5066	***	-0.1748	***	-0.0431		0.2620	**
p-value	*0.0000*		*0.0000*		*0.6670*		*0.0174*	
obs.	*373*		*990*		*102*		*82*	
Impaired Loans/Gross Loans	-0.1997	***	0.2403	***	0.5388	***	-0.0272	
p-value	*0.0004*		*0.0000*		*0.0000*		*0.5672*	
obs.	*310*		*571*		*100*		*445*	
Non-Interest Income/Gross Revenue	-0.6316	***	-0.1025	***	-0.1662	**	-0.3229	***
p-value	*0.0000*		*0.0002*		*0.0126*		*0.0000*	
obs.	*371*		*1,291*		*225*		*471*	

**** / ** / * Statistically significant at 1% / 5% / 10%*

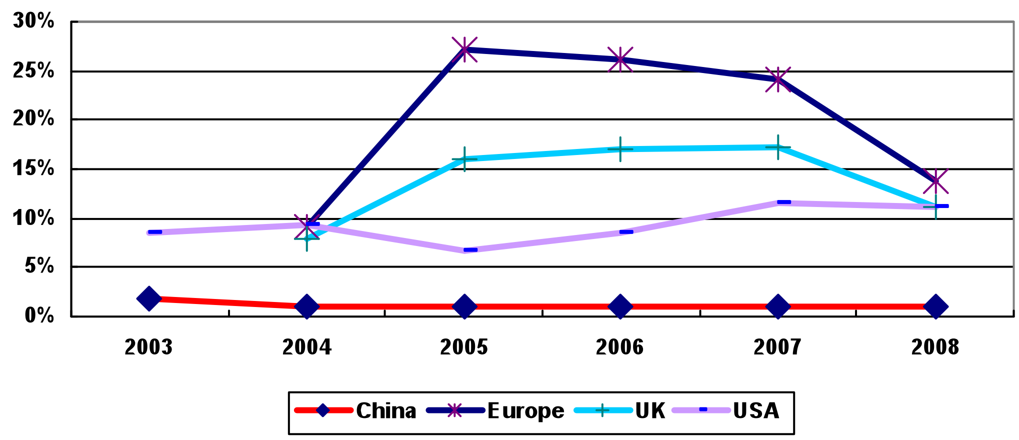
Source: Bankscope

The striking observation is the negative sign of the correlation between impaired loan ratio and net interest margin in Chinese banks compared to the positive correlations in Western banking. While the risk pricing rule – lower asset quality in terms of higher NPL ratio, higher margin – functions well in Europe and in the UK (with correlations of 0.2403 and 0.5388 respectively), the negative correlation in China with -0.1997 is statistically significant at the 1% level. This observation could be partially explained by the sharp decrease in bad assets in the restructuring and the relatively stable mandatory margin in last years. The insignificant correlation in US banks documents in some extent the lending practice in the pre-crisis time.

Furthermore, the close relationship between cost income ratio and net interest margin in China with correlation of -0.4608 confirms that the high interest margin instead of operational efficiency explains to a large extent the lower cost income ratio in China. The consistent negative correlation between non-interest income ratio and net interest margin in all testing fields (-0.6316, -0.1025, -0.1662 and -0.3229 in China, Europe, the UK and the USA respectively) documents that the decline in net interest margin forces banks to expand the business scope in non-interest income businesses. The high correlation between net interest margin and non-interest income ratio in China (-0.6316) demonstrates that the administrative guaranteed high net interest margin reduces the incentive of revenue diversification in Chinese banks. The high negative correlations between trading securities ratios and net interest margin (-0.1570, -0.5239 and -0.1136 in Europe, the UK and the USA respectively) reveal that the thin margin in lending business further drives Western banks to diversify into securities trading. In respect of the bank size, the negative sign of the correlations with total assets in all testing fields confirm in some extent economies of scale through larger transaction size in lending. The benefits are passed through to lenders by lower margins set.

Having recognized the backlog in revenue diversification, Chinese banks took tremendous efforts to develop non-interest income businesses especially in insurance and funds agency and custody services, backed by supporting policy and taking advantage of the capital market boom of the last upward cycle. The remarkable difference in Chinese bank's non-interest income is the dominance of fees and commissions income and the very limited engagement in trading. Net income from fees and commissions of Bank of China (BOC) for instance was eight times that of net gains from trading in 2009, whereas the relationship between income from fees and commissions and trading income in Deutsche Bank remained at around 1.25 over the years.

Figure 3. Trading Securities / Total Assets - Top 5



Measured by the fraction of trading assets in total assets, the average rate of 1.1% in top Chinese banks lies far below the level in Western banks (20.1% in Europe, 13.8% in the UK and 9.3% in the USA), as illustrated in figure 3. The small fraction of trading assets in total assets results partially from the underdeveloped stage of capital markets with limited product variety and the lack of skills in capital market services, and is partially due to the strict regulation in proprietary trading especially in equity and derivatives products.

We further extent the regression analyses above by adding three additional regression variables "trading securities ratio", "available for sale securities ratio" and "customer deposits ratio" as percentage of total assets to the regression equation of model 1 to test the return impact of securities trading on asset return (China, Europe, UK and USA model 2). The results for model 2 are summarized in table 1 in appendix.

The surprising finding is that proprietary trading, either classified as trading securities or available for sale securities, does not generate significant higher asset return over the testing period in all testing fields, as indicated by the insignificant coefficients of securities ratio.[10] This could result from the fact that the high volatile trading results from one year to another are averaged out over years and do not contribute constantly to higher asset return.

2.2. Risk pattern in interest, fees and commissions and trading business lines

[10] We replicate the model 2 regressions by excluding data sets from 2008 for the four testing fields to factor out the impact of the extreme market scenario in the crisis. Neither the coefficients of trading securities ratio nor those of available for sale securities ratio are statistically significant at 10% level.

In the following, we investigate the risk reduction effect through diversification in non-interest income businesses. As the pre-condition for the realization of risk reduction through diversification, we expect that:

Hypothesis 3: The volatilities of interest income and non-interest income are not or negatively correlated.

Regarding non-interest income (NII), we further separate the effects of fees and commissions (FC) and trading income, since we believe fees and commissions business and trading business have different risk patterns. We determine the risk term as the standard deviation of the outcome, nominated with the respective average value[11]. The risk factor for interest income (II) of i bank is calculated with the standard deviation of the bank's outcome of interest income for the sample years, nominated with the average interest income of the bank:

$$\text{Risk II}_i = \text{Standard deviation } (\text{II}_i) \;/\; \text{Average II}_i$$

The same method is applied to calculate the risk factors for fees and commissions (FC) as well as for total non-interest income (NII). We tried to determine the risk factor also for trading income, came however to only a few data sets, since the average income for the sample years usually turned to be negative. We test the correlations of the risk factors.

Table 5. Risk Correlation

	China		Europe		UK		USA	
	II	FC	II	FC	II	FC	II	FC
II	-		-		-		-	
p-value								
obs.								
FC	0.0846	-	-0.0041	-	0.2877 **	-	0.4834 **	-
p-value	*0.4078*		*0.9435*		*0.0450*		*0.0226*	
obs.	*98*		*305*		*49*		*22*	
NII	-0.1257	0.2362 **	-0.0091	0.0316	0.0247	0.4501 ***	0.1208	0.4823 **
p-value	*0.2174*	*0.0192*	*0.8734*	*0.5831*	*0.8608*	*0.0012*	*0.2515*	*0.0230*
obs.	*98*	*98*	*311*	*305*	*53*	*49*	*92*	*22*

II: interest income; FC: fees and commissions income; NII: non-interest income. Risk is defined as the standard deviation of annual net income normalized by the average value.

*** / ** / * Statistically significant at 1% / 5% / 10%

Source: Bankscope

As shown in table 5, the correlations between interest income and non-interest income are statistically not significant for all testing fields, which implies the potential of risk reduction through combining interest income with non-interest income. In China, the UK and the USA, fees and commissions income is significantly correlated with non-interest income with correlation coefficients of 0.2362, 0.4501 and 0.4823 respectively, which indicates that fees and commissions are driving forces of non-interest income in those countries.

Noticeable, fees and commissions income is positively correlated with interest income in UK

[11] In case the average value turns to be negative, the risk term is not calculated with the assumption that long-term average return should not be negative.

and US banks (with correlations of 0.2877 and 0.4834 respectively), but not significant in China and in Europe. In the UK and the USA, both interest income and fees and commissions could be more influenced by the movement of macroeconomic determinants like interest rate level or general capital market mood, whereas fees and commissions in Chinese and European banks could more stem from stable sources like credit card fees, custody fees which are less sensible to determinants of interest income.

We further compare the risk factors for interest income, fees and commissions income and non-interest income separately[12] for the sample period to compare the magnitude of the risks.

Table 6. Risk Comparison

Variable	China					Europe				
	II	FC	NII	II<FC	II<NII	II	FC	NII	II<FC	II<NII
Mean/Difference	0.3928	0.6996	0.9316	-0.3068 ***	-0.5387 **	0.8860	0.3953	0.6739	0.4789	0.2121
obs./p value	*98*	*98*	*98*	*0.0000*	*0.0285*	*311*	*305*	*311*	*0.7979*	*0.6448*
Variable	**UK**					**USA**				
	II	FC	NII	II<FC	II<NII	II	FC	NII	II<FC	II<NII
Mean/Difference	0.2291	0.5153	0.5708	-0.2917 **	-0.3417 ***	0.2699	0.1670	0.4729	0.0185	-0.2030 ***
obs./p value	*53*	*49*	*53*	*0.0149*	*0.0046*	*92*	*22*	*92*	*0.7508*	*0.0028*

II: interest income; FC: fees and commissions income; NII: non-interest income. Risk is defined as the standard deviation of annual net income normalized by the average value.

*** / ** / * Statistically significant at 1% / 5% / 10%

Source: Bankscope

As shown in table 6, the fluctuation of revenues from fees and commissions as well as from total non-interest income business in Chinese and UK banks is statistically significant higher that that in traditional interest income business (0.3068, 0.5387 and 0.2917, 0.3417 higher for China and the UK respectively). Non-interest income in US banks also has a higher volatility than interest income (0.2030 higher). However, the variation of fees and commissions business in Europe and in the USA and that of total non-interest income in Europe are statistically not significantly higher than that of interest income. The overall results show that especially European banks have built up stable non-interest income sources.

To summarize the results in part two: Chinese banks still rely heavily on lending revenues. The stable interest revenues benefit from the guaranteed high interest margin under the current interest rate regime, which however impedes the establishment of risk pricing mechanism and income diversification. Revenue diversification especially in fees and commissions income makes most sense for Chinese banks, since revenues from interest and non-interest income are not correlated and the combination of both stabilizes revenue streams. The higher fluctuation in non-interest income than in interest income, can however diminish part of diversification gains.

III. Emergence of Chinese Universal Banking Model

The analyses above show the necessity and in part the direction of developing universal banking model in China's banking sector. The first trial of universal banking model in China -

[12] The risk factor for trading income is not used here since most mean values in trading income turn to be negative as the result of the sharp downward movement in capital markets for the sample years.

bank's equity participation in asset management companies – was introduced in the gradual lifting for cross-sectoral financial services in 2005 and achieved great market success. We use this unique transformation process to explore the benefits of allowing bank's engagement in asset management. By matching the current 539 Chinese asset management funds with their respective asset management companies, we divide the funds into bank-majority-held funds (bank funds), bank-minority-held funds (affiliate funds), funds held by a financial conglomerate (conglomerate funds) and stand-alone funds (stand-alone funds). We analyze the characteristics and performance differences of these funds using data from 2007 to 2008[13]. Data are draw from the database *wind*.

We investigate several characteristics including asset size, fee condition and portfolio structure and compare the performance between bank-related and stand-alone funds.

Table 7. Comparison Bank-related vs. Stand-alone Funds

Panel 1: assets	**Mean**				**Difference (one-sided test)**					
	Bank	**Affiliate**	**Conglomerate**	**Stand-alone**	**Bank > Other**	***P value***	**Affiliate > Other**	***P value***	**Conglomerate > Other**	***P value***
Total assets 2008 in bn CNY	5.8746	5.3785	5.8679	3.4274	1.8748 ***	*0.0080*	1.3057 *	*0.0849*	2.1151 ***	*0.0000*
obs.	*29*	*19*	*73*	*284*	405		405		405	
Net assets 2008 in bn CNY	4.9928	5.1457	5.5560	3.2632	1.2007 **	*0.0437*	1.3226 *	*0.0683*	2.0230 ***	*0.0000*
obs.	*33*	*20*	*74*	*298*	425		425		425	
Panel 2: fees	**Mean**				**Difference (one-sided test)**					
	Bank	**Affiliate**	**Conglomerate**	**Stand-alone**	**Bank < Other**	***P value***	**Affiliate < Other**	***P value***	**Conglomerate < Other**	***P value***
Management fee in %	1.1340	1.2820	1.2092	1.2559	-0.1151 **	*0.0245*	0.0457	*0.7144*	-0.0347	*0.2282*
obs.	*50*	*25*	*85*	*379*	539		539		539	
Custody fee in %	0.2220	0.2300	0.2289	0.2326	-0.0098 **	*0.0349*	-0.0010	*0.4493*	-0.0023	*0.2942*
obs.	*50*	*25*	*85*	*379*	539		539		539	
Panel 3: portfolio structure	**Mean**				**Difference (two-sided test)**					
	Bank	**Affiliate**	**Conglomerate**	**Stand-alone**	**Bank vs. Other**	***P value***	**Affiliate vs. Other**	***P value***	**Conglomerate vs. Other**	***P value***
Stock%	58.43	54.26	58.61	63.49	-3.5888 ***	*0.0000*	-7.9489 ***	*0.0000*	-3.9399 ***	*0.0000*
obs.	*9,012*	*7,781*	*28,925*	*107,945*	153,663		153,663		153,663	
Bond%	32.55	35.20	32.63	24.70	5.6921 ***	*0.0000*	8.4399 ***	*0.0000*	6.7082 ***	*0.0000*
obs.	*9,012*	*7,781*	*28,925*	*107,945*	153,663		153,663		153,663	
Other%	8.55	10.20	8.72	11.61	-2.4001 ***	*0.0000*	-0.6466 ***	*0.0000*	-2.5858 ***	*0.0000*
obs.	*8,966*	*7,752*	*28,913*	*107,710*	153,341		153,341		153,341	
Panel 4: performance	**Mean**				**Difference (two-sided test)**					
	Bank	**Affiliate**	**Conglomerate**	**Stand-alone**	**Bank vs. Other**	***P value***	**Affiliate vs. Other**	***P value***	**Conglomerate vs. Other**	***P value***
Fund NAV daily return	-0.0644	-0.0505	-0.0435	-0.0654	-0.0041	*0.8874*	0.0104	*0.7393*	0.0209	*0.2358*
obs.	*8,990*	*7,774*	*28,898*	*107,821*	153,483		153,483		153,483	
Fund NAV daily abnormal return #	-0.0298	-0.0117	-0.0436	-0.0389	0.0095	*0.7414*	0.0275	*0.5715*	-0.0063	*0.7209*
obs.	*5,812*	*1,952*	*18,344*	*61,245*	87,353		87,353		87,353	

*** / ** / * Statistically significant at 1% / 5% / 10%

Abnormal return = fund daily return - portfolio daily return, portfolio daily return = stock% * SH composite index daily return + bond% * China composite bond index daily return + other% * SHIBOR daily return

Source: wind

[13] This time frame is chosen for reason of better funds data availability from 2007 on.

We show that bank funds, affiliate funds as well as conglomerate funds are significantly larger in size measured both with total assets and net assets under management at the end of 2008, as summarized in panel 1 of table 7. Bank-majority-held funds are in average 1.8748 billion CNY and 1.2007 billion CNY larger in total and net assets respectively than other types of funds. Funds minority-held by banks also enjoy larger funds volume with 1.3057 billion CNY and 1.3226 billion CNY more total and net assets respectively. Conglomerate funds, which were established in early 90s competing alongside with stand-alone funds, demonstrate the largest asset volume, with in average 2.1151 billion CNY and 2.0230 billion CNY more total and net assets than other funds. The results show that bank-related funds are able to draw investor's attention and to attract more financial resources. The attractiveness of bank-related funds could result from the strong reputation of established brand and the superior distribution ability with vast branch network.

The favorable fee condition could be another explanation for the larger size of bank-related funds. Thanks to the larger assets volume under management, especially bank-majority-held funds are able to offer fund products with favorable condition by lowering management and custody fees, which in turn attracts more assets and aggravates the economies of scale. In average, bank funds require 0.12% and 0.01% lower management and custody fees respectively, as the results in panel 2 of table 7 show.

Regarding the portfolio structure, we identify that funds with bank linkage invest in average 6% to 8% more in bonds products and 4% to 8% less in equity securities, as depicted in panel 3 of table 7. This result can be interpreted with the fact that Chinese banks have longer tradition in bond investment and gained strong market presence in bond market and can extend this expertise to their fund subsidiaries.

We further explore the question if bank-related funds perform better than stand-alone funds based on daily return of net asset value of funds during the years from 2007 to 2008. We evaluate both the absolute daily return and the abnormal daily return defined as the return over the benchmark with the same portfolio structure. The second measurement should take into account the different portfolio structure of bank-related and stand-alone funds as identified in panel 3. For stock investment, daily return of Shanghai Composite Index is chosen as benchmark; for bond investment, daily return of China Composite Bond Index is chosen; and we assume the investment of the rest of the assets in the portfolio in short-term and liquid market and choose the daily return of Shanghai Interbank Overnight Rate (SHIBOR) as benchmark for the rest portion of assets. As summarized in panel 4 of table 7, the performance of bank-related funds do not differ much from that of stand-alone funds, both in terms of absolute return and abnormal return compared to benchmark. This result indicates that banks are not the surely better asset managers on Chinese capital markets. The reputation of big Chinese banks is not sufficient to attract over-performing asset managers to deliver better performance than in stand-alone funds.

Consolidating the findings in part three, we conclude that the potential synergies of Chinese bank's equity participation in asset management companies are realized through sharing reputation and distribution network to attract funds flows as well as by utilizing the expertise in bonds investment. Gains from economies of scale are passed through to customers through lower management and custody fees.

IV. Conclusion and Outlook

The overall results of the above analyses confirm our suspicion of Chinese banks' high dependence on lending in revenue generating compared to international peers. Due to the rigid interest rate regime, the risk pricing mechanism is still not established in the lending practice of Chinese banks. Furthermore, in China, Europe, the UK and the USA, volatilities of interest income and non-interest income are not correlated, which provides potential for diversification gains in combining lending with non-interest income businesses, especially with fees and commissions.

Having recognized that the current narrow banking model can not sustain in pace with the gradual interest rate and currency control liberalization and with the aim of participating in opportunities from rapid development of capital markets, Chinese banks are gradually extending their business scope into asset management. Economies of scale are generated through sharing banks' renowned brand, vast branch network, long-term expertise and strong market presence in bonds investment. Customers benefit from lower management and custody fees in bank funds.

The very cautious liberalization of bank's engagement in proprietary trading especially in equity and derivative products reveals that China learned the lesson of the risks in over-leveraged trading in some Western universal banks of the pre-crisis time. A downscale of trading in Western banks in post-crisis time and the gradual transformation of China towards the universal banking model bring about the convergence of Western and Chinese universal banking models with more balanced business scope in interest, fees and commissions and trading income and more stability and sustainability in the banking sector.

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Corporate Governance, Board Diversity and Bank Efficiency: The Case of Commercial Banks in Malaysia

Sok-Gee Chan
University of Malaya
Institute of China Studies
50603 Kuala Lumpur, Malaysia.
Tel: 603-7956 5663 Fax: 603-7956 5114
E-mail: sokgee@um.edu.my

Lee Teck Heang
Monash University, Sunway Campus
School of Business
Jalan Lagoon Selatan, 46150 Bandar Sunway,
Selangor Darul Ehsan, Malaysia.
Tel: 603-5514 6371 Fax: 603-5514 6192
Email: lee.teck.heang@buseco.monash.edu.my

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Sok-Gee Chan
University of Malaya
Institute of China Studies
50603 Kuala Lumpur, Malaysia.
Tel: 603-7956 5663 Fax: 603-7956 5114
E-mail: sokgee@um.edu.my

Lee Teck Heang
Monash University, Sunway Campus
School of Business
Jalan Lagoon Selatan, 46150 Bandar Sunway,
Selangor Darul Ehsan, Malaysia.
Tel: 603-5514 6371 Fax: 603-5514 6192
Email: lee.teck.heang@buseco.monash.edu.my

Abstract

The subprime crisis in the mid-2008 has resulted in failure of major financial institutions in many countries. Kirkpatrick (2009) pointed out that such problems were primarily due to information asymmetry in the banking industry where information about the banks' exposure failed to reach the board and senior management. Therefore, good corporate governance practices are crucial for long-term survival of banking industry. The study examines the effect of board size and board composition on cost and profit efficiency of the commercial banks in Malaysia from 2000 to 2009 by employing Data Envelopment Analysis (DEA). Next, the Tobit regression is utilized to determine the effect of board composition and board size on cost and profit efficiency by controlling for liquidity risk, bank size, non-performing loans ratio, return to equity, and ratio of equity to total assets. Results found that independent director is positively related to cost efficiency. This implies that independent directors provide an effective monitoring role in over sighting and evaluating the performance of management in the banking industry. The results of the present study suggested that board size does not influence cost and profit efficiency of the commercial banks in Malaysia. This is consistent with the studies by Adams and Mehran (2008) and Zulkafli and Samad (2007). Gender diversity is also found to have no significant effect on cost and profit efficiency of the commercial banks in Malaysia. This is likely due to the relatively lower percentage of female in the corporate boardroom.

JEL classification: G21, D21, G30

1.0 Introduction

The subprime crisis in the mid-2008 has resulted in failure of major financial institutions in many countries. This was mainly due to poor risk management process as a result of weak corporate governance practices. Kirkpatrick (2009) pointed out that such problems were primarily due to information asymmetry in the banking industry where information about the banks' exposure failed to reach the board and senior management. Therefore, good corporate governance practices are needed to ensure long-term survival of commercial banking industry.

Corporate governance is a set of processes and customs that govern the relationship between the stakeholders of a company which includes corporate management, the board of directors, and shareholders. It aims to provide the route for easier performance management within the organization. Besides, it has been recognized by the Basel Committee (2006) as an essential tool in enhancing investors' protection and confidence by contributing to a more proper functioning of the market economy and hence leads to further improvement in economic growth.

In addition, corporate governance practices received considerable attention in Malaysia with the implementation of the Malaysian Code on Corporate Governance (MCCG) in March 2000. Special emphasis had been given on the role of independent non-executive directors to oversight and evaluates management performance (Fama and Jensen 1983; Bhojraj and Sengupta 2003; Ashbaugh-Skaife, Collins and LaFond 2006). In 2001, the Bursa Malaysia Revamped Listing Requirement (2001) states that at least one third of their board of directors must comprise of independent non-executive directors as part of the listing requirement. Continuous improvement in the corporate governance practices is witnessed with the revision of MCCG code in 2007. Besides, board composition in terms of qualification of directors and the role of independent directors in the audit committee being reviewed following the Budget 2008 announced by the Malaysian Prime Minister. This highlights the importance of corporate governance practices in ensuring continuous improvement in firms' performance.

Corporate governance in the banking industry is far more complex and differs from the non-banking firms because the banking industry is highly regulated (Macey and O'hara 2003; Spong and Sullivan 2007; Andres and Vallelado 2008; Agoraki, Delis and Panagiotis 2009). The management and board of directors of the banks are not only accountable for it owners but also to depositors, borrowers, shareholders, clients, bank and also regulators (Ciancanelli and Reyes-Gonzalexz 2000; Pathan, Skully and Wickramanayake 2007). According to Andres and Vallelado (2008) heavy regulations in the banking industry created an additional mechanism of corporate governance. This greatly reduced the effectiveness of the corporate governance in the banking industry and thus affects the bank's performance.

In addition, the role of the banking industry is essentially important in ensuring the smoothness of monetary policy transmission in the developing countries because it provides the main source of financing to businesses. In this context, banks act as the assets transformer in transforming the short-term liabilities in the form of deposits into long-term loans. Therefore, the banking industry is highly leveraged and the mismatch resulted from the assets transformations may contribute to failure of banks as well as distort the creation of sound financial system in the country.

Furthermore, it is always a concern of the bank's regulators to prevent the effect of systematic risk in the banking industry. This is because failure of one bank creates a spillover effect to other banks and resulted in destabilization of the country's economic system (Calomiris 2007). The effort to reduce systematic risk had resulted in conflict between the shareholders in wealth maximization and leads to new agency problem (Andres and Vallelado 2008). Consequently, corporate governance practices through board size, board composition, board diversity and leadership structure of the board may help to mitigate the problems of information asymmetry (Jensen 1993). Therefore, board structure and board composition are critical in corporate governance analysis because it enhances investors' protection and confidence which in turn help to improve firms' performance. This is supported by Barth, Caprio and Nolle (2004).

This study primarily examines the effect of board structure and board size on bank performances in Malaysia in terms of cost and profit efficiency for the period 2000 to 2009 using Data Envelopment Analysis (DEA). In the second stage of the analysis, Tobit regression is conducted to determine the effect of board composition and board size on cost and profit efficiency of these commercial banks. Gender diversity in the corporate boardroom is also included in the analysis of the commercial banks in Malaysia.

This study complements the study of corporate governance and banks' performance because most of the studies of bank performance are based on accounting ratio, namely return on assets and return on equity as well as Tobin's Q (Simpson and Gleason 1999; Griffith, Fogelberg and Weeks 2002; Belkhir 2004; Adams and Mehran 2005; Sierra, Talmor and Wallace 2006; Pathan et al. 2007; Zulkafli and Samad 2007; Adams and Mehran 2008; Andres and Vallelado 2008; Tanna, Pasioura and Nnadi 2008; Agroki et al. 2009). According to Agoraki et al. (2009) bank efficiency as a measure of bank performance is relatively superior as compared to the financial ratio because it enables to take into account of the shortcoming associated with the evaluation of inventories and depreciation. Besides, the frontier analysis allows one to determine the efficient use of banks' resources at a given level of outputs while achieving the corporate objectives of cost minimization and profit maximization.

Section 2 discusses on the study of corporate governance on bank performance. Next, Section 3 presents the methods in estimating the cost and profit efficiency and discusses on the Tobit regression used to examine the relationship between corporate governance and bank efficiency level. This is followed by the discussion of results in Section 4. Section 5 concludes and highlights suggestions for future studies.

2.0 Literature Review

Section 2 outlines the review of literatures pertaining to the objective of the study. It is centered on the following board characteristics that may have impacts on the bank efficiency: (i) gender diversity; (ii) board size; and (ii) independent directors.

2.1 Gender Diversity

The issues of women in the corporate boardroom have been an area of interest of various researchers in recent years as women in present day play a critical role in corporation in view of their contribution towards knowledge, creativity and problem solving skills. According to Westphal and Milton (2000), and Carter, Simkins and Simpson (2003) women are important for corporations as they offered a fresh and various perspectives in problem solving. Besides, they are able to correct informational biases in strategy formulation. Another researcher, Kramer, Konrad, and Erkut (2006) also highlighted that female directors did put forward the interest of employees and firms' stakeholders and such an input has significantly affected the firms' performance. Similarly, Catalyst (2004) claimed that companies experience a better financial performance when there are high representations of women in top management teams. Erhardt, Werbel and Shrader (2003) and Catalyst (2004) explained that this is because heterogeneous group made a better innovative and creative business decision-making than homogenous group.

The strengths of women are also brought up by Desvaux, Devillard-Hoellinger and Baumgarten (2007) who opined that gender diversity is an asset for corporate image because it helps to foster relationship between the company, its employees, its shareholders, and its customers. Likewise, Adams and Ferreira (2004) argued that diverse board is more effective as female directors tend to have lesser attendance problems in board meeting than male directors. Nishii, Gotte and Raver (2007) are also of the opinion that diversity in senior management could lead to adoption of diversity practices which in turn improve company's effectiveness and performance.

Carter et al. (2003) conducted a study on 638 public traded firms in Fortune 1,000 found that firms are having favorable financial ratios when there are high percentages of women involvement in corporations. Carter et al. (2003)'s findings are in line with the later study of Erhardt et al. (2003) on 127 US large companies. Besides, in a more recent study, Smith, Smith and Verner (2005) found a positive relationship on firm performance when women are added in top management. Likewise, the study of Bernardi, Bosco and Vassill (2006) found companies that appeared on "100 Best Companies to Work For" are generally consisted of high proportion of female directors. Such a finding of Bernardi, et al. (2006) is likely to imply the positive contribution of women in corporations. Similarly, the results of Francoeur, Labelle and Sinclair-Desgagne (2008) showed that firms with high level representation of women do generate positive stock-market returns.

On contrary, Bøhren and Strøm (2007) and Adams and Ferreira (2008) found firms perform poorer when the boards are more gender diversified. Such a finding could be explained by Jianakoplos and Bernasek (1998) who found that women are relatively more risk-averse in financial decision-making as compared to men. Besides, the study of Earley and Mosakowski (2000) revealed that heterogeneous group is not well performed. This is because group with diverse background have difficulties to work together in order to achieve a common understanding. Besides, Hambrick, Cho and Chen (1996) also found that diverse groups are slower in taking action, making decisions and responding to the competitors' initiatives.

On the other hand, some studies for example Zahra and Stanton (1988), Shrader, Blackburn and Iles (1997) and Campbell and Minguez-Vera (2007) found no relationship between the presence of women on the corporate boardroom and the firm value. Likewise, Marimuthu and Kolandaisamy (2009) showed that diversity seems irrelevant to financial performance in Top Management Teams (TMTs) of Top 100 listed companies.

The review of literature generally shows inconsistent results on the impacts of gender diversity and firms' performance. All in all further research is needed to gain deeper insight into this area in view of the different opinions expressed by various researchers.

2.2 Board size

The review of literature shows inconclusive findings on the impacts of board size and firms' performance. According to Coles, Daniel and Naveen (2008), larger board size is suitable for complex firms that need greater advising requirements. Kyereboah-Coleman and Biekpe (2006) argued that larger board size is effective and better for corporate performance as it consists of wide range of skillful and knowledgeable expertise that could improve board's decision. Kyereboah-Coleman and Biekpe (2006) further explained that with larger board size, it could lessen the CEO domination which in turn improves corporate performance.

The empirical research conducted by Eilon (1986) on 42 boards of US retailing firms found that non-failed firms tend to have larger boards as compared to failed firm. This implies that larger board tends to have longer corporate survival. In addition, the study of Kiel and Nicholson (2003) revealed a positive result when they explored the relationship between board size and corporate performance of those largest public listed companies in Australia. Similarly, using a sample of 174 banks and savings-and-loan holding companies, the study of Belkhir (2008) revealed that board size is positively related to Tobin’s Q and return on assets.

Adam and Mehran (2008) conducted their research using 35 large publicly traded BHCs banks over a period of 1959-1999. Their study found that there is no relationship between firm performance and board size. Likewise, Zulkafli and Samad (2007) found no relationship between board size and bank performance when they conducted a research on 107 listed banks from nine Asian countries. However, many studies in the literature also found a negative relationship between board size and measures of firm performance. These studies include: Jensen (1993), Yermack (1996), Huther (1997), Conyon and Peck (1998), Eisenberg, Sundgren and Wells (1998), Mak and Kusnadi (2005), Pathan et al. (2007), Bennedsen, Kongsted and Nielsen (2008), Guest (2009) and O’Connell and Cramer (2010). In particular, a study conducted by Mak and Kusnadi (2005) in Malaysia and Singapore on board size and firm performance found that board size and firm value in the two countries are inversely correlated. Similar results are also found in European countries, namely the UK, France, Netherlands, Denmark and Italy (Conyon and Peck 1998), Finland (Eisenberg et al. 1998) and Ireland (O’Connell and Cramer 2010). Besides, the study of Yermack (1996) found that smaller boards produce favorable financial ratios in United States Public Corporations. Yermark (1996) argued that such a result can be interpreted as either smaller size of board brings positive corporate performance, or adjustment on board size is made in response to the past corporate performance.

Other studies, for example, Pathan et al. (2007) also revealed a negative relationship between board size and banks’ performances in the Thai banking industry. In a similar vein, Huther (1997) asserted that larger board is correlated with higher cost which is one of the contributions towards ineffectiveness corporate performance. Eisenberg, et al. (1998) and Guest (2009) argued that when the board size becomes larger, it will increase communication and coordination problems among the board members, and consequently it will affect board’s management control. As oppose to Kyereboah-Coleman and Biekpe (2006) and Jensen (1993) argued that large board could lead to greater CEO control which reduces the board effectiveness. This is because when board size is large, board members are less likely to participate, communicate and commit in the board discussion.

Overall, it can be seen that the number of directors (board size) that sit on the board should be appropriate in order to achieve company’s goal (good performance). The appropriateness is highly depending on the firm size. Pfeffer (1972) remarked that large company that require more external contracting relationship should keep the board large, so that the board consists of members that can deal with various sectors of external environment. Therefore, some researchers suggested that the number of board members should be optimal.

2.3 Independent director

The presence of independent non-executive directors on the corporate boardroom is likely to reduce agency problems as outline in Fama and Jensen (1983) as they enhance monitoring management’s decision, protecting interests of shareholders and other stakeholders, and safeguarding firms’ reputation. Likewise, according to Staikouras, Staikouras and Agoraki (2007) non-executive directors add value to firm by providing their expert knowledge and monitoring services. Similarly, the empirical evidence of Barnhart, Marr and Rosenstein (1994) showed that board composition is essential when independent directors ratify decisions that have a direct effect on managerial well-being and overall firm performance. In the case of banking industry, Brickley and James (1987) found that the presence of independent director tend to reduce managerial consumption of perquisites which in turn improve bank performance. In line with the above, many studies (e.g. Baysinger and Butler 1985; Shivdasani 1993; Cotter, Shivdasani, and Zenner 1997; Pathan et al. 2007; Tanna et al. 2008; and Chuan, Hsiao and Chun 2009) also confirm the contribution of independent directors in enhancing firms' value.

Positive relationship between the proportion of independent directors on the bank board and performance is also found in Pathan et al. (2007). Likewise, Tanna et al. (2008) found that independent directors have been effective in monitoring and controlling managers. Such an action may lead to a positive impact on performance, stock return, credit ratings, and auditing. Besides, the study of Chuan et al. (2009) revealed that board independence plays a positive role on firms' investment behavior and performance.

On the other hand, citing three of the largest bankruptcies in the history of corporate America, namely, Enron Corp., WorldCom, Inc., and Global Crossing Ltd, Petra (2005) argued that the presence of outside directors alone fail to resolve the problems of deficiencies exposed in the corporate boardrooms as these companies also utilized outside directors on their boards. The remark of Petra (2005) is consistent with the earlier study conducted by Hermalin and Weisbach (1991) who found that there is no relationship between the percentage of outside directors and firm performance. Similarly Pi and Timme (1993) found that cost efficiency and return on assets are not associated significantly with the proportion of independent directors in commercial banks in the US.

According to Petra (2005), the inclusion of outside directors may jeopardize the efficient operation of a board of director. This is because outside directors do not have sufficient exposure on daily activities of the firm because of their limited involvement with corporate activities. Other studies, as discussed in Haniffa and Hudaib (2006, p.1039) for example, Baysinger and Butler (1985), Demb and Neubauer (1992) and Goodstein, Gautum and Boeker (1994), also highlighted the weaknesses of high proportion of independent non-executive directors which include excessive monitoring and jeopardize companies as they may stifle strategic actions. In addition, the non-executive directors are accused for not being truly independence and may lack of the business knowledge and this may defeat the purpose of independent non-executive directors.

Overall, the review of literature indicates that the presence of independent directors tends to safeguard the efficacy of supervision and advice in the operation of firm. Therefore, Andres and Vallelado (2008) pointed out that the independent directors should endow with knowledge, incentives, and abilities to mitigate the conflicts of interest between shareholders and insiders. However, Andres and Vallelado (2008) also stressed that an excessive proportion of independent directors may damage the advisory role of boards. This is because it may cause problems on coordinating, controlling and flexibility in decision making. Therefore, a negative relationship between presence of independent directors and firm performance could be observed (Bhagat and Black 2001).

3.0 Methodology

This study employs Data Envelopment Analysis (DEA) to estimate the bank efficiency in Malaysia from year 2000 to 2009. This is a linear programming methods based on the concept of Pareto efficiency where the production frontier is used to estimate the efficiency of a particular firm (Casu and Molyneux 2003). This technique compares each bank's studied with the "best practice" banks and each bank is known as the Decision Making Unit (DMU). The most efficient DMUs lie on the cost or production frontier and assigned with a score of "1". Banks (DMUs) below the frontier are considered to be relatively inefficient as compared to the benchmark banks and will be given an efficiency score in between "1" and "0".

As compared to the econometric models of frontier analysis, DEA is relatively flexible because it does not require a priori functional specification of the unknown technology (Fukuyama 1993; Favero and Papi 1995). Therefore, the estimation of efficiency will not be subjected to possible misspecification of the production function (Bauer, Berger, Ferrier and Humphrey 1998; Jemric and Vujcic 2002; Okuda and Hashimoto 2004). Besides, DEA is superior as compared to econometrics models because it is best used for small samples estimations. The cost efficiency for bank *j* can be expressed as follows:

$$\begin{aligned} &\min_{\mathrm{UnVm}} \mathrm{CE}_j = \sum_{m=1}^{M} w_{jm} X_{jm} \\ &\text{s.t.} \sum_{r=1}^{R} \lambda_r X_{rm} \le X_{jm} \\ &\quad \sum_{r=1}^{R} \lambda_r Y_{rn} \ge Y_{jn} \\ &\quad \sum_{r=1}^{R} \lambda_r = 1, \lambda_r \ge 0, r = 1,2,\ldots j,\ldots R \end{aligned} \tag{1}$$

where:
CE_j = cost efficiency of the *j*th DMU
Y_{jn} = *n*th output of the *j*th DMU
Z_{Kn} = *n*th undesirable output of the *k*th DMU
w_{jm} = *m*th input price of the *j*th DMU
X_{jm} = *m*th input of the *j*th DMU

The cost efficiency for the j_{th} bank is given by the ratio of minimum costs to actual costs can be estimated using Equation 2 below.

$$0 < CE_j = \frac{\sum_{m=1}^{M} w_{jm} X^*_{jm}}{\sum_{m=1}^{M} w_{jm} \theta^*_j X_{jm}} < 1 \tag{2}$$

where:
θ^*_j = technical efficiency of *jth* DMU
X^*_{jm} = *m*th input of the *j*th DMU (calculated by linear programming)

In this context, the banks are said to use *m*th unit of input in their production of *n*th unit of output.

Next, the alternative profit function with the assumption that banks to have certain control over their output prices in the imperfect competitive environment is employed in this study. Profit efficiency represents a better concept of the firm's objectives because it takes into account of both cost of production and revenues generated by the banks. The alternative profit efficiency for bank *j* can be expressed as follows:

$$\underset{\text{UnVm}}{\text{Max}}\, PE_j = R_j - \sum_{m=1}^{M} w_{jm} X_{jm}$$

s.t.

$$\begin{aligned} &\sum_{r=1}^{R} \lambda_r R_r \geq R_j \\ &\sum_{r=1}^{R} \lambda_r X_{rm} \leq X_{jm} \\ &\sum_{r=1}^{R} \lambda_r Y_{rn} \geq Y_{jn} \\ &\sum_{r=1}^{R} \lambda_r = 1 \lambda_r \geq 0, r = 1,2,\ldots j,\ldots R \end{aligned} \tag{3}$$

where:

PE_j = cost efficiency of the *j*th DMU

R_j = Revenue efficiency for *j*th DMU

Y_{jn} = *n*th output of the *j*th DMU

w_{jm} = *m*th input price of the *j*th DMU

X_{jm} = *m*th input of the *j*th DMU

The alternative profit for bank *j*th is given by:

$$APE_j = \frac{\sum_{m=1}^{M} R_j - \sum_{m=1}^{M} w_{jm} X_{jm}}{\sum_{m=1}^{M} R_j^* - \sum_{m=1}^{M} w_{jm} X_{jm}^i} < 1 \tag{4}$$

The above equations follow constant return to scale (CRS) that assumes the production takes place in the linearly scale the inputs and outputs without changing the efficiency level. Nevertheless, in the real economic situation firms may not be able to scale their factors of productions and outputs linearly. Therefore the approach of variable return to scale (VRS) estimation by setting $\sum_s \lambda_s = 1$ provides a better representation for both cost and profit function.

Next, Tobit regression is employed to determine the effect of board structure and board size on cost and profit efficiency of the commercial banks. The bank size, liquidity risk, ratio of non-performing loans to gross loans, return on average assets, return on average equity, and equity to capital ratio are employed as the control variables for cost and profit efficiency in this present study. The Tobit regression estimation is shown in Equation (5).

$$Eff_{it} = f(BS, ID, GD, LR, NPL, \text{profitability, equity capital}) \tag{5}$$

$$Effi_{it} = \alpha_{it} + \beta_1 BS_{it} + \beta_2 ID_{it} + \beta_3 GD_{it} + \beta_4 LR_{it} + \beta_5 size_{it} + \beta_6 NPL_{it} + \beta_7 ROE_{it} + \beta_8 ETA_{it} + \varepsilon_{it}$$

Where Eff_{it} refers to average cost and profit efficiency scores of commercial bank *i* at time period *t*.

BS_{jt} = board size (natural logarithm of total number of directors) for bank i at time t
ID_{ij} = independent director/ total number of directors for bank i at time t
GD_{ij} = total of women directors/ total number of directors for bank i at time t
LRe_{it} = liquidity risk for bank i at time t
$Size_{it}$ = bank size (natural logarithm of total assets) for bank i at time t
NPL_{it} = non-performing loan to total assets for bank i at time t
ROE_{jt} = return on equity for bank i at time t
ETA_{jt} = equity to total assets for bank i at time t
ε_{it} = error-terms for bank i in at time t

3.1 Data and Variables:

The sample of this study consists of selected 19 commercial banks operating in Malaysia which includes both domestic and foreign commercial banks from period 2000 to 2009. The variables used in this study are extracted from various issues of report of commercial bank. The unbalanced panel data approach is used to estimate the relationship between board size and board composition with the commercial banks in Malaysia. The intermediation approach where the banks function as intermediary in collecting deposits from the savers and provides excess of funds to the investors is employed.

The inputs vector employed in this study consists of labour, capital, and loanable funds. The price of labour is calculated by dividing total personnel expenses (employees' salaries and benefit expenses) with total assets of the bank. The price of physical capital is calculated by dividing total depreciation by total fixed assets. The price of loanable funds is calculated by dividing total interest expenses on deposits and non-deposit funds with total loanable funds. The inputs are used to produce financial outputs such as loans, investments, and off-balance sheet products. Hence, these three served as the output vectors for the traditional banking products of banks. Next, the price of outputs employed consists of price of loans, price of investments and the price of off-balance sheet activities. The price of loans is computed using interest income from loans to total loans whereas price of investments is the ratio of investment income to total investment. The price of off-balance sheet activities is taken as the ratio of non-interest income to total off-balance sheet activities of the banks. The total costs consist of operating and financial costs and the net income before taxes is used as the proxy for banks' profit. All outputs, costs and profits values are in RM million.

In the second stage estimation of corporate governance practices on cost and profit efficiency, the independent variables employed are board size, number of independent directors, gender diversity while controlling for liquidity risk, bank size, non-performing loans ratio, return to assets, return to equity, and ratio of equity to total assets. The expected results are stated in Table 1.

[Insert Table 1]

4.0 Results and Discussion

The results of cost and profit efficiency scores of the commercial banks in Malaysia from year 2000 to 2009 are summarized in Table 2.

[Insert Table 2]

The summary statistics of the efficiency scores reveal that the commercial banks in Malaysia is relatively cost efficient with an average efficiency scores of 81.8% as compared to profit efficient with the reported efficiency score of 68%. The results indicate that the commercial banks on average could reduce their input mix by 18.2% given the same output level in order to be cost efficient. On the other hand, the input wasted on profit efficiency is greater and amounted to an average of 32%.

Next, the estimated results of the relationship between board size and board composition with the cost and profit efficiency of the commercial banks in Malaysia is presented in Table 3.

[Insert Table 3]

From Table 3, the results show that the board size does not influence the cost and profit efficiency of the commercial banks in Malaysia. This is supported by Adams and Mehran (2008) which found that banking firms' performance in the U.S. does not significantly influenced by the board size. Similar results were found by Zulkafli and Samad (2007) on 107 listed banks in the Asian emerging markets.

Next, results suggest that the percentage of independent director in the board is positively related to cost efficiency of the commercial banks in Malaysia and it is statistically significant at 5% significance level. This indicates that the role of independent director is successful in mitigating moral hazard behavior of managers to act in accordance with their own self interest. This contributes to higher banks' performance in cost efficiency. Andres and Vallelado (2008) suggested that independent director in the board is useful because it resulted in fewer conflicts of interest with the managerial level and reduced cost incurred to manage the bank. Nevertheless, the percentage of independent director is not significant to influence the profit efficiency level of the commercial banks.

On the other hand, gender diversity does not significantly affect the cost and profit efficiency of the commercial banks in Malaysia. This might due to relatively lower percentage of women in the board. The result is consistent with the earlier study done by Marimuthu and Kolandaisamy (2009) on the Top 100 listed companies in Malaysia that shows gender diversity is not relevant in determining the firm performance.

Liquidity risk is found to be negatively related to cost and profit efficiency at 1% significance level. This indicates that the higher the liquidity risks the lower the cost and profit efficiency of the banks. As pointed out by Rao (2005) lower liquidity risk will result in higher cost and profit efficiency because it is less costly for the banks to handle liquid assets which are relatively lower in interest costs, transaction costs as well as lower storage and protection costs.

Finally, the equity to capital asset ratio is found to be positively related to cost and profit efficiency level of the commercial banks in Malaysia. A higher equity to capital ratio indicates that banks resort to equity capital in financing the banking activities instead of using debt-financing. This resulted in lower risk-taking propensity and lower cost of borrowing and leads to higher and profit efficiency. The study is inline with Demsetz, Saindenberg and Strahan (1996), Salas and Saurina (2003), Rao (2005) and Chang and Chiu (2006).

5.0 Conclusion

This study examined the effect of board size and board composition on cost and profit efficiency of the commercial banks in Malaysia from 2000 to 2009. The DEA is employed to estimate cost and profit efficiency scores of commercial banks in Malaysia. Next, the Tobit regression is utilized to determine the effect of board composition and board size on cost and profit efficiency of these commercial banks by controlling for liquidity risk, bank size, non-performing loans ratio, return to equity, and ratio of equity to total assets.

The results of the present study suggested that board size does not influence cost and profit efficiency of the commercial banks in Malaysia. This is consistent with the studies by Adams and Mehran (2008) and Zulkafli and Samad (2007). Next, results found that independent director is positively related to cost efficiency. This implies that independent directors provide an effective monitoring role in over sighting and evaluating the performance of management in the banking industry. This is in line with the requirement of the MCCG on the role of independent directors to further improve the banking performances. Besides, the regulator should also continuously improve on the MCCG and provides more transparent rules and regulation in developing the role of independent directors to boost the efficiency level of the banking industry. Overall, the results of the present study on the effects of board independent on firms' performance are consistent with the findings by Baysinger and Butler (1985), Shivdasani (1993), Cotter et al. (1997), Pathan et al. (2007) Tanna et al. (2008) and Chuan et al. (2009) on firms' performance. However, it contradicts the findings of prior studies in Malaysia conducted by Abdullah and Nasir (2004), Rahman and Ali (2006), and Haniffa and Hudaib (2006) which showed that independence non-executive directors have not been performed the monitoring functions effectively.

Nevertheless, gender diversity does not significantly influence the cost and profit efficiency of the commercial banks in Malaysia. This is likely due to the relatively lower percentage of female in the corporate boardroom. Furthermore, women may have also played a less critical role as compared to man in the male dominated corporate boardroom in the commercial bank in Malaysia. Hence, their contribution in terms of knowledge, creativity and problem solving skills may not have critically affected the efficiency of the banks. Generally, such a result in this study is consistent with the studies by Marimuthu and Kolandaisamy (2009), Zahra and Stanton (1988) and Shrader et al. (1997) who found that the involvement of women in corporations does not affect firms' performance. Even though the involvement of women in corporate boardroom does not affect firms' performance, Malaysian government should encourage women to participate actively in corporations in order to promote better gender equality in the country. As remarked by Koshal, Gupta and Koshal (1998, p. 18) "women represent a special talent pool; it is not only a matter of morality to treat women equal to male, it also makes good business sense to use this talented resources effectively".

It is acknowledged that the present study only covers the limited aspect of corporate governance such as board size and board independence on bank efficiency. To gain deeper insights, future studies may investigate other corporate governance mechanisms such as board competency, non-duality role of CEO, independence of audit committee and competency of audit committee on their impacts of bank efficiency. It is also suggested the study to be replicated in other emerging markets as to observe their cross cultural effects and to examine whether the same general relationship holds.

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Table 1: Expected results of variables employed in the regression models

Variable	Expected result
board size = Log(total number of directors)	Positively related to bank efficiency if large board resulted in better monitoring and advising the management as well as facilitate the manager supervision. Negatively related to bank efficiency if large board resulted in coordination problems, control and flexibility in decision-making.
Percentage independent directors = total number of independent directors to total number of board of directors	Positively related to bank efficiency because it helps to mitigate agency problem and moral hazard by overseeing the executive and managing directors as well as act as a monitoring role to the banks management. Negatively related if large number of independent directors damage the advisory role of the boards.
gender diversity = Total of female directors to total number of board of directors	Positive relationship is expected if greater gender diversity contributed a fresh perspective in the corporate boardroom for their knowledge, creativity and problem solving skills. Negative relationship is expected when the gender diversity resulted in more complex management of the firms.
liquidity risk	Negative relationship is expected because greater risk reduces the banks to operate efficiently.
bank size = log(total assets)	Capture the possible cost advantages associated with size. Expected to have positive effect with bank efficiency level.
non-performing loans ratio = total of non-performing loans to total loans	Control for assets quality. Negative relationship between non-performing loans to total loans and bank efficiency scores since lower asset quality causes banks to incur additional cost in managing the assets and hence reduction in profit.
Return to equity = Net income to total equity	The profitability ratio should be a positively related to bank efficiency because more efficient banks are said to generate greater profit earnings (Mester, 1993).
equity to total assets	Control for the regulatory conditions. A negative relationship is expected when a lower ratio results from higher risk-taking propensity and leverage and thus, higher borrowing costs. A positive relationship is expected when regulators view a higher level of equity to reduce of future losses.

Table 2: Descriptive statistics of average cost and profit efficiency score of commercial banks in Malaysia from 2000 to 2009

Cost efficiency		Profit efficiency	
Mean	0.818	Mean	0.680
Median	0.835	Median	0.831
Mode	1.000	Mode	1.000
Standard Deviation	0.148	Standard Deviation	0.899
Count	167	Count	167

Table 3: Cost and profit efficiency estimation and its determinants

Variable	**Cost efficiency**	**Profit efficiency**
Constant	0.452	-0.094
	(0.118)	(0.586)
	[3.819]***	[-0.161]
Board size	0.066	0.007
	(0.046)	(0.229)
	[1.418]	[0.032]
Independent director	0.174	-0.188
	(0.069)	(0.339)
	[2.534]**	[-0.554]
Gender diversity	-0.000	-0.439
	(0.132)	(0.650)
	[0.001]	[-0.676]
ROE	0.053	0.456
	(0.082)	(0.406)
	[0.654]	[1.122]
Liquidity risk	-0.212	-1.269
	(0.082)	(0.417)
	[2.586]***	[-3.044]***
Bank size	0.008	0.053
	(0.009)	(0.044)
	[0.869]	[1.217]
Non-performing loans	0.180	-0.103
	(0.142)	(0.699)
	[1.265]	[-0.148]
Equity to capital	0.337	2.011
	(0.130)	(0.659)
	[2.596]***	[3.050]***
Sigma	0.137	0.668
	(0.007)	(0.039)
	[18.276]***	[17.291]***
Log Likelihood	95.310	-169.541

*Notes: ***, **, * denote significance at 1, 5, and 10 % level respectively. Standard errors in parentheses and z-statistics in [ ].*

Topic: **Rise of India**

Title: Doing Business In Rising India: Opportunities and Challenges

Author: **Gautam Ray**

Affiliation: **Professor, Graduate School of Management, Kyoto University**

Mailing Address: **Graduate School of Management, Kyoto University**

Yoshida Honmachi, Sakyo-ku, Kyoto 606-8501, Japan

E-mail: **gautamray79@gmail.com**

Doing Business In Rising India: Opportunities and Challenges

Gautam Ray[1]

Professor, Graduate School of Management

Kyoto University

1. Introduction

Doing business in India is indeed challenging. It has inadequate infrastructure, rigid labor laws, complicated tax systems, labyrinthine judicial system and inefficient public delivery system afflicted by corruption. Yet, today's India with its huge domestic market, abundant supply of good quality human capital and increasingly brighter prospect of a better tomorrow offers attractive longer term investment opportunities.

What makes the 'Rise of India' story particularly interesting is that unlike the East Asian story Indian governments have not fashioned export led growth strategy and allocated resources in key private industrial sectors in order to stimulate growth; nor is India's growth propped up by the bubbles of expectation generated in the financial/capital market or in the property/asset market through indiscriminate flow of unleveraged credit as seen in USA and many other countries. India's growth, on the other hand, is fueled by the burgeoning domestic market: it is founded upon strong fundamentals in manufacturing and service sectors. Most importantly it is shaped and nurtured by India's democratic political processes the significance and importance of which is enormous.

India's business climate does not, however, come across as particularly good judging by the aggregate indicators in human development and ease-of-doing business indices published by the World Bank. The next section gives an overview of the challenges of doing business in India. The phenomenal rise of India in recent years is captured in Section3 followed in the next section by a brief overview of the political and economic factors that are believed to be contributing to India's current growth momentum. Section 5 concludes the discussion.

2. Business Environment: Challenges

The challenges of doing business in India are many; not least among them are the economic and social backwardness of the average Indian and the difficulties in setting up and doing business.

2.1 *Human development Profile*

India, the largest democracy in the world with its 1.17 billion people growing currently at an average annual rate of 1.4%, is a union of 29 states[2] and 6 Union territories. Its democratic

[1] I am grateful to Confederation of Indian Industries(CII) for giving me some facts and figures relating to the present state of Indian economy and businesses which I have used as referred to in this paper.

polity is enshrined in a written constitution that confers major legislative power to the Union Parliament. About 60% of its population is engaged in lowly productive agricultural activities which have contributed only 14.6% of GDP at factor cost in 2009-10 (Economic Survey 2009-10, Government of India). Its per capita income in 2008 was US$1070 ($2960 in PPP); life expectancy at birth in 2007 was 63 years for male and 66 years for female; adult literacy rate(age of 15 and above) in 2007 was 66. Its human development rank in 2009 was 134 (out of 182 countries) making it a medium human development country (World Development Report, 2010).

The state wise figures in Tables 1 and 4 capture the diversity across major states. While Kerala's and Himachal Pradesh's achievements in human development since India's independence are exemplary and comparable to the top rankers among developed countries[3], Bihar and Uttar Pradesh remained as least developed as the bottom ranking countries in the global HDI list. During 1960-2000 headcount poverty index declined the most in Kerala by 3.26 percentage per annum on an average followed by 2.96 in Punjab and Haryana, 2.38 in Andhra Pradesh, 2,29 in West Bengal and 2.02 in Gujarat. The lowest decline was in Assam, by only 0.06 percentage followed by 0.32 in Bihar, 0.8 in Madhya Pradesh and 1.11 in Uttar Pradesh.(Datt and Ravallion, 2002). India's rather unimpressive human development profile has to be understood in the context of the divergent development experience among Indian states and the fact that largely populated Indian states such as Uttar Pradesh, Bihar and Rajasthan have remained laggards for many decades.

2.2 *Governance and Regulatory Framework*

In the World Bank's *Doing Business Survey* 2010, India ranks low 133 among 183 economies. The Survey gives India a poor rank, 169 in starting a business, and poorer ranks, 183 and 175 in enforcing contracts and getting construction permits respectively. In starting a business as a 100% domestically owned limited company in India, minimum capital requirement is US $ 2200, and thirteen(13) procedures are involved which take 30 days time costing about US $ 670 (66% of income per capita).

2.3 Procedural requirements for starting a business

Confederation of Indian Industries (CII)[4] lists fourteen (14) procedural requirements- ten (10) with central government and four (4) for setting up or expanding any industrial project in India. Integrating the CII list and the World Bank Doing Business Survey, one finds that seventeen clearances are required to be taken from central government while at least seven clearances are required from state/local governments. Clearances/approvals from central government include the following:

1. Obtaining director identification number (DIN) on-line
2. Obtaining digital signature certificate on-line
3. Reserving the company name with the Registrar of companies on line

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[2] Each of its fifteen major states is larger than all but a few countries in the world. These major states are: Andhra Pradesh, Assam, Bihar, Gujarat, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal.

[3] See Dreze and Sen (2000) for a comprehensive account of Kerala's and Himachal Pradesh's impressive achievements in human development.

[4] See " Note on Clearances and Approval for Industrial Projects", September 2009.

4. Presenting the company documents duly stamped by Superintendant of Stamps or the authorized bank along with the registration fee to the Registrar of Companies to get the certificate of incorporation
5. Obtaining a Permanent Account Number(PAN) from National Securities Depository Services Limited(NSDL) or Unit Trust of India (UTI) Investor services Limited or their authorized agent.
6. Obtaining a Tax Account Number (TAN) for tax deduction at source(TDS) from Income Tax department.
7. Obtaining Environmental Clearance under environment impact assessment(EIA) notifications of 2006
8. Clearance for diversion of forest land
9. Coastal Zone regulation (CRZ) under CRZ Notification
10. Wildlife clearance under Wildlife (Protection) Act,1972
11. Stack height clearance under Aircraft Act, 1934
12. Clearances required from Ministry of Defense
13. Clearances under Electricity Act,2003
14. Clearance from chief controller of explosives (CCE) to use explosives under Explosives Act, 1884 and Explosive Rules, 1973
15. Clearance to use groundwater in exploited blocks
16. Security clearance
17. Obtaining importer-exporter code

At the state/local government level, following clearances and approvals are required:

1. Approval of building plans by Municipal authorities and factory inspectorate
2. Licenses required from Chief Inspector of Factories under the Factories Act,1948
3. Permission to use water and power allocation
4. Consent to establish and operate and grant of emission and discharge from Pollution Control Board(PCB).
5. Registrations under labor laws such as Provident fund (PF) and Employees State Insurance (ESI).
6. Registration with VAT and professional tax authorities
7. Registration under Shops and Establishment Act.

2.4 *Labour Market*

Industrial Disputes Act, 1947 makes it difficult for the formal sector that employs more than 100 workers to retrench or lay off workers as such lay off/retrenchment requires prior permission from the competent government authority(as per Section 25N of the Act) which is politically difficult as trade unions inevitably oppose such moves. Section 25 G of the Act lays down the procedure of retrenchment. It provides that in the absence of any agreement between the employer and the workman in this behalf, the employer shall ordinarily retrench the workman who was the last person to be employed in the category of workman in which he was employed. In a modern open economy, the volatility and shifting nature of demand in the global market require a not too rigid labor market such as the one that exists in India[5].

2.5 Infrastructure

[5] To be sure, Indian companies have been downsizing its work force, mostly through voluntary retirement scheme. In 2007-2008 Jet Airways, a foreign company incorporated in London, retrenched hundreds of its staff.

According to a McKinsey & Company report, " Building India: Accelerating Infrastructure Projects" (2009), projects awarded in national highways , power and port sectors fell short by 30% than the planned targets in the first two years of 11th plan. This has aggravated India's chronic infrastructure deficit as result of which logistics cost have increased considerably, 13-14% of Indian GDP, considerably higher than the cost in United States(8%)(Chandra and Jain, 2008)[6].

In a recent study CII estimated average transaction cost in Indian ports[7] as Rs.7,437 (US$170) per TEU, 44.6% of which was ' unnecessary' cost incurred due to avoidably high dwell time in yard, pre-birthing detention and non-working time at berths. Time costs constituted 57.3% of the total transaction cost while real cost of service constituted only 36.4%. Real cost of use, which is the sum of port dues, berth hire and detention charges, constitute the smallest share, 6.3% of the transaction cost[8]. The average turnaround time in Indian Port is 3.6 days compared with just 1.5 days average in Southeast Asian ports. Consequently, an identical shipment of textiles to the United States from India costs 20% more than from Thailand and 35% more than China.

Indian Railways, a 150-year old network covering 40,000 mile, moves seven billion passengers and 830 millions of cargo a year. But its modernization has not kept pace with the growth of Indian economy; its tracks have remained too lightweight and locomotives too underpowered to haul more than 5,000 tons of cargo, compared with 20,000-ton capacities of trains in the United States, China and Russia. According to a recent New York Times report containers take more than two weeks time to travel 870 miles by rail from Mumbai to New Delhi from Mumbai[9]. The report states that in order to subsidize passenger travel, Indian railways charges (US) "$395 to move a ton of freight one kilometer- four times what American companies charge and twice as in China." [10]

2.6 Corruption

India ranks 85 among 180 countries in the Corruption perception index of Transparency International[11]. Transparency International India (TII)'s " India Corruption Study 2008"[12] has estimated that below poverty line(BPL) households spent over 883 crore paying bribe of which Rs.223 crore were paid by the poorest to avail 11 basic public services such as

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[6] The Planning Commission has planned to raise investment in infrastructure from about 5% of GDP to 9% by 2011-12 involving US $ 514 billion , 30% of which will be met from government budget, 40% from internal resources and market borrowings, and 30% shall come from private sector

[7] 95% of foreign trade by volume and 75% by value is routed through Indian sea ports

[8] " *Transaction Costs in Indian Ports*" TransCare Logistics India Pvt.Ltd./ Confederation of Indian Industries,2009.

[9] This time lag will be reduced drastically as the proposed Delhi-Mumbai dedicated freight corridor comes into being.

[10] New York Times report dated June 16,2010 titled " India's Clogged Rail Lines Stall Economic Progress"

[11] In a classic study Wade(1982) showed how the system of delivering irrigation water to farmers in southern India was structured to facilitate bribe collection by bureaucrats in the public works department.

[12] See http://www.transparencyindia.org

hospital, education and water that they are entitled to. Nearly two-thirds of BPL household could not avail of PDS, school education and electricity because they could not pay bribe or or use contact or influence to avail of service.[13] According TII's estimate, nearly Rs.80,000(US $1800) are paid annually by a single truck as bribes at toll plazas, check points, state borders while en-route.

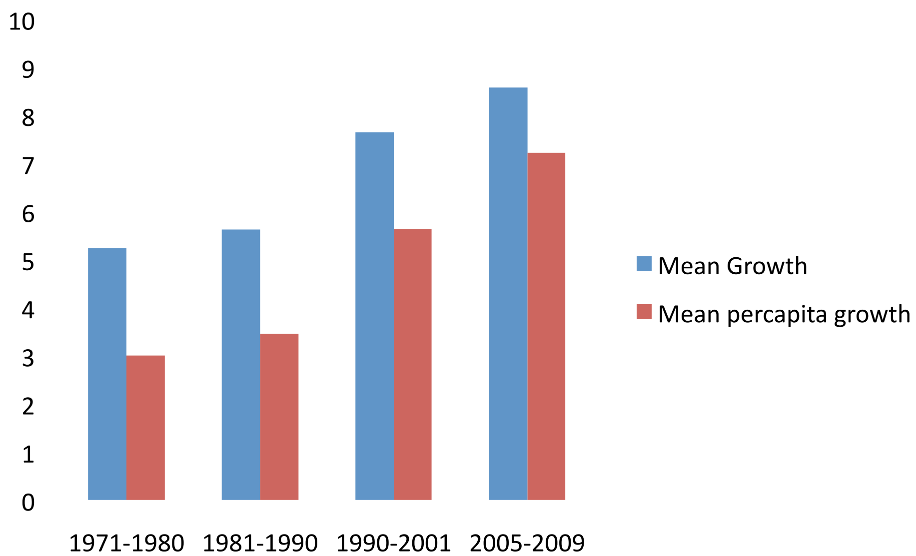
2.7 Tax Structure and Compliance Requirements

Domestic tax structure in India is fairly complicated with multiple taxes levied at the central and state government levels. The cumulative incidence of indirect taxes on goods is estimated to be 28% of the sale price without taxes in February 2010(CII, 2009). Table 2 gives a summary of India's present tax structure and compliance requirements. The proposed goods and services tax (GST), scheduled to come from next year, will subsume all major consumption taxes levied by the central as well as state government [14].

3.The Rise of India: A Profile

The following facts and figures clearly narrate India's rise as an economic power:

1. In the past two decades India's GDP has increased in real terms by four fold. In the current decade the average annual growth in real terms has been 7.65% on the back of 5.62% average annual growth in 1990s decade. In the past five years, average annual growth was 8.1%[15] . Fig.1 shows how mean annual growth and per capita growth has increased successfully in the last four decades while Table 3 shows the trend of India's stable and sustainable growth over the last four decades.



[13] See the Press Release of Press Information Bureau, Government of India, dated June 28,2008 2007. Available in http://pib.nic.in/release/relaese.asp? Relid=39894.

[14] For a detailed account of the proposed GST, see the First Discussion Paper on Goods and Services available in the Finance ministry, Government of India websitehttp://finmin.nic.in/GST/. For analysis of the implications on foreign companies see Ray (2009b).Also see Ray (2009a) for GST's implications on interstate trade.

[15] See Table 3 for historical GNP growth and per capita growth figures along with estimates of mean annual growth and standard deviation over the last four decades.

Fig.1 Mean GNP Growth and Per Capita Growth by Decade

2. Domestic saving increased over the last four decades from the mean annual saving rate of 17.5%of GDP in 1988-89 to 31% in2007-08; gross fixed capital formation also increased during the same period from 16.13%% to 28.62%. The trends in domestic savings and investment rates since 2000-2001 is shown in Fig.2 while decade wise historic trends of annual average domestic savings and domestic capital formation rates in each of last four decades are shown in Fig3. The sectoral share in savings is dominated by household sector, 70% followed by private corporate sector, 26%. In domestic capital formation private corporate sector contributed 36%, household sector 34%, and public sector, 26% (Source: Economic Survey 2009-10; Table A10 and fig.1.2 at page 10)

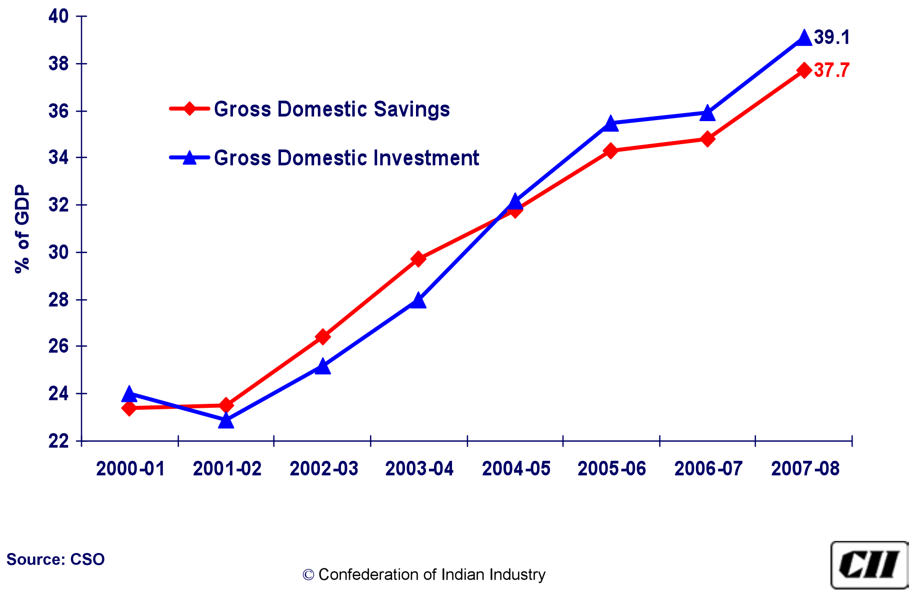


Fig.2 Domestic Saving and Investment Rates in the Current Decade

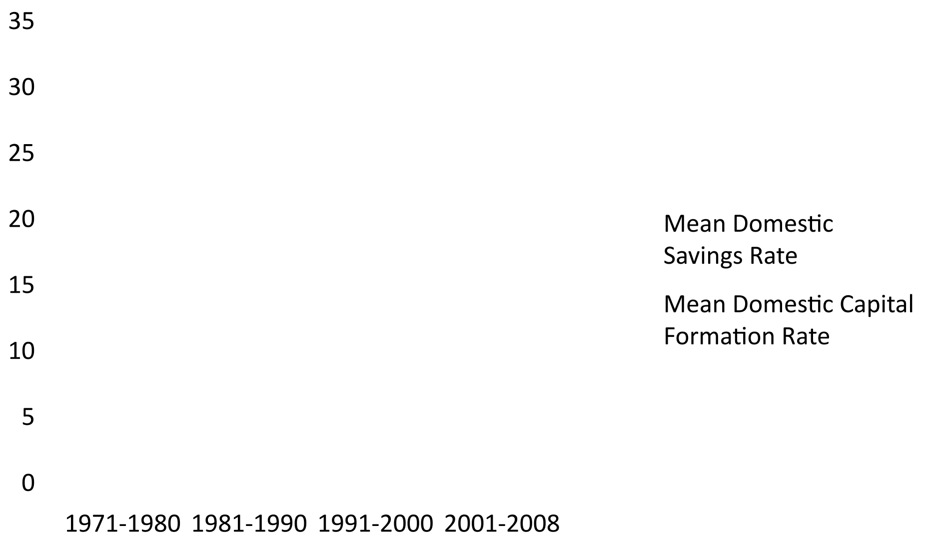


Fig.3: Mean Growth in Domestic Saving and Capital Formation in Four Decades

3. Domestic private consumption dominates the demand side composition of GDP over the last five years has been around 59% , government consumption share being around 11%, investment's share around 35% with net exports being always in the negative(Economic Survey 2009-10, table 1.4, page 6).
4. The primary sector grew at an annual average rate of 3.2% only while manufacturing sector grew at 9.6%. Major service sectors grew at still higher rates: for example, trade, hotels, transport and communication sectors grew at 10.6%; and financing, insurance ,real estate and business services grew at 12% (Source: Economic Survey 2009-10 table A7).
5. Net sales growth of corporate manufacturing sectors increased from 14.5%in 2003-2004 to 26.6% in 2008-09, while the growth in services sector(other than financial services) has been more than 20% throughout the period (Sources: CII, 2010)
6. Average annual productivity(total factor productivity) growth in industry has increased from -1.2% in the period 1997-2001 to 1.9% in 2002-2004; the average productivity growth in services during the same period increased from 2.8% to 3.0. Since 2003about 50% of the jump in growth, from 5%-6% to nearly 8%, is attributable to productivity growth(Goldman Sachs, 2007, pp3- 6).
7. India's consuming class whose annual income in 2005-2006 prices is in the range of US $ 15,000- US 30,000 is estimated to have grown from 13.8 million households in 2005 to 24.9 million households (average household size is 5.38) in 2010. In the next five years this population is estimated to grow to 39.8 million households and they are expected to drive 200% growth in telecom subscribers, 150% in car sales, 100% in power generation, 100% in healthcare services, 80% in processed foods, 75% in colour TV sales.(Source:CII,2010)
8. According to World Economic Forum's Global Competitiveness Report 2010, India holds strategic competitive advantages in market size and financial market sophistication. According to the Report, its overall rank[16] of 49 among 134 countries shall increase considerably once it implements its planned investments in infrastructure and improve its fiscal deficit and inflation parameters.

[16] India's rank is better than other BRIC countries excepting China.

9. The Global Competitiveness Report, 2009 shows that India's rank in availability of scientists and engineers was 3 compared with China's 52, Russia's 34, Brazil's 57; its rank in domestic market size is 4, in foreign market size 5, in intensity of local competition 11, and in extent of markets dominance 19; in quality of Math and Science education, 17 (CII, 2010).
10. With median age of 25.3 years compared with China's 34.1, USA's 36, and Japan's 44, and 78% of its population below age 40, and average labour costs lower than other emerging economies including China, India holds a bright prospect for future growth (Sources: Global Demographics and CII, 2010).
11. India has a sound financial system with capital adequacy ratio of 13% in 2008, well above Basel II norm of 8%. (Source: RBI)
12. According to the Nielson Global Consumer Confidence Study, 2009[17] India tops consumer confidence globally; and for the fourth time in five years, India is the most attractive country for retail investment according to A T Kearney Global Retail Development Index, 2009(CII, 2010). According to IMD's Global Competiveness Report[18], business efficiency indices in India have been better than those in China during the last five years.

4.Factors Driving India's Growth Momentum

What explains India's growth at increasing rates over the decades? In order to better understand what factors may be at play, it is necessary that we look at the disaggregated state level data captured in Tables 1 and 4.

4.1 *Growth Divergence among States*

Per-capita net state domestic product grew in this decade at the slowest pace in the poorest second and third states of Madhya Pradesh and Uttar Pradesh while highest growth is witnessed in the richer states of Gujarat and Andhra Pradesh whose ranks in poverty reduction and overall HDI are also relatively high. Five states in the lowest range in per capita income, decline in poverty incidence and HDI ranks grew at lowest range of rates while five richest states(excepting Maharashtra) with higher ranks in poverty decline, namely, Kerala, Punjab and Haryana, Gujarat, Andhra Pradesh and Tamil Nadu were the states that exhibited highest growth range.[19]

In 1990s also the same trend is observed. Studying 15 major states, Datt and Ravallion(2002) found that poorest states in 1980s grew at the slowest pace in 1990s. An important finding of this paper is that growth in India has been higher in states which exhibit lower growth elasticity of poverty decline which explains why growth has not significantly reduced poverty incidence in India.

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[17] http://in.nielsen.com/news/20100725.shtml

[18] http://www.imd.ch/research/publication/wcy

[19] Among the poorer states, Bihar and Orissa grew at high rates particularly in 2005-06 and 2006-07 mainly because these mineral rich metal producing states benefitted from very high price rise following huge increase in demand in China and India. Maharashtra, the second richest state in per capita output term, was laggard in in poverty eradication during 1960-2000 and growth during 2001-2007.

Looking at the decline of poverty incidence per Datt and Ravallion(2002) incorporated in Table 4, it is seen that during 1960-2000 poverty incidence declined the most in Kerala at an annual rate of 3.26% followed by Punjab and Haryana, 2.96%, Andhra Pradesh, 2.38%, and Gujarat 2.02%. The lowest decline in poverty was in Assam, 0.06%, Bihar 0.32%, and Madhya Pradesh, 0.80%, Uttar Pradesh 1.11%. Again these are the states which grew at the slowest pace and their human development indictors also improved the least during this period. The scatter diagram, Fig. 4, clearly brings out the correlation between poverty decline during 1960-2000 and the annual compounded growth rate in state domestic product (SDP) per capita between 1999-2000 and 2006-07. States with higher ranks in poverty decline and growth have clustered in the north eastern quadrant while lower ranked states in poverty decline and growth have clustered in the south western quadrants of the diagram. West Bengal stands out as a state in the south eastern quadrant suggesting low poverty decline elasticity of growth.

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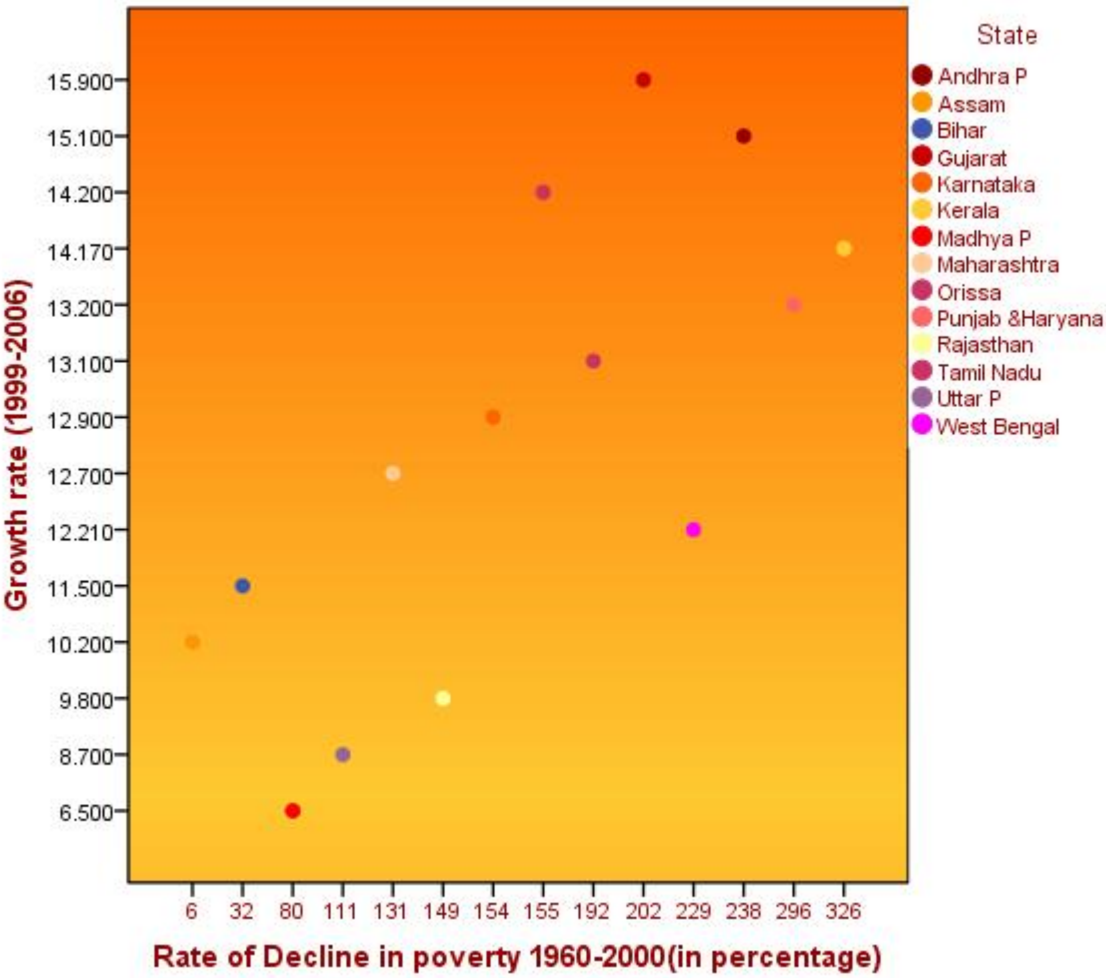

Fig.4: Poverty Decline and Growth

This correlation has an important bearing in understanding India's democracy mediated growth dynamics.

4.2 Poverty Reduction and Growth: Explanation of the Link

Ray (2001) shows two distinctly different endogenous growth trajectories for two different economies: a rich economy that has a threshold level of knowledge capital and the poor economy that does not have such capital. The former grows at a sustained rate without exhibiting diminishing returns to such capital while the latter exhibits diminishing returns and eventually gets trapped to the steady state capital level. In a coordination game framework Ray 2009 shows that economies can exhibit complementary accumulation of knowledge-capital and social infrastructure capital since such investments give higher profit return to private capital and also higher tax return to public authorities who initiate the move for higher investments on social infrastructure capital. Since returns to such investments are higher in rich economies with higher levels of knowledge capital, rich economies may continue to grow at higher rates. This growth dynamics is sustained in the long run if access to such capital is widened to include marginal groups.

India's growth story broadly follows this dichotomous growth dynamics in its richer and poorer states. Comparatively richer states where poverty declined the most provided higher access to public goods and grew relatively faster than poorer states which exhibited neoclassical growth dynamics with diminishing returns to capital and therefore could not accumulate threshold levels of such capital. Maharashtra could not grow at high rates as it could not provide higher access to capital to its marginal groups which is evident from its lower level of decline in poverty incidence. West Bengal grew at lower rates as its capital accumulation was lower than high growth states such as Gujarat, Andhra Pradesh, and Tamil Nadu.

The demand side link of growth with poverty reduction is that reduction in poverty incidence and improvement in human development indicators generate incremental demand for goods and services for the production of which excess capacities already exist. For example, they may demand more education, transportation, telephonic and other communication service, visits doctors for treating their ailments more frequently apart from demanding more transistors, bicycles, TVs, and cellular phones. Since some of these sectors such as education and health exhibit increasing returns to scale while telecommunication services are characterized by demand side externalities typically associated with network services, the effect of increased demand on growth of these sectors may in fact be multiplied. Sustained growth in private consumption of goods and services[20] in rural India lends credence to such demand side link.

Another explanation of the link is that states with better human capital endowment and urban infrastructure are in a better position to appropriate the benefits of India's ongoing economic reforms programs since the middle of 1980s. This has actually happened in foreign direct investment (FDI). Liberalization of India's FDI regime has resulted in FDI flow of about US $ 120 billion in the last ten years, mostly in states with higher per capita income and human development indices such as Maharashtra, 17.78% in Delhi and Haryana, 6.49% in Karnataka, 6.20% in Gujarat, 5.36% in Tamil Nadu, and 4.12% in Andhra Pradesh[21].

4.3 Political-economic Dynamics

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[20] In the last five years per capita private final consumption expenditure grew at an average rate of more than 6% (see Table 1.3, page 5 , ES).

[21] This is evident from the FDI inflows registered in Mumbai, New Delhi, Bangalore, Ahmedabad, Chennai and Hyderabad.

Decline in poverty incidence and improvement of human development indicators can be attributed to at least three major political movements in democratic India. The first movement is the bank nationalisation program in 1969 followed by the *gharibi hatao* (removal of poverty) programs of the newly formed Indira Gandhi led Congress(I) party in 1971, special components of which were earmarked for the disadvantaged groups such as the Scheduled castes, Scheduled tribes, women and minorities. Bargess and Pande(2005) found that large state-led bank-branch expansion program following bank nationalisation was associated with poverty reduction in India. Basu und Maertins(2007) attributes higher domestic savings to bank nationalisation.[22]

The second major political movement is the rising political power of India's dalit and other socially backward population. The movement started with Constitutional provisions for proportional reservation of seats in legislatures, civil services, and academic institutions for the scheduled castes, scheduled tribe and other socially backward caste population. The movement got momentum in the second half of 1980s as the newly established Janata Party led government of India headed by V.P. Singh decided to implement recommendations of Mandal Commission for backward castes in order to establish its sphere of political influence among these large social groups.

Studying investments on rural infrastructure (such as primary schools, piped water, electricity connections etc.) over 1970s and 1980s [23] and their access to different categories of population using data on public goods and social structure from parliamentary constituencies in rural India, Banerjee and Somanathan (2007) found evidence of considerable equalisation of access in accordance with national policies and political agendas of universal access to basic amenities and public facilities. The scheduled caste population who were better organised politically got higher access than the scheduled tribes who were not so well organised politically.

Since backward caste population are also now better organized politically as parties representing these groups have been in power in the two largest states, Uttar Pradesh and Bihar, it is reasonable to conclude that the access to public goods are now more equitably distributed than ever before. The formation of new states of Chhattisgarh, Jharkhand and Uttarakhand with predominant tribal population is expected to increase access of tribal population to public goods and services.

The third major political movement is common minimum program of the political alliance of the Congress parties with leftist parties, which led to National Rural Employment Guarantee Act, 2005. This Act guarantees at least 100 days wage employment in every financial year to every households in rural areas whose adults volunteer to do unskilled manual work. Two recent legislations, Right to Education Act, 2009 and the Women Reservation Bill, 2010, have laid the foundation for India's rapid socio-economic transformation in coming years. The former makes free and compulsory education a fundamental right for all children between the ages of 6 and 14 providing for 20% quota in private schools for the

[22] For a discussion on the political economy of growth in India during 1970s and 1980s, see Basu and Maertins(2007).

[23] Primary schools were available in 75% of all villages in 1991 as against 53% in 1971; electricity connections increased from 18% to 70%, and there was nine fold increase in access to piped water over these two decades .

disadvantaged groups. The latter provides for reservation of seats for women 33% seats in Union and states legislature.

5.Conclusion

India's democratic political dynamics have been leading India to a stable, inclusive and sustainable growth path in the last four decades. This growth process has generated win-win outcomes for the private as well as public capital as evident from the firm level study of Alfaro and Chari (2009) who studied the balance sheets of individual firms in the organized sector. They found that assets, sales and profits of firms, both traditional domesticprivate and public sector firms incorporated before the reforms era beginning in the mid 1980s, and also foreign firms who came after the onset of reforms, have grown strongly during 1985-2000.

The prospect for India's future growth is brighter with growing reservoir of educated workforce, planned investment of about US $500 billion in infrastructure by the end of the current plan period and the vastly improved business climate following the ongoing economic reforms program of Indian governments[24].Two recent examples of such economic reforms program are the e-BIZ project and the Unique Identification Number Program(UNIP). The first mentioned initiative is on course to take India to a new height in e-governance of G2B services. In the pilot project phase the portal has already integrated 29 such services involving clearance, approval, and regulatory compliance requirements for businesses at the central state and local governments in 5 selected states. UNIP will strengthen free market institutions and at the same time improve governance, accountability and transparency as it will effectively monitor public funded programs including those targeted for the poor and vulnerable.

India holds an awesome potential for stable and sustainable growth. There are huge opportunities for growth in sectors such as FMCG, consumer durables, automobiles, petrochemicals, generic pharmaceuticals, food processing, power generation and distribution sectors, highways, ports, airports, civil aviation, logistics, hospitality services, telecommunication, and banking and insurance services. India's stock markets reflect these possibilities as evident from the fact that BSE Sensex index doubled from around 9,000 in March 2009 to about 18,000 in the course of the year and it has been remaining around that level till now. Favorable business climate is also reflected in the survey of Japanese firms in India by JETRO[25] which revealed that their revenue and profits came entirely from domestic market; they are in expansion mode; none of them required to retrench their workforce; and none is considering shifting their business to other countries.

India has been witnessing a democratic political process mediated growth mechanics that lends legitimacy, stability and sustainability to its growth process. It provides the first real life example of the kind of inclusive growth model that development experts and institutions have been advocating for to counteract the adverse effects of globalisation on the poor. India has a long way to go and along the way private capital must focus on stable and sustainable growth rather than maximising growth in the short run. Innovative people centric business strategies such as India Tobacco Company(ITC)'s e-choupals and those envisaged in Prahlada(2004)

[24] See Ahluwalia(2002) for a brief account of India's economic reforms initiatives in 1990s.

[25] http://www.jetro.com

can yield sustainable dividends in the long run and create brand value as well as goodwill crucial for sustained business growth in India over a long period of time.

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Table 1: Selected State-wise Indicators

State	Life Expectancy		Literacy rate		Head Count		Mean HDI Rank	Rank in Poverty Alleviation	Rank in Growth	Rank in
	female	male	female	male	Rural	Urban	(1981-2001)		2006-2007)	SDP
Andhra Pradesh	63.5	61.2	51	71	29.2	17.8	9	3	2	7
Maharashtra	66.6	64.1	68	86	42.9	18.2	3	10	8	2
Gujarat	62.9	60.9	59	81	32.5	14.7	6	4	1	3
Tamil Nadu	65.1	63.2	65	82	38.5	20.9	4	6	6	5
Punjab &Haryana	66.7	65.2	60	77.5	11.6	9.2	2	2	5	1
Kerala	75.9	70.4	88	94	19.5	13.9	1	1	4	4
Karnataka	64.9	61.6	57	76	37.9	21.4	7	8	7	6
West Bengal	63.6	62.2	60	78	25.1	15.5	8	5	9	8
Orissa	57	57.1	51	76	43.5	15.2	10	7	3	10
Rajasthan	60.1	59.1	44	76	23	18.3	11	9	12	9
Assam	57.1	56.6	56	72	35.4	13	12	14	11	11
Bihar	58.4	60.4	35	62	48.6	26.7	15	13	10	14
Madhya Pradesh	55.2	55.6	51	77	36.6	18.5	13	12	14	12

Uttar Pradesh	56.9	58.1	44	71	28.7	21.7	14	11	13	13
ALL INDIA	61.8	60.4	54	76	32.9	18.1				

Table 2: Tax Structure and Compliance

Sl. No	Nature of Tax	Authority	Tax Rate	Compliance	Remark
1.	Personal Income Tax	Central government under IT Act,1961	i)NIL upto annual income of Rs. 160,000 for men, Rs. 190,000 for women, and Rs.240,000 for senior citizens; ii)10% for Rs.160001-Rs.500,000; iii)20% forRs.50,001-Rs.800,000; iv) 30% for above Rs.800000 Plus Education cess of 3% has to be paid on the net tax payable	GetPermanent Account number from UTI services, and file annual return by July 31 of the following year	Electronic filing of return allowed; Double Taxation Treaty Agreement (DTAA) between India and respective foreign countries.
2.	Corporate Income Tax	Central Government under IT Act,1961	Domestic company: 30% Foreign Company: 40% Plus Education cess of 3% has to be paid on the net tax payable	Permanent account number; Advance tax at quarterly intervals; annual return by September 30 of the following year	Electronic filing of return allowed; Double Taxation Treaty Agreement (DTAA) between India and respective foreign countries
3.	Withholding Tax	Central Government under IT Act,1961	10% in general; 2% for contract	Get Tax Deduction Account Number;Deduction/deposit on	Electronic filing of return allowed

				monthly basis by 7th of next month; Issue TDS certificates annually and salary TDS certificate quarterly	
4.	Wealth Tax	Central Government under Wealth Tax Act,1961	1% of the amount exceeding Rs.30 lakhs	Annual payment and filing of return by September 30 of the following year	
5.	Dividend Distribution Tax	Central Government under IT Act,1961	15% of the amount declared, distributed or paid	Payment within 14 days from the earliest date of declarationwq	
6.	Central VAT on goods	Central Government under Central Excise Act, 1944	Basic rate: 10% Plus Education cess of 3% of the tax payable	Payment from CENVAT credit account and Personal Ledger Account; Monthly return by 20th of next month; small scale units can file quarterly return	CENVAT paid on input goods and services can be used for payment of CENVAT on final goods.
7.	State VAT on goods	Respective State Governments under their State VAT Acts.	Ranges from 4% to 20%	Monthly/quarterly payment depending on turnover value; submission of return by 25th of next month/quarter	Credit of stateVAT on input goods can be taken for payment of duty on the transaction price of value added goods
8.	Service Tax on specified services	Central Government under Chapter V of Finance Act, 1994	10% Plus Education cess of 3% of the tax payable	Monthly payment by the 5th of next month; half yearly return by 25th of the month following the particular half year.	Credit of CENVAT paid on input goods and service tax paid on input services are allowed.
9.	Central Sales Tax on inter-state sale of goods	Central Government under Central sales Tax Act,1956	2%	Monthly/quarterly payment depending on turnover value; submission of return by 25th of next month/quarter	No credit allowable.
10	Customs duty	Central government under Customs Act, 1962	Peak import duty rate is 10%(basic duty); CVD equivalent to applicable CENVAT rate;	Bill of entry to be filed (on line or through service centers) in the prescribed. proforma Duty	Dwell time in assessment and customs clearance to a few hours.

			Plus Education cess of 3% on the total tax payable	can be paid on line with designated banks	
11.	Professional Tax; Taxes on Lottery,betting and gambling; Octroi; Entertainment tax; Luxury tax; property tax	Respective State governments under respective Acts; property tax levied by respective municipalities	Different from state to state. Some states do not have many of these taxes	Professional tax is deducted at source by employerand paid to state government account monthly	To be subsumed under the GST

Table 3 : Growth and Standard Deviation Since 1971-72

Year	GNP growth(1999-2000 prices)		Per capita growth	
1971-72	1		-1.8	
1972-73	-0.3		-3.1	
1973-74	4.7		2.2	
1974-75	1.3		-1.3	
1975-76	9.1		6.9	
1976-77	1.3		-1.2	
1977-78	7.6		5.3	
1978-79	5.5		3.2	
1979-80	-5		-8.2	
1980-81	7.2		5	
Mean 1970s	3.24	Standard deviation 4.33646	0.7	4.405678
1981-82	5.5		3.5	
1982-83	2.6		-0.1	
1983-84	7.8		5.8	
1984-85	3.8		1.3	
1985-86	4.2		1.8	
1986-87	4.3		2	

1987-88	3.3		0.8	
1988-89	9.8		7.9	
1989-90	6.1		3.9	
1990-91	5		3.1	
		Standard Deviation:		
Mean 1980s	5.24	2.185406	3	2.419826
1991-92	1.4		-1.1	
1992-93	5.4		3.4	
1993-94	5.9		3.5	
1994-95	6.5		4.4	
1995-96	7.3		5.2	
1996-97	8.1		6.2	
1997-98	4.5		2.3	
1998-99	6.7		4.6	
1999-2000	6.4		4.3	
2000-01	4		1.8	
Mean 1990s	5.62	1.924578	3.46	2.063546
2001-02	6		3.7	
2002-03	4		2	
2003-04	8.5		7	
2004-05	7.5		5.6	
2005-06	9.5		7.8	
2006-07	9.7		8.1	
2007-08	9.6		8	
2008-09	6.7		5	
2009-10	7.4		5.7(estimated)	
Mean(2001-02 to 2009-2010)	7.655556	(Std. Dev: 1. 912281)	5.628889	(2.236707

Mean(2005-06 to 2009-2010) 8.58 7.225

Table 4: Poverty Decline and Growth

State	Population	SDP per capita	Poverty Decline	Growth in 2006-07	Growth Rank	Poverty Decline
		(Rs.)	1960-2000(%)	(%)	2006-2007)	(1960-2000)
Andhra Pradesh	76	35,864	2.38	15.1	2	3
Maharashtra	97	47,051	1.31	12.7	8	10
Gujarat	51	45,773	2.02	15.9	1	4
Tamil Nadu	62	40,757	1.92	13.1	6	6
Punjab &Haryana	45	51,712	2.96	13.2	5	2
Kerala	32	43,104	3.26	14.17	4	1
Karnataka	53	36,266	1.54	12.9	7	8
West Bengal	80	31,722	2.29	12.21	9	5
Orissa	37	23,403	1.55	14.2	3	7
Rajasthan	56	23,933	1.49	9.8	12	9
Assam	27	21,991	0.06	10.2	11	14
Bihar	110	11,135	0.32	11.5	10	13

Madhya Pradesh	81	18,051	0.8	6.5	14	12
Uttar Pradesh	175	16,060	1.11	8.7	13	11
ALL INDIA	1,027	33,283		12.73	33,283	

Revival of The Golden Bird – The Rise of India

Affiliation

Name –	R. Krishna Priya
Affiliation –	Department of Management Science, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad – 431 005, (Maharashtra), India
Hand Phone -	+91-9372046427, +91-9860078836
Email ID -	kpriya.hr@gmail.com

Revival of The Golden Bird – The Rise of India

R. Krishna Priya, *Department of Management Science, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, (Maharashtra), India*

Introduction

The South Asian Republic of India has witnessed a spectrum of annexations, rulers & hence, imbibed a culture of tolerance (sometimes for good & sometimes to the advantage of others). This culture of tolerance was bred right from its discovery by the Aryans at the banks of the River Indus (*Sindhu)*.

This civilization then has witnessed a series of rules right from the Mughal conquer to the British Era. My papers hereby understand the pulse of Indian revival from the poverty-stricken nation in 1940s-50s to today's Economic Superpower in the making with special reference to Knowledge Economy.

India – today is perceived to be a hub of Service Industry & a forerunner in the Knowledge Economy is under preview.

The Economy of India is said to be the Eleventh Largest Economy by Nominal GDP[i] & Fourth Largest by Purchasing Power Parity (PPP)[ii] on the Planet & hence my papers to understand the voyage of this country to its revival.

India – The Golden Bird

Bharat or Hindustan as addressed, India was said to be a Golden Bird in all its emanations – the reason being, India was the economy of rich kingdoms, intellectual wealth amongst the pupils of the states, knowledge - discoveries & above all the natural resources in the sub-continent.

Few of the concrete reasons as to why India was addressed as the Golden Bird is:

1. Revenue of Akbar's Mughal Empire in 1600 was £17.5 Million, whereas that of Great Britian was £16 Million in 1800[iii],
2. Aurangzeb possessed gold & jewels worth £4 Million[iv],
3. The Peacock Throne or *Takht-e-Tavous* dearly called was estimated of the value of ₹. 4 Crore to ₹. 10 Crore[v] (i.e. tentatively 160 Million $ then).
4. Kohinoor – of its time the largest diamond in the World was mined in India (Golconda, Hyderabad State of India)

So from the concrete evidences enlisted above, we can find that India was one of the forerunners of being the *numero-uno* Economy in the world.

Let, me now illustrate a diagram wherein we could notice the clear distinction of Indian Economy as compared to the other World's major Economies; since the year 0 A.D.

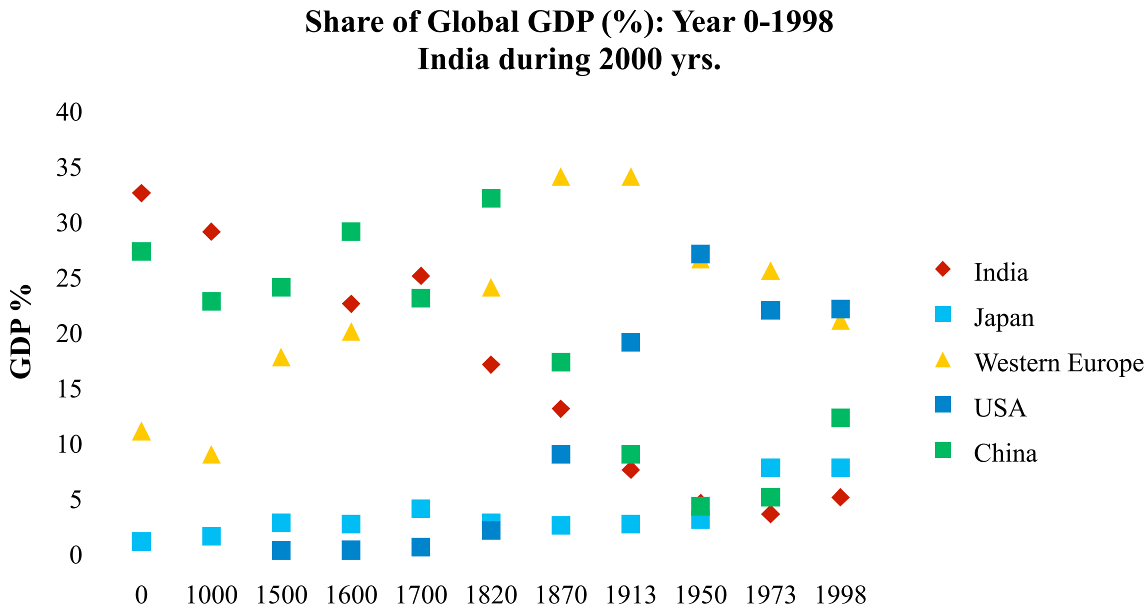

Figure 1: Comparison of India with other Economies[vi]

From the above resource, We can draw – India contributed to almost 1/3rd of the World's GDP in the First Century. By the end of 17th Century, India derailed to a considerable loss (may be cause of the various annexations, right from the Mughal to the British).
There was a steep decline till its Liberation in 1947 – cause the plunder from the Indian Sub-continent was credited to the British Crown's Treasury. On 15th August 1947, India was left with a solace of freedom & poverty stricken-country with many hungry mouths to feed.
With the advent of various 5-Year Plans & progressive moves, India could rise with a steady growth-rate.
Now, India could gather a GDP of 8.3% in 2009 inspite of the bad economic scenario for the World at large.
The recent May – 2010 Statistics; India's GDP Growth released for the last quarter of 2009-10 turned-out to be robust; it showed a record growth of 8.6%[vii].

Archetype – Indian Economy:
The common occupation of the Indus Valley Civilization was that of Lumbering, Agriculture & domestication of animals.
Evidences of one of the first in the World Urban Development initiatives are from the Indus Valley Civilization[viii].
These riches magnetized the foreign merchants to the land.

- Trade System – India was then governed by '*Barter'* Transaction system[ix]. This system ensured complacent economy wherein the value of the artifacts or produce was determined mutually & to the homogeneity of the Economy.
- Minting – Then came the era wherein business system took a U-turn; some for the reason of having foreign merchants influencing the Indian trade transaction.

- Division of Labour – The much criticized *'Sreni'* or Caste System acted as a technique for Division of Labour with much stress on judging one's competency on the ancestral heritage.

With this rich heritage of balancing the Economy, the traditional Indians were one amongst the many folk that had developed one of the best Financial Systems of those times. This was achieved by a much self-reliant closed Economy.

With this self-reliant Economy in place, many of the foreign nations were attracted to India to establish trade with India.

Bharat – India in shackles – The British Era

The advent of East India Company meant many improvements for India as nation, but it fell into shackles of Wealth-drain, Slavery & more importantly losing its individuality as a Republic (of Some united kingdoms).

The Aftermath was –

- Revamping of Tax System (to their benefit),
- Created barriers between communities in order to safeguard their position,
- Bankrupted the indigenous handicraft & cottage industries,
- Processed semi-finished goods at Britain & ordained heavy duties for the finished product at India,
- Created India as a market of the goods produced at Britain,
- Plundered Indian Wealth of Heritage.

An estimate reveals that India's share in World Income fell from 22.6% in 1700 AD to merely 3.8% in 1958[x]. The Study was a product of the efforts of Dr.Maddison of the Cambridge University.

The Colonial Era also bestowed a well-structured Education System, Railway System, Legislations (in certain aspects) & tried to eliminate certain evils.

The British Imperialism has definitely created a sense of Patriotism, a culture of Education, infrastructural developments. And hence, the stay of British in India is a controversial debate, yet there are brighter aspects & a shady effect on the Indian Economy.

Developing India – Setbacks & Success

India was bleeding with anguish of Partition & a mammoth challenge to rebuild the country back to richness. The Indian Independence meant mixed feelings – the joy of Freedom & the challenge to feed the hungry mouths; to create a holistically progressed country.

Some of the challenged that lied in front of the nation was –

1. Food for the huge population,
2. Revamping the Economic, Social & Political Scenario,
3. Harnessing the unskilled, semi-skilled & skilled labour for building progressive India,
4. Focus on Scientific Advancements & Social stability.

With these challenges in place, India made some of the below stated moves to rekindle the spirit of Progressive Economy for the nations –

1. Moves for Green Revolution,
2. Setting up of Five-Year Plans,
3. Restructuring the Educational System & Health Management,
4. Creation of Opportunities for the deserving & the learned,
5. Creation of a Social System that extended support to the deprived communities & encouraged their entry into the main-stream.

Rise of India – Dividend

As scripted rightly by Infosys's Co-founder in his book *'Imagining India'* (Nandan Nilekeni) has proposed an term called 'Population Dividend'.

Population Dividend or Demographic Dividend is rise in the rate of Economic Development by virtue of rising share of Working age-group / Productive Population.

India is steadily growing on its Economic Parameters; let us now delve upon the steady growth the nation in the past few years (as detailed by World Bank Statistics):

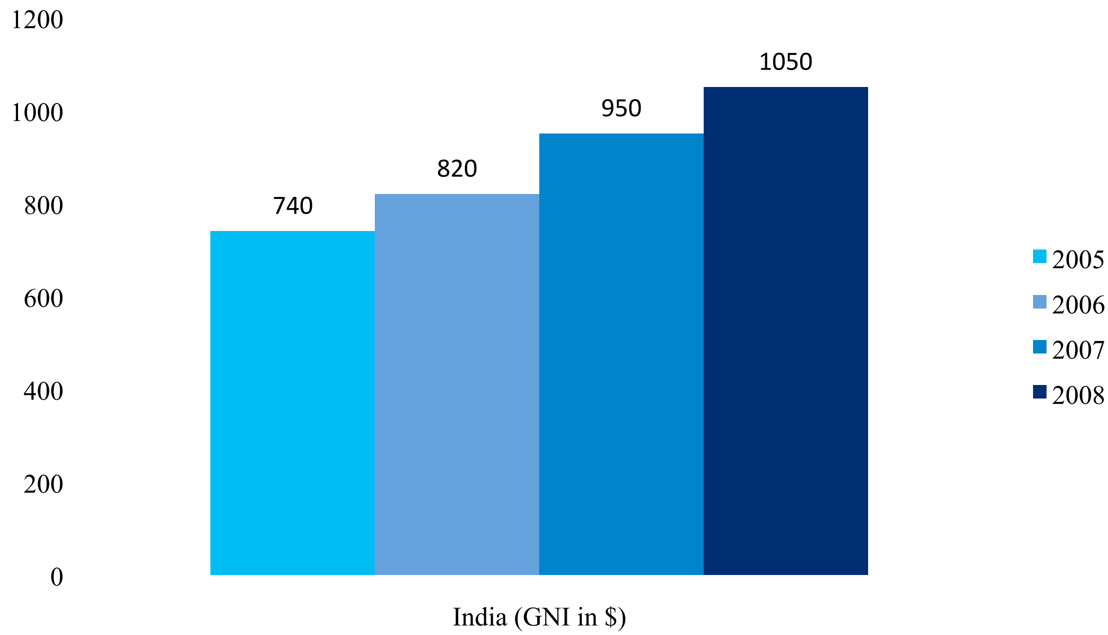

Figure 2: Gross National Index of India (2005-2008)[xi]

In the recent past, India had flown fast towards the Economic Success – thanks to the advent of Knowledge Economy in this decade. India is due to this Knowledge Revolution in India coupled with Infrastructural advancements, educational self-sufficiency & research activities in the nation.

My later part of the papers focus on the aspect of Knowledge Economy in India & where does India stand on its parameters.

The Phenomenon of Knowledge Economy

Over the past two decades, India has moved away from its former *dirigisme* model and become a market-based economy[xii]. This process started in the mid-1980s and gathered substantial momentum at the beginning of the 1990s.

This momentous growth has been a product of India's shift from Manufacturing-focussed industrial set-up to a more service-oriented economy. This intangible-service based economy has propelled India to be an active part of Knowledge Economy. Let us now define, Knowledge Economy for making the whole concept more palatable & give our research a direction.

The World Bank Institute (World Bank's Learning Wing) offers a formal definition; viz.

"… an economy that creates, disseminates & uses knowledge to enhance its growth & development.[xiii]"

A knowledge economy uses data as it raw material and transforms it using technology, analysis tools, and human intelligence into knowledge and expertise.

Knowledge Creation Process is a 5-Stage process starting from Crude Data – Information – Insight – Knowledge – Expertise. When the process achieves the stage of an expertise, Knowledge is converted into something of value & can create value.

In practice, three main operational approaches are propounded to define KE; lets enumerate them–

First theory focused more on the inputs –

The first emphasized on the **'inputs'** & focussed more on the skill proficiency or operational R&D Excellence,
The second emphasizes on the **'outputs'** & the heart of this definition are the products of the KE & typically focused on nature of goods & services & to what extent knowledge is embedded in that product.
The third approach tries to identify the more-broadly based of indicators – **'scoreboard'** of the whole KE.

1st Approach: Inputs-approach
This approach typically uses 'feeds' as a determinant to identify KE – it says the skills, knowledge or human capital actually define the nature of an economy – whether its KE or not.
The European Commission (2000) has identified the proposrtion of workforce qualification as a benchmark to label a Knowledge Economy.

2nd Approach: Knowledge-intensity & knowledge-based outputs
OECD (2003) has attempted to define 'Technology & knowledge-intensive industries' as 'high technology' industries based essentially on R&D. It also includes 'knowledge-intensive knowledge industries' that is based on the knowledge & skills-based work.

3rd Approach: Scoreboards
OECD's Scoreboard approach defines almost 200 indicators for identifying a KE. Indicators attempt to provide trends in knowledge-based economy & they cover four key areas – the creation & diffusion of knowledge, the information society, economic globalization & productivity-economic structure.
This scorecard approach takes into consideration various aspects of an economy, like Annual GDP, Human Development Index, infrastructural development, literacy & few other indicators.

Knowledge Economy Scorecard - India & China

Figure 3: Basic Knowledge Economy Scorecard for India, China & United States[xiv]
Comparison Group: All   Type: weighted   Year: KAM 2008

The above radar demonstrates a comparative analysis of India & China on parameters of Knowledge Economy.
These two economies on the forefront of Knowledge Economy has been near competitors of the parameters of Knowledge Economy

Pillars to Knowledge Economy

Creating Knowledge Economy is a voluntary process, whose substratum is the four pillars enlisted below. These aspects speak about broadly the infrastructural availability & skills availability – these two form the actual basis of a knowledge economy which is also represented in Figure 2 above.

Evolution of a KE is primarily based on the concept of understanding the strengths & weaknesses of a country & that of a competitor. These have to be further articulated to the knowledge – skills & potential of its people to enhance the success factor of that specific economy.

There are four pillars to KE[xv], lets understand them –

Pillar 1 – Economic & Institutional Regime
This provides for incentives for the efficient use of existing & new knowledge & flourishing of entrepreneurship.

Pillar 2 – Education & Skills
People should be imparted with education & skills that empower them to exploit, use & share it well.

Pillar 3 – Information & Communication Infrastructure
A dynamic infrastructure to facilitate & propel effective communication, dissemination & processing of information.

Pillar 4 – Innovation System
Country's Innovation Centres - educational institutes, R&Ds, Organizations etc. must be capable of tapping & assimilating growing stock of knowledge & adapting it to local needs & creating technology.
According to the World Bank's 2008 KAM Index, India is steadily on a progression with its current score of an average 3.5 in each of the pillars.

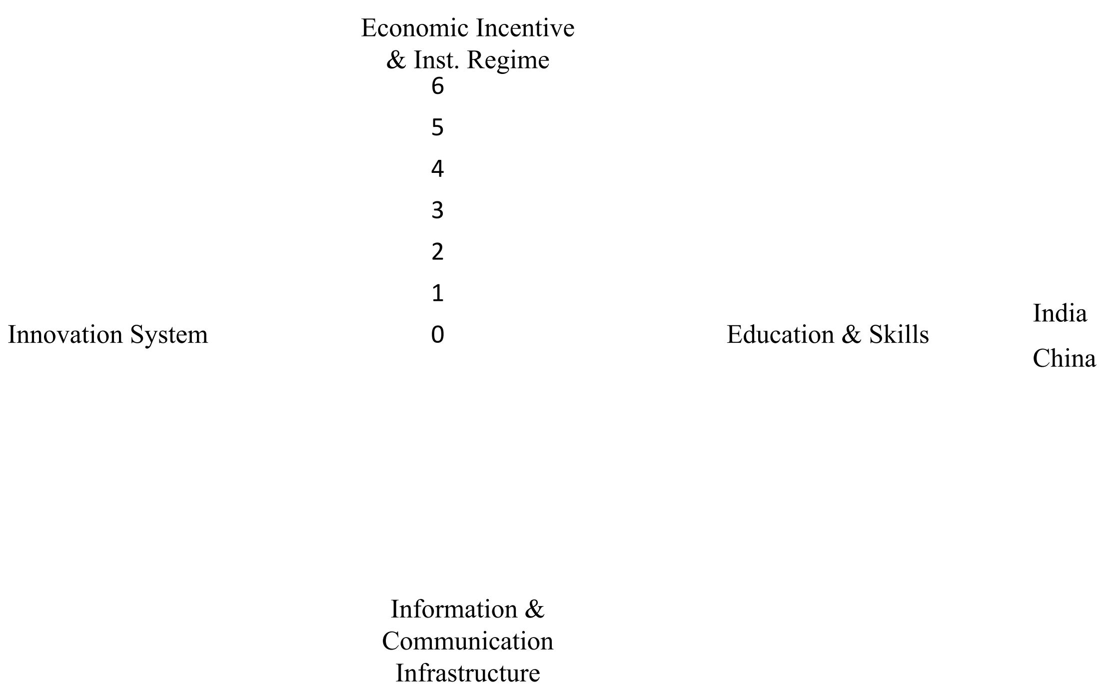

Figure 4: Knowledge Economy Pillars for India & China[xvi]

With these pillars in place, India had pretty well been a part of the Knowledge Economy. These four pillars can be clustered into two major portals – the social & the economic development. The relevant developmental issue can be in detailed studied at a later part of the research papers.

Figure – 3 & 4 clearly state the presence of India as one of the very important part of Knowledge Economy Regime.

At the same time, these KAM Graphs present us with the data that China & India are near competitors in few aspects & China excels in most of the factors in few other aspects.
Due to economic meltdown, United States illustrated a staggering GDP in 2008, yet excels in many other aspects in contrast with our republic.

The Way Ahead…!

India is steady on its way to excel holistically – may it be Economic set-ups, Social Glory or Research advancements. Adding impetus to its endeavours shall be its three pronged approach towards making India a breeding ground for Knowledge Economy.

India could develop a well furnished scenario for Knowledge Economy, by stressing on the following parameters –

Reforms	**Pillar**	**Indicator**
Social Reform	Education & Skills	- Human Development Index - Adults literacy rate - Gross Secondary Enrolment rate - Gross Tertiary Enrolment rate
	Innovation System	- Royalty Payments - Technical Journal Articles/mill - Patents granted USPTO/mill
Economic Reform	Economic & Institutional Regime	- Tariff & non-tariff barriers - Regulatory quality - Rule of Law
Environmental Reform	Information & Communication Infrastructure	- Telephones/1000 people - Computers/1000 people - Internet users/1000 people

Table 1 – 3-D Perspective: Reforms, Pillars & Indicators.

India should focus on developing on the Indicators of Knowledge Economy by which it could cater to the ground-realities yet invite foreign investors to outsource the same to India.

Conclusion

The best part of India is that when western nation are doomed economically, India is one such nation that has prospered & showed a GDP Growth of 6.7 % in 2009[xvii]. This competitive player in the race to Knowledge Economy has showed its mettle in the past year with a turtle's yet steady gait.

India – A nation that is overpowered with talent, skills upto the brink, fuelled with passion, energized with Nationalism, intertwined with ethos & that never ending resilience to peep in the eye of adversity has meant success for this nation.

A nation that is powered with the aspiration to Win, should be entangled in a vicious cycle of growth & reform. This cycle along with learning from other developing & developed nations shall lighten the path of progress for India.

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Thai Hedging Practices: Post Asian Financial Crisis

Authors

Dr Terry Boulter, MBA Director - Deakin Business School, Deakin University, Australia
Phone: 03 9244 5509 International 61 3 9244 5509
Fax: 03 9244 5533 International 61 3 9244 5533
Email: terry.boulter@deakin.edu.au

Ms Vanlapa Wongchan, Lecturer Finance and Banking, Payap University, Thailand
Phone: 053 241255 Ext 429 International 66 53 241255 Ext 429
Fax: 053 241983 International 66 53 241983
Email: vanlapa_v@payap.ac.th

The topic of the submission: The impact of Asian Economies on Global Business

Thai Hedging Practices: Post Asian Financial Crisis

Authors

Dr Terry Boulter, MBA Director - Deakin Business School, Deakin University, Australia
Ms Vanlapa Wongchan, Lecturer Finance and Banking, Payap University, Thailand

Abstract

This paper provides survey evidence captured from a sample of 113 respondents to a 2008 questionnaire that was sent to 344 listed non-financial companies in Thailand. The study examines how Thai companies manage their exchange rate exposure post Asian Financial Crisis.

Thailand is an interesting case study because it was a country at the core of the 1997 financial meltdown and was one of the first forced by the crisis to move from a fixed to a floating exchange rate regime. It is therefore constructive to examine how businesses in Thailand have coped with a shift from a fixed to floating exchange rate and to examine how they manage their exchange rate exposure post 1997.

Findings indicate that companies that use currency derivatives do so to reduce volatile cash flows are less risky and tend to be more profitable than companies that do not use currency derivatives. This is consistent with the theory that hedging increases the value of the firm.

The type of instruments that companies in Thailand use and how they are used is similar to what other studies find in other countries. Matching and the use of forward contracts are the most common ways that companies manage transaction exposure. The study also confirms that companies with higher levels of international business engagement are more likely to use currency derivatives.

What is unique in Thailand is that Thai businesses are less rigorous in their internal control of their currency hedging activities. It is therefore recommended that companies consider a documented hedging policy and that senior management actively monitor the policy and currency hedging activity.

Keywords: Foreign Exchange; Hedging; Risk Management
JEL classification: F3, F23

1. Introduction

An unhedged floating exchange rate increases the risk of a firm when it engages in international transactions. Financial risk management theory predicts that hedging transaction exposure can increase the value of the firm by reducing the potential costs of financial distress and bankruptcy (Smith, C. W. & Stulz 1985).

Bodnar et al. (1995) examines the responses from 530 non-financial companies in the US and finds that managers hedge to reduce the volatility in the cash flows of the firm. Lower volatility of cash flows reduces financing risk, which lowers the potential for financial distress. This is consistent with what the theory of financial risk management would predict.

Berkman et al. (1997) compare the use of derivatives in New Zealand and the United States, and find that even with higher hedging costs and a less liquid derivatives markets New Zealand firms hedge more of their transaction exposure. This suggests that businesses operating in different economies view the significance of exchange rate risk differently.

Berkman et al. (1997) and Marshall (2000) examine the differences in attitudes to hedging in the UK and the US and find few differences. A number of recent studies including those of Alkeback, Hagelin and Pramborg (2006), Bartram, Brown and Fehle (2009) provide evidence that the hedging activities of firms within developed financial markets add value to the firm. Research suggests that firms regardless of orgin use similar hedging instruments, but will hedge different degrees of their exposure, and use hedging to reduce the cash flow volatility. A good survey of the hedging literature is provided by Muller and Verschoor (2006).

What is less understood are the hedging practices of firms operating within emerging economies. Particularly those that have had to manage a transition from a fixed to a floating exchange rate system. Understanding hedging practices within these economies is particularly important given the increasing significance they have within an integrated global economy[1], and the potentional contagion that could occur if they did not hedge or were to use derivatives speculatively.

The contribution of this study is to survey the hedging practices of non-financial companies in the emerging economy of Thailand post 1997 financial crisis. This was a period when Thailand was forced to abondon a fixed baht and move to a floating exchange rate regime[2]. Also it was a period in Thailand when the derivatives market was in its infancy[3].

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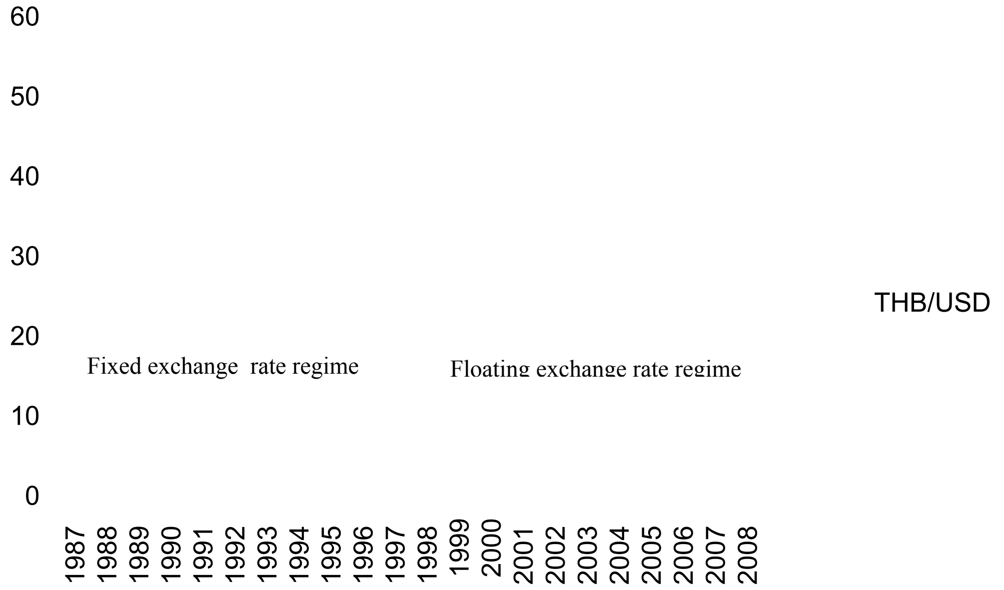
[1] Akin, C & Kose, M 2008, 'Changing nature of North South linkages: Stylized facts and explanations', *Journal of Asian Economics*, vol. 19, no. 1, pp. 1-28. Akin and Kose believe that emerging economies will act as the primary driver of future economic growth

[2] In 1997, foreign investors moved their investment out of Thailand because of the economic crisis, and the Thai Central Bank could not support the baht's fixed value against the US dollar. As a result, the Thai Central Bank moved to floating regime on 2 July, 1997.

[3] The Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity 1998 reports that activity in the OTC derivatives market in Thailand was 2.2 billion US dollars, while in Japan and Singapore were 91.7 and 85.4 billion US dollars respectively. In comparison, the Thai derivatives market was very small. Bank for International Settlement 1999, *Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity 1998*, retrieved 29 April 2010, <http://www.bis.org/publ/r_fx98.htm>.

Thailand is therefore a valuable case study because it is both an emerging economy that was at the epi-centre of the 1997 Asian Financial Crisis and an economy forced to move from a fixed to floating exchange rate regime. With a shift from fixed to floating, businesses in Thailand have had to adapt quickly to a volatile exchange rate market. It is therefore appropriate to examine how companies in Thailand managed this transition. Figure 1 plots the movement of the Baht against the US dollar pre and post Asian Financial crisis, and demonstrates the significant increase in exchange rate volatility that these companies had to manage.

Figure 1: Movement of Baht/US pre and post Asian Fiancial Crisis



Source: Bank of Thailand (2008)

The objective of the study is to examine the hedging practices of companies in Thailand. The purpose is to ascertain how effective they have been in managing the transition from fixed to floating, whether they use derivatives to manage exchange rate risk, why they use derivatives, and whether the use of derivatives creates value for the firm.

The paper is organized as follows. Section 2 describes data and methodology used for the study, Section 3 presents results, and Section 4 provides a summary of findings and conclusion.

2. Data and methodology

Data for this study has been generated from survey responses to a mailed questionnaire and from publically available accounting data collected from the OSIRIS database. The survey data originates from a 2008 questionnaire that was sent to 344 listed Thai companies. These companies were targeted because they were deemed to have varying degrees of transaction exposure. This was determined in advance by reviewing the company's annual report. The study has excluded financial service companies because they buy and sell derivatives for fee income as well as for hedging, and separating the two activities is complex.

The questionnaire used in this study was designed by revising survey questions from other similar studies. These include the studies of Bodnar, Hayt and Marston (1998), Batten, Mellor and Wan (1993) and Marshall (2000), Naylor, Marshall and Greenwood (2007). Additional questions were also designed and incorporated. Different styles of questions were used including open-ended questions, closed-end questions, importance questions and Likert scale questions[4]. The survey questions covered a range of areas. These included;

- the internal methods used to manage foreign exchange exposure,
- the external methods used to manage foreign exchange exposure,
- the reasons for managing foreign exchange risk, and
- internal controls of currency hedging activity.

A pretest of the questionnaire was undertaken in 2008[5]. Minor changes were made to the original questionnaire as a result of pretest feedback. The final questionnaire was mailed to the Chief Financial Officer or equivalent of 344 listed non-financial companies in Thailand. A total of 117 companies returned the questionnaire including 4 companies that replied but did not complete the survey. The total number of valid responses was 113. This equates to a 32.8 per cent response rate. This rate of response is sufficient to be treated as a representative sample of the total population (Sekaran 2003, p 251).

3. Results

Findings are discussed as follows: 1) the types of companies in Thailand that use currency derivatives, 2) the objectives for using derivatives, 3) how transaction exposure is managed and by whom, 4) the internal controls of hedging activity, and 5) whether the use of currency derivatives adds value.

3.1 Who uses currency derivatives?

Table 1 shows the breakdown of derivative use by domestic or multinational company. The majority of respondents who use currency derivatives are multinational companies. This is expected given they operate and transact in numerous international economic locations (Batra, Donnenfeld & Hadar 1982; Fisher et al. 2006). The majority (65%) of domestic Thai companies also use derivatives. The remaining (35%) of domestic companies in Thailand and 19% of multinational companes do not use derivatives. This does not mean that companies who do not hedge have no exposure. It may be the case that they hedge but do not do so with derivatives.

Table 1: Types of company and the use of currency derivatives

Types of company	The use of currency derivatives		
	Derivative non-users	Derivative users	Total
Domestic companies	28 (35%)	53 (65%)	81 (75%)
Multinational companies	5 (19%)	22 (81%)	27 (25%)
Total	33 (31%)	75 (69%)	108 (100%)

[4] Open-ended questions are questions that provide respondents express their opinions. Closed –ended questions are multiple choice answers. Importance questions, the respondents are asked to rate on a rating scale from very important to not at all important. Likert scale questions are questions that ask for respondents agree with a particular statement from strongly agree to strongly disagree.

[5] Companies were visited personally at least one company was selected from each industry, and asked to review the questionnaire and identify any ambiquities or confusing questions.

Table 2 examines the reasons that companies give for not using currency derivatives. The main reason is because they face minimal foreign exchange exposure. Given that transaction exposure is minimal and hedging instruments are expensive, managers may judge the potential cost of exchange rate risk to be lower than the cost of using derivatives to cover that risk. In other words they find hedging to be uneconomical (El-Masry 2006; Geczy, Minton & Schrand 1997). A second reason given for not using derivatives is because respondents found it difficult to assess their value (i.e the cost of the product against the savings they generate) and the price of the instruments. These two reasons for not using derivatives; they are uneconomical and because of misunderstanding of price and value may be an indication that sellers of derivatives have not been able to effectively communicate to clients their value. This would be reasonable given the derivatives market in Thailand at the time of this study was in its infancy. Being a new market there would be a lack of experts within the financial service sector to advice clients at a time when demand for these products was growing.

Table 2: Reasons why companies do not to use derivatives

Reasons	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	Total (n)
1.Insufficient exposure to foreign exchange risk	6.1% (2)	6.1% (2)	12.1% (4)	51.5% (17)	24.2 (8)	100% (33)
2.Use internal methods for managing foreign exchange risk	0% (0)	6.2% (2)	25% (8)	40.6% (13)	28.1% (9)	100% (32)
3.Cost of establishing and maintaining a derivatives program exceeds the expected benefits	0% (0)	3.1% (1)	40.6% (13)	37.5% (12)	18.8% (6)	100% (32)
4.Hard to acquire derivative from financial institutions	6.2% (2)	25% (8)	37.5% (12)	21.9% (7)	9.4% (3)	100% (32)
5.Difficultly of pricing and valuing derivatives	0% (0)	15.6% (5)	15.6% (5)	56.2% (18)	12.5% (4)	100% (32)

Like other studies, which include Dolde and Mishra (2007), Hagelin (2003), Allayannis and Ofek (2001), and Nance, Smith and Smithson (1993) we also examine whether firm characteristics can be identified that would help to explain why some firms hedge and others do not. The specific characteristics examined in this study include the level of international business engagement, the current ratio, debt to equity ratio, firm size, dividend yield and market-to-book ratio[6]. Independent sample t-tests were conducted to determine if there were significant differences in the firm's characteristics for using or not using derivatives.

[6] Appendix explains the detailed definitions for each variable.

Table 3 reports these findings. It appears that companies with extensive international business engagement (i.e. financial transaction denominated in foreign currencies) including operating costs, cost of goods sold, accounts payable, and accounts receivable, are more likely to hedge with derivatives. This suggests that companies in Thailand like companies in other countires acquire derivatives for the purpose of hedging. This is a prudent reason to use derivatives as opposed to using them to speculate. This finding is consistent with other studies which include Sheedy (2006), Faff and Marshall (2005), Solakoglu (2005), Hagelin (2003) Allayannis and Weston (2001), and Geczy et al. (1997).

It may also be the case that a firm with significant transaction exposure, may benefit from transaction cost economies of scale. This means that they may be able to negotiate lower commission fees and/or bank charges which would make the hedging expense more cost effective (Dolde cited in Mian 1996, p 424) making them economical.

Table 3: Firm Characteristics and whether they explain the difference between derivative users and those firms that do not use derivatives

Financial characteristics	The use of derivatives of company	(N)	Mean	Std. Deviation	t	df	Sig. (2-tailed) p = .05	Eta squared
Operating revenue in foreign currency	Derivative non-users	34	20.3235	27.87523	-1.784	109	.077	0.028
	Derivative users	77	31.5844	31.78934				
Operating cost in foreign currency	Derivative non-users	34	12.3971	18.33228	-2.419*	90.62*	**.018**	**0.053**
	Derivative users	72	23.1944	26.88533				
Cost of goods sold in foreign currency	Derivative non-users	33	14.5909	19.16232	-3.195*	86.41*	**.002**	**0.090**
	Derivative users	72	29.4653	27.55153				
Accounts payable in foreign currency	Derivative non-users	33	16.7273	22.98950	-2.428*	78.59*	**.017**	**0.051**
	Derivative users	77	29.5325	30.15315				
Accounts receivable in foreign currency	Derivative non-users	32	16.5000	27.24560	-2.086	106	**.039**	**0.039**
	Derivative users	76	29.6053	30.81626				
Short term debt in foreign currency	Derivative non-users	33	8.3182	19.11226	-.108	107	.914	0.000
	Derivative users	76	8.8026	22.56119				
Current ratio	Derivative non-users	34	3.1698	4.97837	.909	109	.366	0.007
	Derivative users	77	2.4925	2.83467				
Debt to equity ratio (Leverage)	Derivative non-users	34	1.0336	1.32632	-.620	109	.537	0.003
	Derivative users	77	1.3185	2.52656				

Table 3: Firm Characteristics and whether they explain the difference between derivative users and those firms that do not use derivatives (Continued)

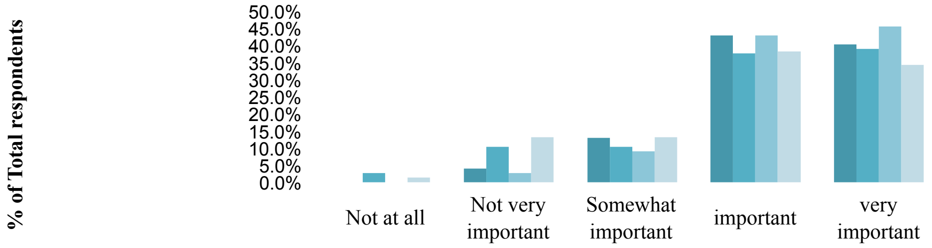
Financial characteristics	The use of derivatives of company	(N)	Mean	Std. Deviation	t	df	Sig. (2-tailed) p = .05	Eta squared
Firm size	Derivative non-users	29	7.2489E6	1.30841E7	-1.073	99	.286	0.011
	Derivative users	72	3.1440E7	1.20710E8				
Dividend yield	Derivative non-users	28	5.13	5.265	.047	98	.962	0.000
	Derivative users	72	5.08	5.023				
Market-to-book	Derivative non-users	28	.8075	1.01009	-.439	98	.661	0.001
	Derivative users	72	.8832	.66142				

*The *t* and *df* were adjusted because variances were not equal.

3.2 Objectives for managing foreign exchange exposure

Figure 2 highlights the reasons given by Thai firms for managing foreign exchange exposure with derivatives. The main reason is to minimize fluctuations in the cost of goods sold and/or in operating costs, which are outgoing cash flows. This is consistent with the theory that firms want to minimise cash flow volatility so as so minimise the potential cost of financial distress. Doing so adds value to the firm by reducing risk, and the possibility of bankruptcy. Other reasons for hedging are to assist in planning cash flows and to minimize fluctuations in earnings. Again this is consistent with what financial risk management theory would predict.

Figure 2: Objectives for managing foreign exchange exposure



	Not at all	Not very important	Somewhat important	important	very important
Planning cash flow	0.0%	3.9%	13.0%	42.9%	40.3%
Minimize fluctuation in earnings	2.6%	10.4%	10.4%	37.7%	39.0%
Minimize fluctuation in cost of goods sold or operating cost	0.0%	2.6%	9.1%	42.9%	45.5%
Increase the value of the firm	1.3%	13.2%	13.2%	38.2%	34.2%

3.3 Who and how do Thai companies managing transaction exposure

Table 4 provides a snapshot of who manages the transaction exposure within Thai firms. It is interesting to observe that the majority of respondents who completed the survey are female (57 per cent). They are over 40 years old and they have been working as financial managers or accounting managers within the company for 1-10 years. It is likely that since they are the people within the organisation who completed the survey that they are also those closest to hedging activity. It is interesting that it is primarily women who are engaged in hedging activity in Thai companies. Given that women are found to be more risk adverse than men, it may benefit Thai companies to have females in charge of risk management activity (Eckel & Grossman 2008).

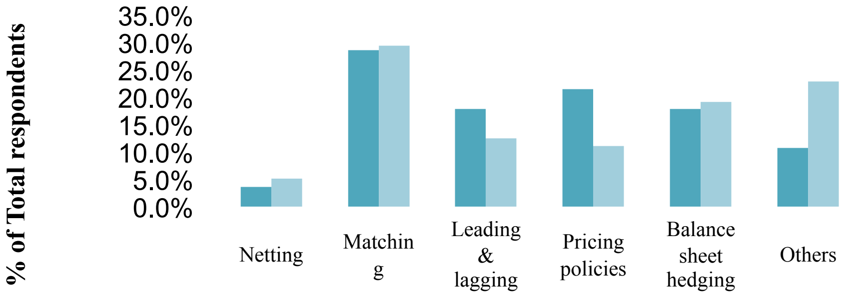
Table 4: The individual respondents' profiles

Position holding in the company	Frequency	Per cent
Chief financial officer	6	5.4
Vice president finance	9	8.1
Financial/Accounting manager	**83**	**74.8**
Other	13	11.7
Total	111	100

Gender			Working for the company: 1 – 10 years	More than 10 years	Total
Male	Age	20 – 40 years old	13	4	17
		over 40 years old	16	15	31
Total			29	19	48 (43%)
Female	Age	20 – 40 years old	17	5	22
		over 40 years old	18	23	41
Total			35	28	63 (57%)

We also examine how Thai companies manage their transaction exposure. Figure 3 reveals that 58% use matching to reduce their exposure.

Figure 3: Internal methods of managing transaction exposure among derivative non-users and derivative users



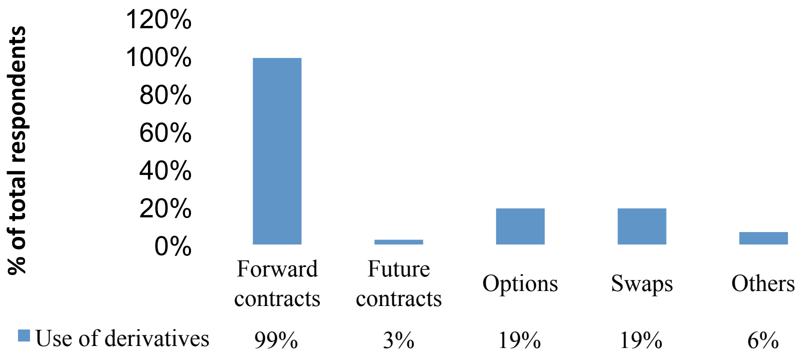
	Netting	Matching	Leading & lagging	Pricing policies	Balance sheet hedging	Others
Derivative non-users	3.6%	28.6%	17.9%	21.4%	17.9%	10.7%
Derivative users	5.1%	29.4%	12.5%	11.0%	19.1%	22.8%

Companies that can adopt matching have both cash inflows (i.e. accounts receivable in foreign currencies) and cash outflows (i.e. accounts payable in foreign currencies). They would also have foreign currency deposit accounts in each foreign currency. Matching reduces the costs associated with the conversions of foreign currencies into domestic currency and vis versa. Foreign-denominated revenues can be used to pay for foreign-denominated expenses. Matching also eliminates the need to pay commission fees for derivatives. Matching does however require an in-house investment in risk management expertise, which is an ongoing expense that does not guarantee appropriate levels of transaction exposure will be covered. This is because of different amounts and maturity dates for receiving and making payments. As a result, companies will have a level of uncovered exposure that will fluctuate over the year. This fluctuation will contribute to an increase in cash flow volatility and risk.

Non-derivative users also use pricing policy to manage transaction exposure. When the currency appreciates the company drops its price to maintain demand and when the currency depreciates it raises price. This strategy is suitable for companies with a high degree of price elasticity of demand and/or operates within a highly competitive market.

Of the companies that do hedge (see Figure 4) 99 per cent (77 out of 78 companies) use forward contracts. This is consistent with other studies (Al-Momani & Gharaibeh 2008; Allayannis & Ofek 2001; Batten, Mellor & Wan 1993; Howton & Perfect 1998; Kroll 2006; Naylor, Michael J. & Greenwood 2008; Sheedy 2006).

Figure 4: The use of currency derivatives



The reasons companies prefer forward contracts is because;

1. they know exactly what the cost of hedging is. This helps companies manage their profit margins and plan cash flows.
2. Forward contracts are easy to use and are flexible in terms of the contract amount and maturity.
3. Forward contracts are cheaper than options and swaps and easier to manage internally.
4. It is easy to acquire a forward contract. Financial institutions in Thailand responded quickly to a shift from fixed to a floating (Abken & Shrikhande 1997; Dufey & Srinivasulu 1983).

Table 5 shows which hedging instruments Thai companies use given their industry classification. The services, resources and technology sectors use a variety of hedging instruments. In contrast, consumer products and industrials primarily use forwarad contracts. No sector uses a hedging instrument more than a forward contract. This is consistent with what occurs within companies in other emerging markets (Al-Momani & Gharaibeh 2008, p 216).

Table 5: The use of currency derivatives by industry

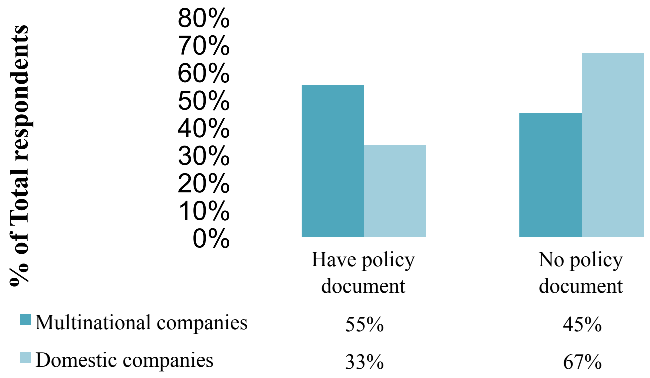
Industry		The use of currency derivatives			
		Forward Contracts	Future Contracts	Options	Swaps
Agricultural & Food Industry	Count	16	0	5	2
	% of Total respondents	20.8%	.0%	6.5%	2.6%
Consumer Products	Count	9	0	0	1
	% of Total respondents	11.7%	.0%	.0%	1.3%
Industrials	Count	15	0	2	0
	% of Total respondents	19.5%	.0%	2.6%	.0%
Property & Construction	Count	13	0	0	4
	% of Total respondents	16.9%	.0%	.0%	5.2%
Resources	Count	7	1	3	3
	% of Total respondents	9.1%	1.3%	3.9%	3.9%
Services	Count	5	1	3	3
	% of Total respondents	6.5%	1.3%	3.9%	3.9%
Technology	Count	10	0	2	2
	% of Total respondents	13.0%	.0%	2.6%	2.6%
Companies Under Rehabilitation	Count	1	0	0	0
	% of Total respondents	1.3%	.0%	.0%	.0%
Total	Count	76	2	15	15
	% of Total respondents	98.7%	2.6%	19.5%	19.5%

Note: Total of respondents (n) = 77

3.4 Internal control of hedging activity.

Internal management of hedging activity is an important risk management function. Internal control reduces the risk of the inappropriate use of derivatives (Smith, P. A. & Bahrman 1997). A lack of internal control can lead to speculative activity which would increase the risk within the business. Figure 5 indicates that 67% of the survey respondents do not have documented hedging policies or procedures. Most domestic companies manage their foreign exchange exposure informally on a need be basis. This contrasts with what happens in companies in the US, UK, and New Zealand (Bodnar, Hayt & Marston 1998; Mallin, Ow-Yong & Reynolds 2001; Naylor, Michael J. & Greenwood 2008).

Figure 5: A documented hedging policy



Reporting derivative activity to the board of directors is also an important component of risk management (Naylor, M. J, Marshall & Greenwood 2007).

Figure 6: Reported activity

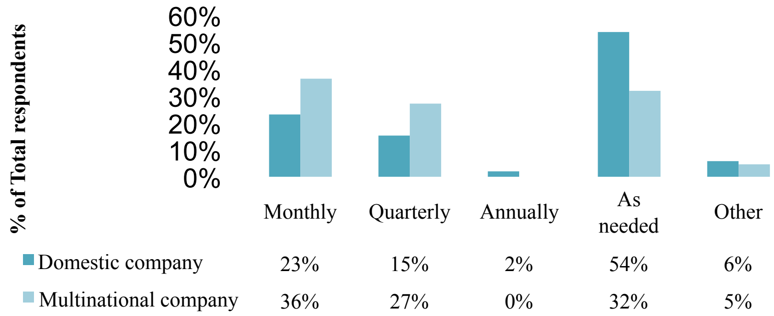


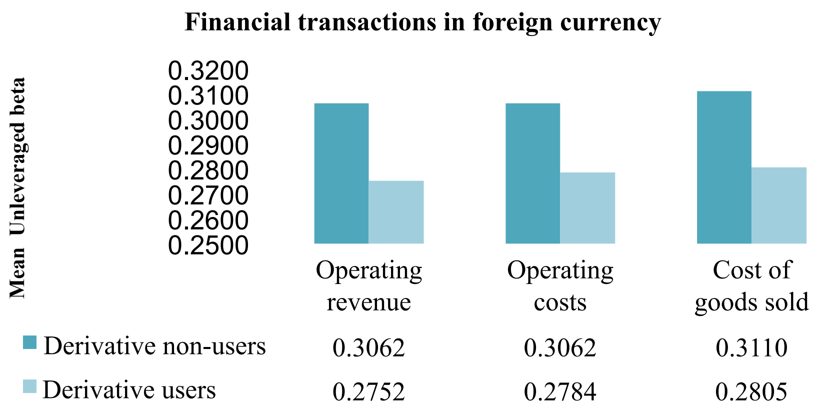
Figure 6 indicates that multinational companies are more likely to have a documented hedging policy and to make regular reports to the board of directors. Domestic Thai companies on the other hand report less often or only when asked to do so. This is similar to what Sheedy (2006) finds when he reports that Asian firms are less rigorous in their policies relating to derivatives and the reporting of derivatives.

3.5 Whether the use of currency derivatives adds value.

This section examines risk and return on assets for derivative users and non-users. In determining the risk within business, a beta score is often used to measure the firms contribution to market risk (Brigham & Ehrhardt 2005). This study uses the unleveraged beta of companies as a proxy measure for risk. This is because unleveraging the beta eliminates the risk associated with capital structure (Damodaran 2001).

Figure 7 shows that the mean unleveraged beta of companies that have financial transactions denominated in foreign currency and use currency derivatives is lower than companies that do not hedge using derivatives. This means companies who hedge are also on average less risky.

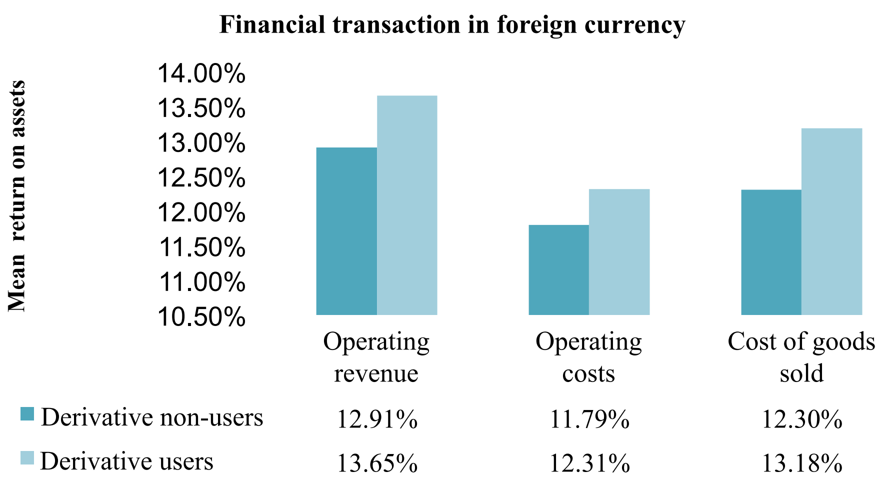
Figure 7: The risk within business of derivative non-users and users



We also compare the return on assets for derivative users and non-users. Cash expenses are used for calculating the return on assets. Earnings before interest, taxes, depreciation, and amortization or EBITDA is used to reflect the cash a company earns from its operations. Return on assets is calculated using EBITDA divided by total assets. Figure 8 indicates that companies that hedge with derivatives have a higher return on assets than companies that do not. This is consistent with the work of Bartram, Brown and Fehle (2009).

Companies that use currency derivatives are therefore less risky and have a higher return on assests. This finding is consitstent with the theory that hedging increases the value of the firm.

Figure 8: Return of assets of derivative non-users and users



4. Summary of Findings and Conclusion

This study has examined currency hedging practices of listed non-financial companies in Thailand post the Asian Financial Crisis (1997). The purpose is to determine how they have coped with volatilie exchange rates since the forced transition from a fixed to floating system.

We wanted to find out which Thai companies use derivatives, why they use them, how they manage their transaction exposure and whether Thai hedging practices creates value for the firm.

We find that 69% per cent of companies in Thailand hedge their transactions exposure. They do this in order to minimize cash flow volatility. We find that companies with higher levels of international business engagement are more likely to use currency derivatives. Matching and the use of forward contracts are the most commonly used methods to manage their transaction exposure, and that females within companies are most often engaged in hedging activity. An emerging derivatives market does not appear to have impaired Thai companies ability to hedge. In fact financial institutions in Thailand were able to respond quickly to the shift from fixed to floating systems.

We also find that companies that hedge also have lower risk and higher return on assets. This is consistent with creating value for the firm, which is what is predicted by financial risk management theory.

With respect to the risk management policy for monitoring currency hedging, many, but not all multinational companies in Thailand have written policies regarding hedging practices. They also usually report their activities monthly to the board of directors. In contrast, domestic companies in Thailand usually have no documented hedging policy and do not make regular reports to the board of directors. Thai companies are less rigorous in their policies relating to reporting and monitoring currency hedging. Even though they have lax reporting of derivative use, it appears that they use derivatives prudently. Irrespective, the lack of reporting is a risk that exists within Thai companies that does not exist in companies operating within developed economies. We recommend that Thai companies consider a documented hedging policy and actively monitor the policy and currency hedging activity. This will help to reduce the non-systematic risk of Thai companies.

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Appendix

Financial characteristics definitions

Financial characteristics	**Variable definitions**

International involvement	
Operating revenue in foreign currency	Operating revenue in foreign currency divided by total operating revenue
Operating cost in foreign currency	Operating cost in foreign currency divided by total operating cost
Cost of goods sold in foreign currency	Cost of goods sold in foreign currency divided by total cost of goods sold
Accounts payable in foreign currency	Accounts payable in foreign currency divided by total accounts payable
Accounts receivable in foreign currency	Accounts receivable in foreign currency divided by total account receivable
Short term debt in foreign currency	Short term debt in foreign currency divided by total short term debt
Liquidity	
Current ratio	Current assets divided by current liabilities
Leverage	
Debt to equity ratio (Leverage)	Total liabilities divided by total shareholder equity
Firm size	
Firm size	Book value of total assets minus book value of shareholder equity plus market value of shareholder equity
Dividend yield	
Dividend yield	Dividend per share divided by stock price per share
Market-to-book	
Market-to-book	Market price per share divided by book value per share
Returns	
EBITDA to total assets (ROA)	Earnings before interest, taxes, depreciation, and amortization (EBITDA) divided by total assets

The Effects of Online Customer Trust on Shopping Value, Satisfaction and Loyalty

***Chi-hsun Lee** ****Wen-yeh Huang** *****Jui-line Su**
* professor, Department of Business Management, National United University
E-mail:cslee@nuu.edu.tw
** Assistant professor, Department of Business Administration, Yuan-Ze University
E-mail:rene@saturn.yzu.edu.tw
*** Doctoral Student, Graduate School of Management, Yuan-Ze University
E-mail:juiline@nuu.edu.tw

Abstract

The rapid growth of e-commerce has lead to the online shopping behavior as a new marketing research issue which needed to be concerned. For the developing of e-commerce, the motivations and value of customer are needed to be taken into account. Therefore, issues for understanding the online behavior and value of customer are important. From the perspective of environmental psychology, the present study explored the online trust of consumer and its linkage with affective response and shopping value, and investigated the relations among trust, shopping value, satisfaction and loyalty. We propose relevant managerial suggestions for e-commerce to set up marketing strategies.

Keywords：Trust, shopping value, Satisfaction, Loyalty

The Effects of Online Customer Trust on Shopping Value, Satisfaction and Loyalty

***Chi-hsun Lee **Wen-yeh Huang ***Jui-line Su**

Introduction

With the personal computer and the Internet developed and spread, the Internet caused by the economic potential of the commercial value and have not be ignored. However Guriley (2000) research shows that 2 / 3 of online shoppers, stacking full of goods in the shopping cart, the check out has abandoned buy any thing, analysts think this situation caused by e-commerce service lack of interaction with customer. Because when customers use e-commerce as a communication medium of exchange, it will generate a lot of uncertainty, the establishment of trust is very important (Gronroos, 1994), Cowles et al. (2002) also recommended: e-commerce should take into account the motivation of custmers to use online shopping or value, understanding of impact of factors related to online shoppers is an important issue.

As the value mediates the relationship between the trust and loyalty (Sirdeshmukh, Singh and Sabol, 2002), building customer trust will be able to enhance the online information sharing (Cheskin research, 1999), to make customer more information to reduce uncertainty, there are excellent opportunities to create value for his customers (Rintamaki, Kanto, Kuusela and Spence, 2006), online customer seek to enhance the utilitarian value and hedonic value. It is an important issue to enhance Satisfaction and Loyalty of customers.

This study explored that interaction between online customers' sense of shopping web site-trust and affective response and shopping value. In turn, this will affect their satisfaction and loyalty. The results will be available for online store operators a reference when developing marketing strategies.

Literature Review and hypothesis

1. Trust on the Shopping Value, Satisfaction and Loyalty

If the customers are confidant of safety of online shopping site to provide goods, services and trading systems, you can rest assured that travel between sites on shopping, more rapid and efficient product and information, rapid completion of the procurement task. You easily through mouse click, browse the different sites of commodity information, for a variety of information collection and have fun, so this study suggest that:

H1: The customers are a positive relationship between shopping site of trust and hedonic shopping value.

H2: The customers are a positive relationship between shopping site of trust and utilitarian shopping value.

In e-commerce transactions because the parties can not confirm the identity or other product quality (Ba and Pavlou, 2002), So the site or to win the favor of customers, and let the transaction are satisfied, should first build the trust of customers shopping site (Gefen, 2002). That is:

H3: The customers are a positive relationship between shopping site of trust and satisfaction.

2.Shopping value on Satisfaction and Customer Loyalty

In this study, self-satisfaction as a customers online shopping experience, the value obtained in the evaluation. If customers in online shopping trip smooth, efficient access to desired products or services, also felt the whole shopping process that is pleasing and fun, and its inner nature has a high satisfaction, so this study suggest that:

H4: The customers are a positive relationship between shopping site of hedonic shopping value and satisfaction.

H5: The customers are a positive relationship between shopping site of utilitarian shopping value and satisfaction.

Babin et al. (1994) that customers feel more utilitarian and hedonic shopping value, would consider their shopping activities are highly valuable. The Gwinner et al. (1998) pointed out that if customers feel better economy, time and efficiency savings, it will produce practical shopping value, will reduce the possibility of their conversion, but is willing to maintain with the current supplier their relationship. So this study suggest that:

H6: The customers are a positive relationship between shopping site of hedonic shopping value and loyalty.

H7: The customers are a positive relationship between shopping site of utilitarian shopping value and loyalty.

3.Satisfaction on Customer Loyalty

Anderson and Srinivasan (2003) pointed out that e-satisfaction (e-satisfaction) is the online customers and e-commerce retailers, according to their purchase transactions to meet the level of experience gained, and customers will be based on the overall shopping experience and accumulated satisfaction and repurchase intent and the formation of repeat purchase decision-making, which suggests that:

H8: The customers are a positive relationship between satisfaction and loyalty.

Methods

1.Study and survey methods

This study used the online shopping experience with online customers as subjects, so use the Internet questionnaire (Http://www.my3q.com/index.phtml) data collection. A total of 435 university students received the survey. The subjects rated how much they liked each word by suing 7-point scale. That range from do not agree (1) to agree a lot (7).

Results

1. A total of 435 usable questionnaires were collected for the study**.** Male and female respondents were represented almost equally in the sample. The age range was 21–30.
2. The hypothesized path model was estimated with maximum likelihood, using Ams7.0(Jo¨reskog and So¨rbom, 1984)
3. The structural model was analyzed with summed scale indicators for all of the constructs. The chi-square for the tested model is 2.30 (df =96), goodness- of-fit index (GFI) =0.94, adjusted goodness-of-fit index (AGFI) =0.92, and root mean squared residual (RMSR)=.055.
4. These test statistics indicate an adequate fit of the data to the proposed model
5. All the Hypothesis have a significant influence, are supported, as shown in Table 1

Table 1 Model results

Hypothesis	ß Coefficient	t value	result
H1 Trust→ Hedonic value	0.35	6.59**	support
H2 Trust→ Utilitarian value	0.36	6.84**	support
H3 Trust→ satisfaction	0.50	10.50**	support
H4 Hedonic value→ satisfaction	0.32	7.54**	support
H5 Utilitarian value→ satisfaction	0.31	7.68**	support
H6 Hedonic value→ loyalty	0.21	3.90**	support
H7 Utilitarian value→ loyalty	0.14	2.69*	support
H8 Satisfaction→ loyalty	0.53	7.86**	support
$\chi^2(96)$=220.94 P=0.000 χ^2/df =2.30 GFI=0.94 AGFI=0.92 CFI=0.97 RMSEA=0.055			

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Comparing the Affects of Management Practices on Organizational Performance Between For-Profit and Not-for-Profit Corporations in Southeast Wisconsin USA

Gary F. Keller*

Abstract

The need to demonstrate the effectiveness of any business or organization worthy of attracting resources and transforming them into valued products/services is an entity's primary mission. A variety of methods have evolved over time to measure a for-profit enterprise's performance. Economists have typically studied how well a firm manages the factors of production under its control while accountants and financial analysts scrutinize a variety of analytical tests to determine current and future performance. Not-for-profit organizations have adopted many of the commercial sector's economic and accounting/financial techniques to gauge their performance. However, an issue that plagues the analysis of for-profit and not-for-profit businesses is the effect that management has on an enterprise's performance. While economists and accountants can account for nearly all of the factors of production, the discipline cannot calculate the affect of management on agency performance.

Considering the roles and economic impact that both for-profit and increasingly not-for-profit organizations/non-governmental organizations (NPO or NGO) it is vital to assess how these organizations are managed and what if any effect management practices have on their organizational performance. The purpose of this quantitative research investigation was to study the affect of 18 management practices defined as "operations (three practices), monitoring (five practices), targets (five practices), and incentives (five practices)" (Bloom & Van Reenen, 2007, pp. 1393 - 1397) had on the performance of for-profit firms and NPOs in southeast, Wisconsin. The basis of this research project was derived from two studies. One study (Keller, 2009) was conducted on for-profit corporations in late 2008 and the second that Keller conducted on NPOs in 2010. The examination revealed that management practices did not have a statistically significant impact on the economic performance of for-profit firms (with the exception of one ownership type) and a strongly significant influence on not-for-profit organizations.

Fields: Management Practices, Economic Performance,
Economic Measurement of Management, Management Theory

*Dr. Gary F. Keller, College of Business and Management,
Cardinal Stritch University. E-mail: gfkeller@stritch.edu

1. Introduction

Since the Industrial Revolution in the United States (c., 1860 1890) economists, social scientists and their management science colleagues have attempted to explain why some firms thrive and others fail. Many explanations have been offered over the decades. Economists have opined that factors such as capital, technology and other inputs account for the differences between flourishing and failed firms (Bloom & Van Reenen, 2007). Greenwald (2004) asserted that while economists have typically attributed growth in aggregate economic activity to the introduction of technology, the decision to apply new equipment and other factors of production in a systematic way is a management function. Greenwald stated that "microlevel studies at firms and even plants have consistently shown that most improvements in operating efficiency are attributable to the small, steady benefits of day-to-day management intervention, not to dramatic technological innovations or capital investments" (p. 3). However, a major barrier to explaining the differences between thriving and unsuccessful companies has been the absence of high-quality data that measures in a consistent way the relationship between management practices and economic performance (Bloom & Van Reenen, 2007).

Around the world, not-for-profit organizations (NPOs) or non-governmental organizations (NGOs) are making an increasingly important contribution to national economies. In the United States in 2007 there were 1,569,572 tax-exempt organizations accounting for 8.11% of all wages and salaries paid with $2.6 trillion in total assets (National Center for Charitable Statistics, 2010). The demand to effectively manage this sizeable portion of America's GNP has led many NPOs to utilize many of the commercial sector's economic and accounting/financial techniques to gauge their performance.

However, an issue that plagues the analysis of for-profit and not-for-profit businesses is the affect that management has on enterprise performance. While economists can account for nearly all of the factors of production, the discipline cannot calculate the affect of management on agency performance. Similarly, accountants and financial analysts can compute the outcome of fiscal transactions; however, the professions cannot accurately attribute the affect that managerial decisions have on how the financial numbers were generated.

The purpose of this quantitative study was to determine whether for-profit corporations or NPO's management practices, defined by Bloom and Van Reenen (2007) as operations, monitoring, targets and incentives, were related to their economic performance defined as increases/decreases in the number of employees. This economic performance criteria was selected as a proxy for financial gain and a strategic success factor for the following reasons: a) employment data was used as a proxy for firm economic performance because privately held firms are not required to publicly file reports about their financial status in the United States; b) an NPO's primary goal is to financially break even, therefore year over year financial gain may not be a significant indicator of positive financial success, indeed a *profit* may be anathema to the organization; c) contributions toward an ongoing capital campaign or special project could distort an organization's financial position; d) a deficit due to special circumstances could also distort an organization's financial position; e) the gain/loss of employees provides a quantifiable insight into the entity's relative effectiveness and if the organization's products/services were in demand, constant or declining.

2. Literature Review - For-Profit Perspective

Since the advent of the industrial economy and its evolution into the information age, corporate leaders have searched for a succinct set of guiding principles that can both guide and measure firm performance. Prior to the Industrial Revolution (1750) the typical farmer or artisan in Europe was not much better off than their ancestors dating back to ancient Rome or Greece; however after the Industrial Revolution that situation changed dramatically (Hubbard, 2006). With the advent of factories and dramatic increases in productivity the scale of coordinating the operations of large enterprises became more difficult. With little historical precedent or academic resources to draw upon, corporate leaders groped for solutions to efficiently manage their enterprises competing in a new competitive environment.

As the American economy continued its massive growth in the later part of the twentieth century a variety of new management theories continued to emerge in popularity to systematize the efficiency and competitiveness of a firm. A variety of management theories emerged during the early period of America's industrial development Theorists from Frederick W. Taylor, *The Principles of Scientific Management* (1911) to W. Edwards Deming, *Out of the Crisis* (1986) to Robert S. Kaplan and David P. Norton, *The Balanced Scorecard* (1996) have attempted to capture the essence of a singular method to consistently produce corporate success. Furnham (2005) studied the evolution of contemporary management trends (1950 – 2000) and catalogued 24 different management approaches ranging from Empowerment to Theory Z. However; despite the best efforts of many, the search for the managerial equivalent of the Theory of Relativity, a clear definition of corporate performance measures and an explanation of the connection between management choices and corporate results continues.

Hubbard (2006) offered an intriguing insight into the mystery of why some enterprises consistently perform at very high levels and others do not. The key to unraveling the performance/productivity puzzle is assessing corporate competitiveness on a micro economic level. Hubbard cited the work of Alfred Chandler Jr. and David Landes who argued that professional management was the key factor for the United States' rise to economic prominence compared to its European rivals. "Through the microeconomic perspective, management is, at heart, a choice made by each firm" (p. 30).

A seminal study by Bloom and Van Reenen (2006) of more than 700 manufacturing firms in Great Britain, France, Germany and the United States found that the approach taken by corporate leaders was the foremost management influence on enterprise performance. Those firms with superior management were associated with higher productivity, return on equity and market capitalization. Bloom, Van Reenen, Dorgan and Dowdy (2007) conducted an expanded research project encompassing more than 4,000 American, European and Asian businesses. Bloom et al. (2007) research further reinforced Bloom and Van Reenen's 2006 findings. The findings from the 2007 study indicated that there was no single management practice that provided the key to improved firm performance. Rather, it was the average score of 18 management practices grouped into "four areas: *operations* (three practices), *monitoring* (five practices), *targets* (five practices), and *incentives* (five practices)" (p. 1361) when compared to a firm's economic success that provided the most accurate indicator of success.

3. Literature Review – Not-For-Profit Perspective

The challenge to manage and measure the effectiveness of any organization is complex and frequently a highly subjective task. The for-profit sector created commonly accepted accounting and financial standards that indicate the economic performance of a firm. However, evaluating the utility of not-for-profit organizations (NPO) has been a historical challenge, given the sector's purpose of producing social well-being for public stakeholders compared to the for-profit's objective of producing wealth for private shareholders. As the number of NPOs increased to deal with a myriad of social issues, so did the *competition* for support and the need to demonstrate how NPOs utilized contributed resources. It was not long before the NPO sector adopted the commercial sector's accounting and financial gold standards to gauge institutional output.

In addition to utilizing commonly accepted financial standards, NPOs also attempted to appliqué many for-profit managerial theorems onto their institutions. But which management practice was the equivalent of a commonly accepted accounting practice? Furnham (2005) catalogued 24 different management practices ranging from Empowerment to Theory Z that were introduced in the last half century. Additionally, during the last 40 years many of the best known management theorists translated their principles for use in the charitable sector. Examples include McConkey (1973) Management by Objectives (MBO); Deming (1986) *Out of the Crisis* TQM and many of its derivatives such as ISO, Six Sigma and etc.; Drucker (1990) Managing the Non Profit Organization; Buckmaster (1999) Benchmarking; Kaplan (2001) the Balanced Scorecard; Sanger (2008) and Field (2009) Data Drive Performance Measurement and Lewis (2003) a hybrid of all of the evolving management theories.

Unfortunately many commercial management theories have not always produced the best solutions for NPOs (Rojas, 2000). Speckbacher (2003) noted that one reason commercial concepts did not always succeed in the NPO sector was because the assumptions underlying the economic and organizational models were alien to the missions of many NPOs. For example, outsourcing certain functions (ex. a call center, food preparation, and security services) may save a for-profit firm a considerable sum of money but could be an operational and public relations disaster for a community based shelter for homeless or abused persons. Herman and Renz (2004) offered that "finding the right fit among (management) practices is more important than doing things the "right way" (p. 694). Herman and Renz (2008) also conducted an extensive literature review of nonprofit organizational effectiveness and highlighted nine conclusions, including one which stated that it was unlikely there were universally applicable best practices for all NPO boards and management.

A further issue that has clouded the topic of evaluating the impact that management practices have on firm or organizational performance is the lack of a precise definition of performance. Ritchie and Kolodinsky (2003) asserted that agreement about NPOs financial performance measurement and overall performance evaluation was elusive. Folan, Browne and Jagdev (2007) argued that there is no precise definition of the meaning of performance in the context of management science and as a result financial measurements continue to be the default indicators of managerial quality. Young (2007) claimed that while profitability is an unambiguous criterion for commercial ventures, no comparable standard exists for NPOs. While NPOs are required to break even, a surplus may or may not be a sign of achievement due to the nature of the organization's mission and legal (501 (c) (3) tax exempt status.

The definition of a not-for-profit organization according to the Internal Revenue Service is "An organization may qualify for exemption from federal income tax if it is organized and operated exclusively for one or more of the following purposes, religious, charitable, scientific, testing for public safety, literary and educational" (IRS, 2010). There are 4 other qualifying organizational types; social welfare organizations; labor unions, farm bureaus and others; business leagues; and social and recreational clubs. To distinguish the many types of 501 (c) (3) organizations a classification system was developed, the National Taxonomy of Exempt Entities (NTEE). The NTEE is a system used by the IRS and the National Center for Charitable Statistics to classify nonprofit organizations (NCCS, 2010).

The literature was replete in demarcating management theory and financial measurements. However, few if any scholars have been able to demonstrate a connection between the two elements. The major impediment to connecting management practices to economic performance was the inability to select which management practices should be measured and correlating them to firm results. As a consequence, economists, financial analysts and accountants utilized the most reliable and acceptable measures available, fiscal ratios, balance sheets and etc. Of all of the classic factors of production, management was among the most difficult to quantify. Management was said to matter but evaluated similar to the way electrical engineers explain the impact of electricity on various system, i.e. the outcome is known; however, the exact composition of electric current remains a mystery. Bloom and Van Reenen provided a methodology and survey tool to illuminate the correlation between management decisions and firm economic performance.

4. Methodology – For-Profit Assessment

The problem addressed in this part of the quantitative study was investigating the economic performance of firms located in southeast Wisconsin as measured by increases and or decreases in the number of employees. Norse (1968) recommended the use of employment data as a proxy for firm economic performance because privately held firms do not have to publicly file reports about their financial condition in the United States. In this study, employment data was obtained from respondents to the survey instrument. Below is the null and alternative hypothesis that guided this study.

H1o. There is no difference in firm economic performance based on management practices of corporations located in southeast Wisconsin.

H1a. There is a difference in firm economic performance based on management practices of corporations located in southeast Wisconsin.

The type of data collected was quantitative (interval and ratio scale) derived by a survey instrument that was closely patterned after one used and extensively validated by Bloom and Van Reenen (2006, 2007). The survey was composed of 14 general firm identifier questions and 18 questions about the company's management practices defined as "operations (three practices), monitoring (five practices), targets (five practices), and incentives (five practices)" (Bloom & Van Reenen, 2007, pp. 1393 - 1397) of for-profit enterprises in southeast Wisconsin. The specific 18 management practices were: 1. Use of Modern Manufacturing, Production or Workflow Systems, 2. Reasons for Using Modern Manufacturing/Performance Techniques, 3. Process Problem Documentation, 4. Performance Tracking, 5. Corporate Performance Review, 6. Corporate Performance Dialogue – How Information is Used in Meetings, 7. Consequences of Management Decisions, 8. Goal Balance, 9. Goal Integration, 10. Goal Time Horizon, 11. Targets are Ambitious, 12. Performance Clarity, 13. Managing Human Resources, 14. Rewarding High-Performance, 15. Removing Poor Performers, 16. Promoting High Performers, 17. Attracting Talent, 18. Retaining Talent (Bloom & Van Reenen, 2007, pp. 1393 - 1397)

The author received permission from Bloom to utilize his methodology and he commented favorably about modifications made by the author to apply Bloom's telephonic survey to a mailed survey format. On October 23, 2008 a survey instrument was sent to the CEOs of 682 qualified firms in southeast, Wisconsin. The qualified companies (682) included firms with 49 or more employees derived from the Unemployment Compensation data bases for Racine and Kenosha Counties dated September 2, 2008. The survey instrument was used to sample

100% of the eligible population of 682 firms. The response rate to the mailing of the survey was 54 surveys or a response rate of 7.92%. This rate was considered acceptable for a blind direct mail survey with no built in system for follow-up except for a letter of reminder to the entire population of 682 (S. Arora, personal communication, August 21, 2008).

In this part of the study a number of Student T-Ratios and a series of ANOVA tests were conducted to test the four null hypotheses. Null hypothesis 1 was analyzed using the ANOVA test. The data analyzed ownership type by the ANOVA test. Furthermore hypotheses 2 and 3 were analyzed using a Linear Regression Analysis. The correlations resulting from these analyses for null hypotheses 2 and 3 were further analyzed using the Student T-Ratio. A .05 level of significance was used to determine the significance for each of the null hypotheses.

5. Methodology – Not-For-Profit Assessment

The purpose of this portion of the quantitative research investigation was to study the impact of 18 management practices on the performance of NPOs in southeast, Wisconsin. A survey composed of 14 general organization information questions and 18 questions about the company's management practices defined as "operations (three practices), monitoring (five practices), targets (five practices), and incentives (five practices)" (Bloom & Van Reenen, 2007, pp. 1393 - 1397) of NPOs in southeast Wisconsin. The author received permission from Bloom to utilize his methodology to apply Bloom's telephonic survey to a mailed survey format and change adapt several questions to the NPO/NGO environment. In this research project, employment data was requested of respondents to the survey instrument. The type of data collected was quantitative (interval and ratio scale) derived by a survey instrument the author used in a study (Keller, 2009) conducted of the for-profit sector in southeast, Wisconsin.

Below is the null and alternative hypothesis that directed the analysis of not-for-profit organizations.

H1o. There is no difference in the organizational performance based on management practices of NPOs located in southeast Wisconsin.

H1a. There is a difference in organizational performance based on management practices of NPOs located in southeast Wisconsin.

On February 9, 2010 a survey instrument was sent to the Executive Directors of 100 qualified NPOs in southeast, Wisconsin. The qualified NPOs (100) included those derived from the Unemployment Compensation data bases for Racine and Kenosha Counties. The survey instrument was used to sample 100% of the eligible population of 100 organizations excluding governmental units, schools, health care agencies and colleges/universities. The data was analyzed using a Student T-Test to determine whether to accept or reject the null hypothesis. A Student T-Test was selected to analyze the data due to the small sample size (Zikmund, 2003). A .05 level of significance was used to determine significance. The Student T- Test measured whether if employment growth as the indicator for organizational performance was significant.

6. Methodology – Comparing Not-For-Profit Firms With Not-For-Profit Organizations

A series of ANOVA tests were conducted to compare the results of the 18 management practices tested in the surveys sent to for-profit firms and not-for-profit organizations located in southeast Wisconsin, USA. A .05 level of significance was used to determine the significance of each factor that was compared.

7. Findings – For-Profit Firm*s*

The researcher used an ANOVA One-Way test to determine whether to accept or reject Hypothesis 1: There is no difference in the organizational performance based on management practices of NPOs located in southeast Wisconsin. With an F Value of .69 the researcher was unable to reject the Null Hypothesis (P value of .40) at the .05 level. The ANOVA One-Way Test for Hypothesis 1 indicated that for all ownership types ($N = 53$) the null hypothesis is accepted. However, a more thorough analysis of the data revealed that several significant correlations exist at the .05 level between economic performance and specific ownership type management practices. The analysis indicates that there is a significant difference (p=.007) in the management practices used in family owned firms and the economic performance of these firms. Additionally with a Significance F of .01 the null hypothesis was rejected and the research hypothesis was accepted that there is a difference between the management practices and economic performance of privately owned firms. It should be noted that both family and privately owned firms were combined in this analysis because both types of firms are defined as privately owned firms.

8. Findings – Not-For-Profit Organizations

The researcher used a Student T-Test to determine whether to accept or reject the null hypothesis for NPOs in this study. There were 20 valid responses (20% response rate) to the survey. The Student T-Test measured whether employment growth as the indicator for organizational performance of respondents' organizations was significant. The Student T-Test result for the NPOs that participated in the survey (N=20) was (10.26) which was strongly significant at .01 level (.0000002.85) level. This unusually small P value was sufficient to reject the Null Hypothesis and accept the Alternative Hypothesis: There is a difference in organizational performance based on management practices of NPOs located in southeast Wisconsin. In aggregate, 70% of the organizations who responded to the survey reported no change in employee count (35%) or increases of between 1% to 10% or greater (35%) in the number of employees.

9. Findings – Comparisons Between For-Profit and Not-For-Profit Enterprises

The researcher used a series of ANOVA Single Factor tests to compare the responses of for-profit firms and not-for-profit organizations to the questions regarding 18 management practices. The results indicated that statistically significant differences existed in 4 (which is 22% of the management practices) at the .10 level of significance, see Table 1. They were:

Summary for Comparison of All Management Practices – There was no statistically significant difference between the management practices of for-profit and not-for-profit entities.

Factor 1: Modern Workflow Systems – For-profit firms use better workflow systems (e.g., ISO standards, Just In Time Inventory, lean manufacturing, automation, total quality management, Six Sigma, automation, flexible manpower, support systems, attitudes and behavior) than NPOs.

Factor 6: Corporate Performance Dialogue – How Information is Used in Meetings - NPOs used information to make decisions better than for-profits.

Factor 14: Rewarding High Performance – For-profits were able to award performance related rewards better than NPOs.

Factor 18: Retaining Talent – For-profit firms were able to provide compensation/benefits better than NPOs.

Table 1
Top 4 Statistically Different Management Practices

Top Differences in Management Practices	***ANOVA F***	**P-*value***
Summary of All Data: For-Profit v. NPO	1.86	.176
1. Modern Workflow Systems	4.07	.047
6. Corporate Performance Dialogue	3.31	.074
14. Rewarding High Performance	3.72	.057
18. Retaining Talent	6.69	.011

An evaluation of how for-profit firms and not-for-profit organizations ranked the 5 factors (financial resources, employees, management practices, materials and technology) that were vital to enterprise success was revealing. Depicted in Table 2 is the comparison (1= low, 5 = high) of the five vital success factors.

Table 2
Comparison of 5 Vital Success Factors Between For-Profit and Not-For-Profit Enterprises

5 Vital Success Factors	For-Profit	Not-For-Profit
Financial Resources	1	1
Employees	2	4
Management Practices	5	3
Materials	3	5
Technology	4	2

(Note: 1= low, 5 = high)

10. Analysis of For-Profits' Rankings

Most respondents to Keller's 2008 survey of for-profit firms in southeast Wisconsin indicated that they had adequate access to capital. The importance of financial resources receiving a relatively low grade (number 1 or low) for its significance to the firm's success may be explained by the response to Question 14 (Does the firm have access to capital?) where 93% of respondents stated they had access to capital. In essence respondents may take for granted their ability to secure adequate amounts of capital to operate their firms. Respondents may take for granted that their firm either has accumulated a sufficient amount of saved capital or have relatively easy access to it. There was agreement regarding the top two vital success factors (technology and materials). One of the reasons firms graded technology and materials as the top factors may be related to the fact that key business decisions are made at a distant corporate headquarters which delegates strategic decisions to local managers for implementation. The impact of employees on firm performance received a mixed response from respondents to the study's survey. Of the respondents ranking employees as vital to the success of their firms, 55% ranked it high (3-5) while a slightly lower number 47% considered employees as being a low success factor for their firms' success. Clearly, the role that employees play in the performance of firms in southeast Wisconsin is somewhat split due to the difference in firm ownership. The final vital success factor that was ranked was technology. Of the respondents ranking technology as vital to the success of their firms, 77% ranked technology high (3-4-5) while 23% considered technology low. Respondents' rankings of the importance of materials and technology to their firms' success was quite high indicating that most firms desire to stay abreast of tools and techniques that will keep their firms efficient and productive. Management practices, the independent variable in this study, was selected by for-profit firms as the most vital factor to their enterprises' success. This high ranking was revealing. Four of the five vital success factors (sans management practices) are the fundamental components that economists use to assess the performance of a firm. The respondents to the 2008 survey affirmed Greenwald, Bloom and Van Reenan's thesis that management choices (the effect of management) are measureable and can be directly linked to the economic performance of a company.

11. Analysis of Not-For-Profits' Rankings

At first glance, the not-for-profit respondents' ranking of the success factors was somewhat surprising considering the missions of NPOs. One explanation for the curious ordering of materials being the most important success factor may reflect the diversity of organizations in the survey sample (from an adult literacy group to a municipal zoo) and a growing trend in NPO agencies, social entrepreneurship. Many NPOs are attempting to generate earned revenue via creation of products/services that provide a new revenue stream to diversify away from dependence on contributions, funding from United Way type funding agencies and fees for services which oftentimes do not fully recover the services' costs. The ranking of management practices by respondents as the third most vital success factor is curious given the strongly significant correlation of management practices and organizational performance. One explanation for this ranking may be an increasing managerial skill level and sophistication of not-for-profit corporate leadership. This phenomenon may be a result of the inclusion of talented for-profit leaders serving on the boards of directors of NPOs and the growing trend of NPO executives securing management degrees and ongoing training.

12. *Implications*

This research study sought to determine if there are significant differences between the management practices and enterprise performance between for-profit firms and NPOs located in southeast Wisconsin. It was found that on the whole there was no statistically significant difference between the management practices and firm performance among the for-profit population, with the exception of one key ownership group (family and privately owned firms). Additionally, it was found that for-profit firms ranked management practices as the top corporate vital success factor.

A review of the data for not-for-profit organizations showed that management practices were correlated to organizational performance. Despite the strongly significant statistical correlation between management practices and organizational performance, NPO respondents did not rank management practices as the number one success factor for their agencies. As mentioned previously, this disparity may represent a growing trend in the evolution of the management practices of NPOs.

Both components of this study were conducted while the American economy was in the worst part of recession of 2008-2010. While some for-profit firms added employees, most were decreasing head counts. NPOs also reported mixed results in terms of significant declines in revenue derived from operations; however what greatly stabilized their operations was the increase in donations.

In the final analysis, this study needs to be repeated on a semi-annual basis to achieve two important results; generating a larger number of responses and creating a base line to compare and improve the robustness of the research design and the practical use of the results. As noted several times, the requirement to generate "numbers" that demonstrate the quality of an enterprise has taken a life onto itself in both the for-profit and not-for-profit sectors. Management practices are frequently considered "soft skills" and therefore not a reliable, countable and important "asset." It is refreshing to discover that the NPO sector and family and privately held corporations in this study demonstrated that management practices have a "hard impact" on the bottom line.

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Financial crisis and innovation in banking business model: are we minding the gap with the reform agenda?

Valerio Pesic, PhD
Assistant Professor of Banking and Finance
University La Sapienza, Rome, Italy
Tel.: + 39 06 49766260, Fax: + 39 06 4450079
E-mail: valerio.pesic@uniroma1.it

Abstract

The recent financial crisis has generated an impressive debate between practitioners and scholars about the causes and consequences of the crisis, as well as about the effectiveness of supervision and the overall architecture of prudential supervision for providing the stability of international financial system. From this perspective, a very large attempt has been dedicated to the analysis of the originate-to-distribute model of financial firms, together with the discussion about the weaknesses that have been revealed in banks' risk management process and capital adequacy framework. In order to address the lessons of the crisis, the reform agenda is now moving in order to strengthen global capital and liquidity regulations with the goal of promoting a more resilient banking sector, as well as improving banks' risk management procedures, transparency and disclosure. By focusing the attention on the performance achieved by an international sample of banks during the period from 2005 to 2008 (the top 100 global player are considered), for whose it is possible to distinguish between different characteristics of financial innovation, consistency of the capital base, quality of governance, and other fundamental banks' attributes, the objective of this paper is to understand if the reform agenda is going to cover the "gap" which has been revealed by 2007-2008 crisis, between the prudential supervision architecture and the real functioning of international financial system, or if any undisclosed bias is still remaining unresolved.

JEL code: G21, G28, G34
Keywords: Banking Crisis, Regulation, Capital Adequacy, Corporate Governance

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Valerio Pesic*

Abstract

The recent financial crisis has generated an impressive debate between practitioners and scholars about the causes and consequences of the crisis, as well as about the effectiveness of supervision and the overall architecture of prudential supervision for providing the stability of international financial system. From this perspective, a very large attempt has been dedicated to the analysis of the originate-to-distribute model of financial firms, together with the discussion about the weaknesses that have been revealed in banks' risk management process and capital adequacy framework. In order to address the lessons of the crisis, the reform agenda is now moving in order to strengthen global capital and liquidity regulations with the goal of promoting a more resilient banking sector, as well as improving banks' risk management procedures, transparency and disclosure. By focusing the attention on the performance achieved by an international sample of banks during the period from 2005 to 2008 (the top 100 global player are considered), for whose it is possible to distinguish between different characteristics of financial innovation, consistency of the capital base, quality of governance, and other fundamental banks' attributes, the objective of this paper is to understand if the reform agenda is going to cover the "gap" which has been revealed by 2007-2008 crisis, between the prudential supervision architecture and the real functioning of international financial system, or if any undisclosed bias is still remaining unresolved.

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* University La Sapienza, Rome, Italy.

1. Introduction

The recent financial crisis has generated an impressive debate between practitioners and scholars about the causes and consequences of the crisis, as well as about the effectiveness of supervision and the overall architecture of prudential supervision for providing the stability of international financial system. From this perspective, a very large attempt has been dedicated to the analysis of the originate-to-distribute model of financial firms, together with the discussion about the weaknesses that have been revealed in banks' risk management process and capital adequacy framework. In order to address the lessons of the crisis, the reform agenda is now moving in order to strengthen global capital and liquidity regulations with the goal of promoting a more resilient banking sector, as well as improving banks' risk management procedures, transparency and disclosure. By focusing the attention on the performance achieved by an international sample of banks during the period from 2005 to 2008 (the top 100 global player are considered), for whose it is possible to distinguish between different characteristics of financial innovation, consistency of the capital base, quality of governance, and other fundamental banks' attributes, the objective of this paper is to understand if the reform agenda is going to cover the "gap" which has been revealed by 2007-2008 crisis, between the prudential supervision architecture and the real functioning of international financial system, or if any undisclosed bias is still remaining unresolved. The structure of the paper is as follows. Section 2 is dedicated to a brief overview of the literature on the relation between financial innovation and financial crisis. Section 3 summarises fundamentals elements which characterize the reform agenda together with some arguable topics that should take part in this debate. Section 4 shows how the data have been gathered and details the characteristics of the sample of banks analyzed. Section 5 shows the most interesting findings. Section 6 concludes with comments and remarks.

2. Financial Innovation and Financial Crisis: a disclosed evidence

A large literature has examined the causes and circumstances that led to the generation of the crisis of 2007-2008, along with the boundaries of the OTD originate-to-distribute model of financial intermediation (Borio, 2008; Acharya, Richardson, 2009). By this meaning, the fundamental weakness characterizing the capital adequacy regime have been highlighted, together with the need to strengthen prudential supervision and achieve a stronger coordination for a more effective international supervision architecture (Financial Stability Board, 2009). Moreover, it was pointed out the excessive risks exposure achieved by financial operators willing to maximizing profitability targets through an excessive short-term view (Blundell-Wignall, Atkinson, Lee, 2008; Kirkpatrick, 2009), along with the need to provide a stronger regulation about organization and governance of banks.

In this field, capital adequacy and credit quality are two fundamental topics for bank management, whether within a stable scenario or whether during a financial turmoil. Especially during the subprime crisis there has been an increasing attention on the capacity of banks to face the downturn and the sharp decline in their profitability (Allen, Gale, 2007; Borio, Zhu, 2008; Acharya, Richardson, 2009): by this meaning, bank's capital has become a key variable, along with credit quality measurement and other information coming from capital markets, such as stock price, rating judgment and credit spread (Flannery, 1999; Hancock, Kwast, 2001; Norden; Weber, 2007).

As we already mentioned, a broad literature have been increasing attention on the causes and consequences which have characterized the recent financial turmoil: nevertheless, not yet a clear answer has been already proposed to the question of how different typologies of banks moved up to the financial crisis and which has been more involved on it (Knaup, Wagner, 2008; Altubans et al., 2009). By this way, we try to consider if it is possible to distinguish between different business model, in term of performance achieved before and after the financial meltdown. Otherwise, we are interested on analyzing if others causes, different from the characteristics of business, such as model of governance, characteristics of board, could be used to explain the performance achieved during the sub-prime crisis by the most relevant financial intermediaries.

From this perspective, initially our research aims to investigate for any relationship existing between banks' risk, which we analyze through capital adequacy, credit quality, high leverage and underestimated risks, and market performance achieved by the banking industry of most developed countries (Diamond, Rajan, 2005; Garlappi, Shu, Yan, 2008). In particular, by focusing our attention on a sample of 100 top world's players, we attempt to confirm the linkage existing between the endogenous bank's efficiency and the market performance achieved by those banks during the period from 2005 to 2008. Through this analysis we try to distinguish, before the crises occurred, as well as during its development, between banks which have been riskier than others, because they used less capital, they used higher leverage, they suffered because of a larger amount of subprime loans. If it is possible to make this distinction, we would like to verify if market's prices have reflected the more endogenous risk of the riskier banks in terms of higher volatility or lower performance of their stock (Diamond and Rajan, 2009).

An impressive literature has traditionally been focusing attention on bank capital (Myers, 1984; Merton and Perold, 1993; Froot and Stein, 1995; Matten, 1996): moreover, there is a significant theoretical literature on bank capital requirements and their effects during financial crises (Koehn and Santomero, 1980; Kim and Santomero, 1988; Furlong and Keeley, 1990; Thakor, 1996; Hellmann, Murdock and Stiglitz, 2000). Despite this broad literature, the issues of financial leverage and bank capital have gained special prominence in light of recent events, when the subprime lending crisis has dramatically showed which a high-leverage financial system can find itself beset with a crisis that further erodes capital and sets in motion forces that exacerbate the crisis (Gerardi, Lehnert, Sherland and Willen, 2008). Therefore, even if it is by now well understood that high leverage ratios of banks make the financial system more fragile and increase the likelihood of financial crises (Allen, Gale, 2007), our knowledge of the dynamics of financial-system leverage is rather limited (Goel, Song and Thakor, 2009).

During last decades, the business of banks has undergone fundamental changes, owing to financial innovation, financial integration and increases in market funding: it is common opinion that parts of the banking sector have moved away from the traditional "originate-to-hold" to an "originate-to-distribute" model of the banking firm, which is much more reliant on market forces (Loutskina and Strahan, 2006; Hirtle, 2007; Altunbas, Gambacorta and Marqués-Ibáñez, 2009).

By this meaning, it is widely recognized that bank risk must be carefully reconsidered, together with other standard bank-specific characteristics, when analyzing the role of the bank in economic system. Due to financial innovation, variables capturing bank size, liquidity and capitalization are fundamental for the analysis of the banks' ability and willingness to face financial shocks (Blundell-Wignall, Atkinson, Lee, 2008; Kirkpatrick, 2009). Moreover, the 2007-2008 credit turmoil has made very clear that the perception of risk by financial markets is crucial to the banks' capability to raise new funds, affecting their balance sheets in different ways.

3. Fundamental elements of the Reform Agenda: is there any unresolved bias?

The financial crisis of 2007-2008 has stimulated an intensive program of reforms, aiming to strengthen the resilience of financial system, through a more effective regulatory system and supervisory monitoring, within an unprecedented effort for coordination between supervisory authorities. In this perspective, the Basel Committee aims to raise the resilience of the banking sector by strengthening the regulatory capital framework, as well as to increase the quality of the regulatory capital base and to enhance the risk coverage of the capital framework. It has been planned to introduce a leverage ratio that is intended to constrain excess leverage in the banking system and to provide an extra layer of protection against model risk and measurement error (BCBS, 2009a). Moreover, the Committee is introducing a number of macroprudential elements into the capital framework to help to contain systemic risks arising from procyclicality and from the interconnectedness of financial institutions (BCBS, 2009b).

From this perspective, the Committee is looking to increase the quality, consistency, and transparency of the capital base, so to ensure that large, internationally active banks would be in a better position to absorb losses on both a going concern and gone concern basis. After that, the

Committee is planning to strengthen the risk coverage of the capital framework, as well as the capital requirements for counterparty credit risk exposures arising from derivatives, repos, and securities financing activities (BCBS, 2009c). By these enhancements, the resilience of individual banking institutions will be strengthened and the risk of shocks transmitted from one institution to the next through the derivatives and financing channel should be reduced (BCBS, 2009d). The reform agenda has planned to introduce a leverage ratio as a supplementary measure to the Basel II risk-based framework, in a way to contain the build up of excessive leverage in the banking system and introduce additional safeguards against excessive risk assumptions. Moreover, the Committee is going to introduce a series of measures to promote the build up of capital buffers in good times that can be drawn upon in periods of stress: it is intended as a countercyclical capital framework, which can contribute to a more stable banking system, thanks to the capacity to reduce, instead of amplify, economic and financial shocks. At the same time, the Committee is also promoting more forward looking provisioning based on expected losses, which captures actual losses more transparently and is also less procyclical than the current "incurred loss" provisioning model (BCBS, 2009b). Least, but not last, the Committee is introducing a global minimum liquidity standard for internationally active banks that includes a 30-day liquidity coverage ratio requirement underpinned by a longer-term structural liquidity ratio (BCBS, 2009e): through this framework the Committee aims to introduce a common set of monitoring metrics to assist supervisors in identifying and analysing liquidity risk trends at both the bank and system wide level (BCBS, 2008).

Consistent with the objective to evaluate the effectiveness of the proposals introduced by the reform agenda, in this paper we consider the most relevant firm characteristics which can be examined as determinants of bank's profitability, in order to investigate the main causes of performance achieved by major international banks during the sub-prime crisis: through this analysis, we aim to highlight the financial variables which can be identified as determinants of riskier strategies persecuted by international banks, and thus, to evaluate if the reform agenda is going to solve the problems that actually characterize the overall financial system.

Nevertheless the judgement one can assign to relevant efforts provided by the reform agenda, we consider other fundamental topics need to be analysed in order to enforce the resilience of financial intermediaries: by this meaning, the recent financial crisis has contributed to increase attention on the relevant debate, which has been ongoing within the discipline of financial intermediation, about the contribution that a good governance is able to provide in order to ensure a greater stability for financial intermediaries, and for the financial system as a whole (BCBS, 2006; Kirkpatrick, 2009; Beltratti, Stulz, 2009).

From this perspective, the economic literature has already defined the critical role that corporate governance can perform to improving the efficiency of the financial system and thus contribute to economic growth. For the most traditional literature, the issue of corporate governance focuses on the key issues arising from the separation between ownership and management (Berle, Means, 1932), along with other issues that affect the influence that different components of governance can determine on business performance (Hermalin, Weisbach, 2003). Nevertheless, according with the discipline of financial intermediaries, the issue of governance acquires an even broader significance, since it enlarges the number of subjects that are being affected by banks' activity. By this meaning, the regulation of financial intermediaries in corporate governance plays a vital role for the realization of a sound management system, when the management decision system and the discipline of decision-making in the board are able to offer more safeguards to protect the interests of all corporate stakeholders, and not just the one' of shareholders (Macey, O'Hara, 2003).

The Basel Committee has long recognized that given the important role played by banks for financial intermediation in the economy, their high sensitivity to potential difficulties arising from ineffective corporate governance and finally the need to safeguard the shareholders and stakeholders stakes, the corporate governance of banking organizations has a significant importance for the international financial system (BCBS, 2006). The banks' governance thus becomes critical to ensure effective management on the one hand the efficient use of resources, secondly the

solvency and stability of the financial system (Levine, 2004): by this way, valid governance mechanisms lead to an efficient bank's management functioning and funds' allocation, including improving the governance systems of companies that are receiving those funds (Adams, Mehran, 2003).
An extensive literature has already highlighted how the government of banks appears to be more complex than the one of industrial firms (Adams, Mehran, 2004): the number of stakeholders involved is greater, as well as shareholders, depositors, and also supervisory authorities are directly concerned with banks' performance. In these terms, the classic agency problems (Berle, Means, 1932) also extends to other aspects, related to the possible negative externalities arising from the failure of a bank, the inefficient monitoring by depositors and other stakeholders, the opacity of its operating environment, the regulation (Levine, 2004).
From this perspective, the recent financial crisis has enhanced the debate about the effectiveness of banks' governance, especially allowing for the inadequacy in the conduct of these financial institutions: therefore, if the classical theories of financial intermediation emphasized the specificity of banks in the functioning of the economic system (Gurley, Shaw, 1960, Benston and Smith, 1976; Leland, Pyle 1977, Diamond, 1984), some more recent visions of the financial system helped to accentuate the role that these operators are able to produce in terms of risk management and financial contribution to the innovation process (Merton, Bodie, 1995; Allen, Santomero, 1998). That view led its consequences in terms of rethinking the overall governance of the financial system (Williamson, 1975; Tirole, 1986), but also in terms of opacity and lack of management regulations to stem the flow of innovation and growing complexity of managing such operators (Draghi, 2008).
Among the multiple mechanisms of corporate governance, the board is of particular importance in contexts such as banking, characterized by limited competition, strong regulation and high information asymmetry. This body helps to mitigate the weaknesses of other governance mechanisms, as it constitutes a key tool to monitor the behavior of managers of the bank and protect the interests of shareholders (Andres Vallelado, 2008). There are several Authors that have investigated over time the characteristics of the board, through the assessment of various empirical studies that have shown conflicting results among them: several studies have analyzed the interaction between board size and financial performance (Jensen, 2005; Linck, Netter and Yang, 2008; Agoraki, Delis, Staikouras, 2009), both with regard to banks and other firms. Others scholars have considered if the composition of board between inside and outside directors can influence firms' performance (Adams, Mehran, 2004; Staikouras, Staikouras, Agoraki, 2006); a number of recent studies have considered if the presence of so-called CEO-duality (Brickley, Coles, Jarrell, 1997; Pi, Timm, 1993), may have the same effectiveness.
However, other studies have focused more attention about the structure and functioning of board, including the assessment of the number of meetings held during a year (Mace, 1986; Conger et al., 1998; Vafeas, 1999), the presence of committees aimed at ensuring a effective managing of the most complex issues that characterize banks' governance (Klein, 1995, John, Senbet, 1998, Davidson, Pilger, Szakmary, 1998, Shivdasani, Yermack, 1999). Finally, the different possible board structures could be analyzed in order to understand how it can influence banks performance.
Consistent with the studies that have enlarged in the analysis of various characteristics of the board, in this paper we take into account boards' characteristics, in order to understand how these can affect financial performance and stock performance, and thus they may be included in the reform agenda.

4. Dataset and descriptive analysis

Consistent with the objective to understand if the reform agenda is going to cover the "gap" which has been revealed by 2007-2008 crisis, we first of all worked to identify a large sample of banks, capable to grasp the fundamentals that have generated the recent financial crisis: for this purpose the Bankscope database (Bureau Van Dijk Electronic Publishing ©) has been utilized, in order to collect information about the balance sheet and market prices of top global players.

In the construction of the sample was decided to focus on major global banks, favoring a choice taking into account the size and significance of banks for each of the countries chosen: initially, the top 200 global banking groups were identified, selected by the value of total assets on December 2007, referring to the categories of intermediaries surveyed in this database as commercial banks, merchant banks, bank holding companies, other financial groups, taken from 22 major countries worldwide. By this meaning, through the evaluation of the financial characteristics presented in the period 2005-2008 an initial sample of 145 banks has been selected, which then, depending on the availability and completeness of data, was used to arrive to a final sample of 98 banks, which could represent a significant sample of international banks affected by the crisis. In this analysis it was decided to assess the period 2005-2008, because the account value prior to 2005 could lead to major problems of analysis of time series data, because of changes in accounting standards occurred because the introduction of IAS-IFRS. Thus, the need to maintain as an object of the analysis a cluster of banks that would guarantee a minimum size, it made necessary to include 22 no-listed banks, which effectively reduced the sample of listed banks analyzed at 76 compared to the total sample examined. In our opinion, it was a necessary choice in order to keep the investigation of banking performance in such dimensions as to allow a comparison of key strategies designed to address the process of financial innovation that has affected the international financial system before the crisis, together with the impact of the crisis itself has involved, in terms of reduced profitability and decrease performance equity.
At this point, once identified the sample of banks considered in the analysis, we proceeded to the assessment of financial and stock performance recorded by the banks under analysis: it was taken into account the distinction resulting from the classification of institutional affiliation of each operator, but, more importantly, through the evaluation of the business model analyzed from the estimation of the composition of the balance sheet and income statement. Through this analysis, it was possible to distinguish between different business models achieved by different intermediaries, mainly synthesized by structural indicators of balance sheet composition. Then, it has been possible to analyze the quality of the assets and the degree of risk exposure, measured by ratios expressing the financial position and capital adequacy of banks, together with other characteristics of business, key indicators of profitability and efficiency shown by each firms. Afterward, through the use of the Datastream database, it was possible to evaluate the stock performance recorded by the banks under analysis: we referred to the value of buy-and-hold-dollar return *BHAR*, which has been analyzed before the crisis, conventionally recognized with the moment of announcing the bankruptcy of Lehman Brothers, as well as after that time (Beltratti, Stulz, 2009).
The second part of the analysis considers some of the fundamental characteristics of banks governance, we collected through the analysis of financial statements and corporate governance documents, as well as other information available from the websites of companies for the period 2006-2007: we refer, for example, to the number of directors comprising the board, the board composition, the number of meetings held, and others characteristics of board structure and functioning, like the business model adopted (we distinguished between the one-tier board system, the vertical two-tier board system, the horizontal two-tier board system), the ownership structure, the institutional classification and type of activity performed by each operator.
Once constructed the dataset, we proceeded to analyze the fundamental differences characterizing the sample of banks, both by the properties on the sample as a whole, both through the performance evaluation on the banks belonging to different countries considered. Table 1 e Table 2 show a description of the characteristics of the banks taken together and by countries' sample: both the tables show a significant heterogeneity between the banks included in the sample, even for financial variables, then for governance attributes. In Table 1, between the others, a relevant size diversity is illustrated, whilst in table 2 a significant heterogeneity between different business model and profitability is showed for the countries considered by our study.

5. Empirical analysis

Consistent with the objective to estimate the effectiveness of the key proposals of reform agenda, in Table 3 the results of regression estimating the relation between buy-and-hold stock returns over the period January 2005 - June 2007 and bank characteristics are reported. Regression 1 takes into account a judgment of the relation between stock performance and financial firm characteristics computed in 2006. Characteristics like Total Assets, Deposits, Loans, Equity, Net Income, Other Operating Income are analyzed, in order to show the relation with stock performance, and thus assess the effectiveness of reform agenda proposals. In this case, high bank leverage, together with net income, represent significant determinants of stock performance achieved before the crisis by large banks. Regression 2 and 3 increase the complexity of the model, considering the significance of others banks characteristic, such as Board Size, Outside (ratio of number of outside directors to number of board members), Board Meetings, Two-Tier Board, One-Tier Board. In this case, the innovation realized by large banks, measured through the ratio of other operating income to total assets, and the choice of two-tier board model result significant predictor of the stock performance achieved during the period January 2005 - June 2007, whilst the choice of one-tier model seems to influence negatively this index.

In Table 4 the relation existing between buy-and-hold stock returns over the period June 2007 - December 2008 and bank characteristics in reported. In particular, regression 1 considers the relation between stock performance and financial firm characteristics computed in 2008. Characteristics like Total Assets, Deposits, Loans, Equity, Net Income, Other Operating Income are considered to understand stock performance after the developing of the crisis. Regression 2 and 3 show the relevance of other banks' characteristics, like Board Size, Outside (ratio of number of outside directors to number of board members), Board Meetings, Two-Tier Board, One-Tier Board, which, in our opinion, should be objective of an effectiveness reform aiming to strengthen the resilience of financial system. In this case, capital market seems to change its belief, with a positive judgment for banks capital base and a greater appreciation for net income in all the versions of the model. However in regression 2 and 3 also the board size exhibits a positive role for stock performance, confirming the resource-based view (Hermalin,Weisbach, 2003), whilst the choice of two-tier board in this case shows a negative influence on stock performance. Therefore it seems the banks that the market rewarderd with large stock increases in 2006 are banks whose stock suffered the larger losses during the crisis.

In Table 5 the results of regression estimating the relation between return on equity in 2006 and bank characteristics are reported. Regression 1 takes into account financial firm characteristics computed in 2006. It considers Total Assets, Deposits, Loans, Other Operating Income, in order to evaluate their influence on economic performance before the crisis. Regression 2 and 3 show the significance of other characteristics, like Two-Tier Board, One-Tier Board, CEO Duality, Nomination Committee, Remuneration Committee, Audit Committee, as determinant of economic performance realized by the banks included in the sample. In this case, all the regressions show a positive and significant role for other operating income as determinant of economic profitability, whilst regression 2 and 3 demonstrate also a significantly positive coefficient for CEO duality and nomination committee, whilst the choice of the two-tier board model exhibits a negative sign.

Finally, Table 6 comprises the regression estimate of the relation between return on equity in 2008 and bank characteristics computed in 2008. Regression 1 considers Total Assets, Deposits, Loans, Other Operating Income, as determinants of economic performance. Regression 2 and 3 consider other characteristics like Two-Tier Board, One-Tier Board, CEO Duality, Nomination Committee, Remuneration Committee, Audit Committee, in order to highlight the main area which should be included in the framework of supervision reform. In this case, all the regressions show a significantly negative coefficient for other operating income, whilst not other significant evidences are highlighted for other banks characteristics.

6. Conclusions

The financial crisis of 2007-2008, with its related problems of capitalization, liquidity, deterioration of assets quality, market losses, has stimulated an intensive program of reforms, aiming to strengthen the resilience of financial system, through a more effectiveness regulatory system and supervisory monitoring, within an unprecedented effort for coordination between supervisory authorities. In this perspective, the Basel Committee has approved a series of proposals to amend the current regulatory framework, with the aim to create a financial system stronger, more liquid, with less debt, and thus, more capable to prevail to possible future crises. Nevertheless the fundamentals proposals contained in the pattern of reform agenda, in this paper we considered other characteristics of banks governance which can have a fundamental role in order to explain the circumstances that affected the last financial crisis. We have found evidence about the necessity for supervisor authorities to take into account other determinants of banks performance, rather the financial characteristics which have been claimed by the reform agenda: we refer to fundamental governance characteristics which constitute significant determinants of the performance achieved worldwide by a large sample of banks during the period 2005-2008, for which we retain favorable a serious consideration by the supervisory authority, in order to make the reform agenda more effective and capable to really increase the resilience of financial system.

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Annexes

Table 1 – Summary Statistics

Value	**Mean**	**Median**	**Dev. St.**	**Max**	**Min**	**25° Perc**	**75° Perc**
Number of Board Members	15,30	15,00	5,93	37,00	0,00	2,85	30,35
Number of Outside Directors	9,12	9,00	4,95	23,00	0,00	0,00	21,46
Number of Board Meetings	14,02	13,00	8,11	47,00	0,00	0,00	39,62
Total Assets 2008	557.043	367.763	524.486	2.515.718	92.870	108.316	2.221.221
Total Capital Ratio 2008	11,99	11,40	2,12	18,00	5,70	8,09	17,43
Equity / Tot Assets 2008	4,51	4,26	2,79	12,60	-3,60	-1,95	11,93
Return On Avg Assets (ROAA 2008)	-0,10	0,23	1,37	1,17	-6,54	-6,16	1,16
Return On Avg Equity (ROAE 2008)	-10,24	4,86	57,43	25,06	-405,42	-267,46	21,95
BHAR JAN 05 - JUN 07	55,30	48,51	60,88	433,78	-50,78	-17,53	255,73
BHAR JUL 07 - DEC 08	-63,00	-65,86	24,46	-10,24	-100,00	-100,00	-12,11

Table 2 – Summary Statistics (Country Description)

Country	N° of board components	N° of Outside directors	N° of board meetings	Total Assets 2008	Loans / Total Assets 2008	Equity / Tot al Assets 2008	ROE 2008	BHAR Jan05-Jun07	BHAR Jul07-Dec08
Australia	9,3	7,8	10,8	293.487,43	0,67	5,04	15,35	44,43	-43,31
Austria	18,0	n.a.	7,0	201.441,00	0,61	5,51	9,36	52,51	-70,80
Belgium	16,3	6,7	19,7	366.397,67	0,35	4,35	-152,09	52,15	-86,25
Brazil	7,0	1,5	15,5	151.011,59	0,38	6,64	25,82	84,39	-56,25
Canada	16,2	14,3	17,5	323.756,02	0,46	4,67	7,61	45,22	-40,02
China	11,3	4,0	9,0	620.534,76	0,45	5,97	14,88	51,90	-28,63
Denmark	15,0	10,0	13,0	481.848,80	0,31	2,77	1,05	35,53	-77,51
France	17,9	7,8	10,9	956.890,57	0,34	2,85	-1,35	41,86	-57,86
Germany	20,3	11,2	10,5	493.512,03	0,38	2,68	8,53	110,04	-74,76
Japan	13,7	4,3	11,0	534.438,47	0,38	5,09	6,78	47,38	-65,28
Hong Kong	20,0	n.a	n.a	367.763,48	0,30	5,08	25,40	n.a	n.a
India	13,0	n.a	6,0	249.022,18	0,59	6,80	13,72	137,29	-20,70
Ireland	15,0	6,5	10,0	189.788,50	0,70	4,53	16,93	28,00	-92,53
Italy	18,0	15,4	21,4	427.774,44	0,67	7,79	3,54	56,04	-60,50
Korea. Rep.	16,5	7,3	3,0	154.306,03	0,65	5,53	6,58	118,51	-75,31
Norway	30,0	21,0	n.a	188.023,90	0,65	4,44	10,97	30,80	-64,02
Netherland	12,0	11,0	11,0	870.200,00	0,52	3,40	8,86	56,26	-88,30
Russia	19,0	4,0	24,0	165.469,94	0,75	11,14	13,03	433,78	-79,09
Spain	18,8	5,0	14,0	508.735,83	0,63	6,17	13,69	45,60	-50,12
Sweden	13,0	8,8	17,0	267.580,33	0,62	3,76	14,18	53,36	-58,08
Switzerland	12,5	12,0	30,0	1.075.915,90	0,22	3,14	-31,01	67,59	-69,84
UK	13,5	7,6	18,4	990.323,65	0,50	3,16	-25,77	20,22	-68,47
USA	13,0	11,2	16,8	715.538,32	0,34	6,11	32,75	28,41	-67,52

Table 3 – Stock returns for January 2005 – June 2007

Regression	(1)		(2)		(3)	
	Beta	t-statistic	Beta	t-statistic	Beta	t-statistic
Costant	249.154*	1.883	59.410	0.667	67.824	0.791
Ln (Total Assets 2006)	-15.735	-1.623	-4.185	-0.707	-4.660	-0.811
Loans 2006	-0.263	-0.554	0.187	0.683	0.204	0.757
Deposits 2006	0.499	1.157	0.428	1.534	0.448	1.642
Equity 2006	-10.371**	-2.312	-4.996	-1.490	-3.954*	-1.858
Net Income 2006	57.466**	2.367	7.988	0.405		
Other Operating Income 2006	-0.183	-0.482	0.735***	2.717	0.746***	2.801
Ln (Board Size)			-17.556	-1.173	-18.248	-1.240
Outside			21.660	1.165	21.603	1.173
Ln (Board Meetings)			5.927	0.743	5.317	0.686
Two-Tier Board			46.861***	2.784	43.857***	2.931
One-Tier Board			-18.515**	-1.851	-17.720*	-1.824
Number of Observation	75		75		75	
Adj-R^2	0.117		0.187		0.202	

The regression estimate the relation between buy-and-hold stock returns over the period January2005-June2007 and bank characteristics. Firm characteristic are computed in 2006. Ln (Total Assets 2006) is natural logarithm of Total Assets 2006, Deposits is the ratio of deposits to total assets, Loans is the ratio of loans to total assets, Equity is the ratio of equity to total assets, Net Income is the ratio of net income to total assets, Other Operating Income is the ratio of other operating income to total operating income, Ln(Board Size) is the natural logarithm of number of board members, Outside is the ratio of number of outside directors to number of board members, Ln(Board Meetings) is the natural logarithm of number of board annual meetings, Two-Tier Board is a dummy variable equal to 1 when a vertical two-tier board system is adopted, One-Tier Board is a dummy variable equal to 1 when a one-tier board system in adopted. Alternative models have been developed to test robustness to different included/excluded variables. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Adj.-R^2 is adjusted R-squared.

Table 4 – Stock returns for June 2007 – December 2008

Regression	(1)		(2)		(3)	
	Beta	t-statistic	Beta	t-statistic	Beta	t-statistic
Costant	-95.169	-2.061	-126.895	-2.347	-138.820	-2.794
Ln (Total Assets 2008)	1.605	0.472	2.627	0.732	1.9061	0.562
Loans 2008	-0.122	-0.845	-0.124	-0.800	-0.088	-0.618
Deposits 2008	14.049	0.886	6.511	0.388	5.468	0.340
Equity 2008	233.677**	2.079	271.881**	2.228	257.013**	2.214
Net Income 2008	5.109**	2.024	5.530*	1.729	4.5169*	1.705
Other Operating Income 2008	-0.041	-0.837	-0.026	-0.470	-0.005	-0.108
Ln (Board Size)			13.994*	1.407	17.779**	1.981
Outside						
Ln (Board Meetings)			-4.823	-0.974		
Two-Tier Board			-13.788*	-1.776	-15.977*	-2.205
One-Tier Board			-5.443	-0.746	-7.740	-1.133
Number of Observation	73		73		73	
Adj-R^2	0.211		0.204		0.246	

The regression estimate the relation between buy-and-hold stock returns over the period June2007-December2008 and bank characteristics. Firm characteristic are computed in 2008. Ln (Total Assets 2008) is natural logarithm of Total Assets 2008, Deposits is the ratio of deposits to total assets, Loans is the ratio of loans to total assets, Equity is the ratio of equity to total assets, Net Income is the ratio of net income to total assets, Other Operating Income is the ratio of other operating income to total operating income, Ln(Board Size) is the natural logarithm of number of board members, Outside is the ratio of number of outside directors to number of board members, Ln(Board Meetings) is the natural logarithm of number of board annual meetings, Two-Tier Board is a dummy variable equal to 1 when a vertical two-tier board system is adopted, One-Tier Board is a dummy variable equal to 1 when a one-tier board system in adopted. Alternative models have been developed to test robustness to different included/excluded variables. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Adj.-R^2 is adjusted R-squared.

Table 5 – Return on Equity 2006

Regression	(1)		(2)		(3)	
	Beta	t-statistic	Beta	t-statistic	Beta	t-statistic
Costant	20.014	1.935	31.032***	2.904	33.071***	2.933
Ln (Total Assets 2006)	-1.181	-1.559	-1.747**	-2.235	-1.777**	-2.152
Loans 2006	0.041	1.171	-0.031	-0.815	-0.044	-0.967
Deposits 2006	0.041	1.294	0.006	0.190	0.007	0.217
Other Operating Income 2006	0.131***	4.846890	0.074**	2.280	0.062*	1.698
Two-Tier Board			-2.538**	-1.925	-2.423	-1.645
One-Tier Board			-2.019	-1.496	-2.002	-1.444
CEO Duality			2.905**	2.348	2.644**	1.970
Nomination Committee			4.876***	3.305	5.391***	2.982
Remuneration Committee					-0.114	-0.060
Audit Committee					-0.724	-0.232
Number of Observation	98		98		98	
Adj-R^2	0.195		0.215		0.179	

The regression estimate the relation between return on equity 2006 and bank characteristics. Firm characteristic are computed in 2006. Ln (Total Assets 2006) is natural logarithm of Total Assets 2006, Deposits is the ratio of deposits to total assets, Loans is the ratio of loans to total assets, Other Operating Income is the ratio of other operating income to total operating income, Two-Tier Board is a dummy variable equal to 1 when a vertical two-tier board system is adopted, One-Tier Board is a dummy variable equal to 1 when a one-tier board system in adopted, CEO Duality is a dummy variable equal to 1 when the CEO is also a managing director, Nomination Committee is a dummy variable equal to 1 when the board has nominated a nomination committee, Remuneration Committee is a dummy variable equal to 1 when the board has nominated a remuneration committee, Audit Committee is a dummy variable equal to 1 when the board has nominated an audit committee. Alternative models have been developed to test robustness to different included/excluded variables. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Adj.-R^2 is adjusted R-squared.

Table 6 – Returns on Equity 2008

Regression	(1)		(2)		(3)	
	Beta	t-statistic	Beta	t-statistic	Beta	t-statistic
Costant	-84.752	-0.663	-35.847	-0.352	-34.952	-0.333
Ln (Total Assets 2006)	7.963	0.828	1.098	0.138	0.517	0.061
Loans 2006	0.279	0.715	0.320	1.014	0.187	0.541
Deposits 2006	-33.726	-0.828	15.020	0.464	11.732	0.338
Other Operating Income 2006	-0.005**	-2.267	-0.004***	-2.743	-0.005***	-2.841
Two-Tier Board					16.816	1.120
One-Tier Board					-21.261	-1.515
CEO Duality			-5.319	-0.418	-8.148	-0.605
Nomination Committee			5.936	0.434	8.438	0.490
Remuneration Committee					5.058	0.273
Audit Committee					13.227	0.421
Number of Observation	96		96		96	
Adj-R^2	0.025		0.047		0.061	

The regression estimate the relation between return on equity 2008 and bank characteristics. Firm characteristic are computed in 2008. Ln (Total Assets 2008) is natural logarithm of Total Assets 2008, Deposits is the ratio of deposits to total assets, Loans is the ratio of loans to total assets, Other Operating Income is the ratio of other operating income to total operating income, Two-Tier Board is a dummy variable equal to 1 when a vertical two-tier board system is adopted, One-Tier Board is a dummy variable equal to 1 when a one-tier board system in adopted, CEO Duality is a dummy variable equal to 1 when the CEO is also a managing director, Nomination Committee is a dummy variable equal to 1 when the board has nominated a nomination committee, Remuneration Committee is a dummy variable equal to 1 when the board has nominated a remuneration committee, Audit Committee is a dummy variable equal to 1 when the board has nominated an audit committee. Alternative models have been developed to test robustness to different included/excluded variables. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Adj.-R^2 is adjusted R-squared.

Abstracts of Selected Presenters by Request

0011
Corporate Risk Management: The Hedging Footprint

Peter MacKay[1], Sara Moeller[1]

[1]HKUST, Hong Kong, Hong Kong, [2]University of Pittsburgh, Pittsburgh, Pennsylvania, United States

What risks do firms hedge? How much do they hedge? How far ahead do they hedge? What determines corporate hedging policy? Should firms hedge at all? Can corporate risk management create value? As straightforward and important as they might appear, these questions are still largely unresolved. One difficulty in answering them is lack of data: Large-sample studies rely on coarse measures (does a firm hedge or not?) that offer few insights and studies with precise measures rely on small-sample, proprietary data that do not generalize. We propose an alternative approach that extracts corporate hedging policy from publicly-available data. The key insight is that the way corporate risk-management activity is recorded (cash-flow hedge accounting) leaves a hedging footprint that we can uncover by regressing a firm's sales (or costs) against past futures prices and recent spot prices. We apply our approach to a sample of 34 oil refiners and return to answer some of the above questions.

0029
Economic Growth and the Demand for Graduate Management Education in the APAC Region

Sabeen Sheikh, Alex Chisholm

Graduate Management Admission Council, McLean, VA, United States

Graduate management education in the APAC region increasingly is rooted in the transformation of the Asian economy. The impact of regional economic growth on the business school landscape and the demand for talented managers can be identified through a multitude of data that the Graduate Management Admission Council (GMAC) collects on a regular basis.

This session will explore student-side dynamics as captured through GMAC survey research and GMAT® examinee data, and also will examine macro trends that have helped foster the development of graduate management education through external data sources such as the IMF, UNESCO, and the World Bank. In particular, data collected from business school alumni will reveal insights on the perceptions of the national and global economy, the value of graduate business education in relation to employment status, and the impact of such education on labor market outcomes for citizens of this exciting region. Asia is likely to remain a prime focus of global economic and political activity as the 21st century moves forward. As the leader in access to research on graduate management education, GMAC is well positioned to offer the most in-depth understanding of Asian economies in the context of human capital development.

0020
Why Toyota was the almighty in just-in-time delivery and zero defects

Evelyn Anderson
Australian Catholic University, Brisbane, Queensland, Australia

Womack, Jones and Roos, in their ground breaking work published in 1990, identified two important features in the manufacturing process of automobiles that gave Japanese automakers a competitive advantage over their western counterparts. They were the just-in-time (JIT) delivery of auto parts with zero defects. Although both Nissan and Toyota had implemented a vigorous quality control program, the Toyota Production System (TPS) alone became synonymous with JIT delivery and zero defects. Until the recent auto recalls, Toyota symbolised the highest standard of quality assurance in spite of its enviable track record of minimal inventory. This paper explains how Toyota in particular had benefited from a Japanese industrial policy, which was enacted in 1956 and which expired in 1970. The Japanese legislation was the Provisional Act for the Promotion of the General Machinery Industry. Toyota's choice of governance in response to and in combination with the incentives provided in the legislation gave the automaker a competitive edge in inventory management in the second half of this fifteen-year period vis-a-vis its domestic arch rival - Nissan.

0026
Financial Regulation and Market Discipline in the Indian Context by N.R.Bhusnurmath and [1] Shailendra Kumar Rai[2][1] Professor of Finance, Management Development Institute, Gurgaon-122001, India.[2] Assistant Professor, Management Development Institute, Gurgaon-122001, India.

N R Bhusnurmath, Shailendra Kumar Rai
Management Development Institute, Gurgaon, Haryana, India

The global crisis has underlined the critical necessity of ensuring stability of the banking system in any economy. Historically, financial regulation was the route adopted towards this objective. Subsequently, recently under Basel II market discipline has also been adopted; in fact as one of the three pillars. While financial regulation is imposition by the sovereign or its representative, market discipline is in keeping with operation of free market forces and is endogenic. Market discipline is an important element in safeguarding the soundness of the banking system and in maintaining overall financial stability. But experience has shown that the force of the market discipline is limited. Thus, Market discipline and regulation are tools which should go hand-in-hand.

In view of the recent financial crisis, the objectives of the paper are - to measure the effectiveness of the market discipline on Indian banking system and to assess the efficiency of the regulation on the banking system. The paper will measure the impact of recent financial crisis on the Indian banking system by doing stress testing. The study will also throw light on the role of the regulator in strengthening and stabilizing the Indian banking system in the context of the recent financial crisis. Though the measurement of the effectiveness of the regulator is anecdotal and is assessed only by analyzing the reports and statements given by the regulator, however the effectiveness of the market discipline is tested through data analysis.

0033
What Makes New Contracts Succeed or Fail?

Mao-Wei Hung[1], Bing-Huei Lin[2], Yu-Chuan Huang[3], Jian-Hsin Chou[3]
[1]National Taiwan University, Taipei City, Taiwan, [2]National Chung Hsing University, Taichung City, Taiwan, [3]National Kaohsiung First University of Science and Technology, Kaohsiung City, Taiwan

This study aims at identifying key factors that influence the success of exchange-traded futures contracts. We first examine these factors in the context of the Taiwan Futures Exchange (TAIFEX) and then explore the effect of specific futures exchange structures on the success of futures contracts in the context of futures exchanges worldwide. Results show that successful futures contracts benefit from a large and volatile spot market. For the TAIFEX, the transaction tax and the percentage bid-ask spread have negative impacts on futures volume, suggesting that a liquid market with lower transaction costs is required for a futures contract to succeed. For worldwide exchanges, the choice of the trading platform, the relative size of exchanges, and whether the futures market is located in the same country as the underlying cash market are all important to the success of contracts.

0032
Perceived fairness of layoff and its impact on layoff survivors: A Case of MNCs in India

Sumita Rai
Management Development Institute, Gurgaon/Haryana, India

The globe is facing challenges due to recent economic melt-down. Lay-offs have become organizational reality. Hundreds of organizations laid-off their employees who once were loyal and committed to them and also organizations put a lot of effort on retaining them at that point of time.

There is no muse that losing job is a stressful experience for employees who are being laid off but also this generates anxiety and stress for the employees who have seen people leaving the organization. This research endeavour is attempted to understand the perceived fairness of lay-off and its impact on lay-off survivors (people who are not laid off). There is lot of work in the area of justice perceptions and organizational commitment (Bennett et al, 1995; Wanberg, Bunce & Gavin, 1999). Number of researchers (Brockner, Grover, O, Malley, Reed & Glynn, 1993; Brockner, et al, 2004) has conducted study to see the impact of lay-off on layoff survivors. But there is not a single study to see the impact of lay off on lay-off survivors in Indian context. Data were collected and analyzed from 360 employees from Multinational Company located in northern part of India. Results are discussed toward highlighting the role of fairness in the lay-off process and the findings also highlight the impact on work behaviour attitude of employee and productivity effectiveness of the organization. In this study, a model is proposed through which developing and futuristic economy organization can minimize the perceived negative impact of lay-off on lay-off survivors.

0042
A Contractual Analysis of State versus Private Ownership

Susheng Wang, Kun Jiang
Hong Kong University of Science and Technology, Hong Kong, China

Since the main problem with SOEs is the incentive problem and the contractual approach has been recognized as the basic solution to this problem, this paper provides a unique contractual analysis of privatization. We analyze the advantages and disadvantages of private ownership versus state ownership under various circumstances with the same model setting. Specifically, we compare the contractual relationship and induced incentive in central planning economy with those in market economy of a same firm before and after the privatization by taking into account external risks, internal governance, and the relative importance of the owner versus managers. We have the following theoretical findings. First, when the business environment is quite risky, the market solution is always better than the planning solution. Second, when the business environment is not very risky, if corruption can be effectively controlled, then the market solution is better. In particular, when corruption is minimal, the market solution is always better. Third, more generally, the market solution is better if a safer environment is coupled with more effective control of corruption. Fourth, if corruption cannot be effectively controlled, the market solution can still be better if either the owner or the manager is dominant over production, otherwise the planning solution is better. Finally, when times are always good, the market solution is better if corruption is under control, otherwise the planning solution is better. We also provide empirical evidences to support our theoretical findings with the privatization data in China.

0081
Enhancing Cross-cultural Management Effectiveness: Evidence from Australian Business Operations in China

Ling Deng
RMIT University, Melbourne, Australia

This paper aims to investigate the key factors that contribute to effective cross-cultural management within the context of Western-Chinese cultural differences in China. Derived from information and insights gathered through a series of in-depth interviews with a final sample of 32 expatriate managers and 19 local Chinese managers, who represented top- and middle-level executives working in 30 Australian business organizations operating in China, this study suggests a pragmatic framework of cross-cultural management effectiveness for Western businesses operating in China that will be of use to practitioners. The framework illuminates an effective way to assist expatriate managers to develop their intrapersonal and interpersonal capacities that underlie effective cross-cultural leadership on one hand, and on the other hand, suggests some key issues that may help achieve effective management localization in Western businesses in China. Therefore, given the large and increasing interest in doing business in China among Western firms, this study provides practitioners (e.g. Western expatriate managers) with an informed understanding of the complexity of cross-cultural management issues in China, the importance of having theoretical knowledge on this topic, and the need to be flexible and pragmatic in applying this knowledge in daily practice.

0112
On the Hybrid Manager Track: Cross Cultural Managers in Japan

Will Baber
Kyoto University, Kyoto, Japan

The literature of cross cultural management identifies hybrid managers as those who are able to link local and international management techniques, networks, and language skills along with the cultural skills of the home and host countries. These hybrid managers are capable of dealing with complex work and life situations when abroad whereas conventional expatriates, dispatched from headquarters with little prior experience in the host country, frequently stumble. The process of becoming a hybrid manager, if there is a process, remains under-investigated in the context of international management, particularly in Japan despite widely being considered a difficult country for cultural adjustment.

This presentation describes a research project in the context of Japan that seeks to determine if there is a hybridizing process. Further, the research investigates whether the component skills of hybrid managers can be differentiated and stratified. Initial findings may suggest a hybrid track along which these international managers may progress. The research project collects data from international managers in Japan via questionnaire and follow up interviews. The data is processed such that individual records can be visually compared to the entire data set. Analysis of individual managers will be of interest to those human resource specialists who may be able to better identify and encourage development of key skills in their international managers.

0120
Emerging B2B Portals Connecting Chinese Entrepreneurs to the World

Yubo Chen[1], Qi Wang[2], Jinhong Xie[3]
[1]University of Arizona, Tucson, AZ, United States, [2]State University of New York at Binghamton, Binghamton, NY, United States, [3]University of Florida, Gainesville, FL, United States

Advances in information technology and e-commerce are creating unprecedented opportunities for local entrepreneurs to enter global markets. For example, thousands of Chinese suppliers are now transacting with buyers in different countries through Chinese business-to-business online portals. These emerging platforms not only make it possible for a massive number of small Chinese enterprises to compete in international trade, but also provide opportunities for large and small firms outside of China to gain access to an extensive selection of Chinese products at competitive prices. However, this great potential comes with significant risks for buyers, sellers, and portal operators. These arise from low entry/exit barriers for buyers and sellers, frequent changes in product offerings, fly-by-night players, the limited information available about potential transaction partners, and various logistical, financial, and legal challenges of a truly global reach.

This research explores the factors that influence the performance of this new Chinese B2B system from the perspective of the portal operator, its buyers, and its sellers. We analyze a unique dataset from one of the leading online B2B firms in China.
The dataset tracks more than 100,000 sellers from their initial listings as well as over 200,000 buyers from countries all over the world.

0143

The Effect of Regulation on Analyst Behavior: Evidence from Changes of Analysts' Independence in Making Stock Recommendations in U.S and in Hong Kong Markets

Yihong Wang, Peter F. Chen
Hong Kong University of Science and Technology, Hong Kong, Hong Kong

This paper reports the differences in changes of analyst's independence in making stock recommendations between the United States and Hong Kong. We expect that analyst responses to the similar regulations differ between the two countries because of the substantial difference in their legal enforcement and capital market characteristic that affect the success of enforcement actions. Following the SEC's approval of NASD Rule 2711 in May 2002, SFC in Hong Kong issued a Consultation Paper on the Regulation Framework for Addressing Analysts Conflicts of Interest on March 31, 2004. We show that both Hong Kong Guidelines and US NASD Rule are effective in enhancing independence of analysts. They issue recommendations that are more related to the intrinsic value in the post-Guidelines (post-Rule) period than in the pre-Guidelines (post-Rule) period. We also show that both Guidelines and NASD Rule are effective in curbing conflicts of interest. The positive relation between stock recommendations and the proxies for the conflicts of interest becomes weaker after the implementation of the Guideline (NASD Rule). Finally, we compare the effectiveness of regulations in the two countries and show that although the relation between recommendations and the valuation estimates is stronger in Hong Kong than in US, the Hong Kong Guidelines is not as effective as the US NASD Rule.

0151

Housework, Endogenous Participation and Labor Market Fluctuations

Pengfei Wang, Lifang Xu
Hong Kong University of Science and Technology, Hong Kong, Hong Kong

The U.S. data show that the pool of marginally-attached (including those discouraged) workers are highly volatile, and the transition rates between this particular group and labor force are 6-10 times larger than those of those totally out of labor force. These two facts imply that labor market participation choice is fairly relevant for labor market dynamics.

Motivated by such observation, this paper tries to improve the search model in accounting for labor market fluctuations by incorporating home production with idiosyncratic productivity shocks. We solve the model analytically to investigate how the shock-induced endogenous participation choice influences the equilibrium Nash bargaining wage, and then the labor market dynamics.

By calibrating the model to match the U.S. labor market and good market observations, we show that endogenous participation choice greatly enhances the labor market fluctuations. To be specific, the paper well captures wage dynamics, and for that reason it also matches those salient features of U.S labor market fluctuations satisfactorily.

Why Toyota was the almighty in just-in-time delivery and zero defects

Evelyn Anderson
Australian Catholic University
1100 Nudgee Road
Banyo, Queensland
Australia 4014
(+617 3623 7214)
evelyn.anderson@acu.edu.au

Introduction

Asanuma (1992, p. 99) observes, 'Japanese automobile manufacturers have developed over time a complex system of relationships with their suppliers in Japan. There has been a widespread belief, for some time now, that the nature of this system is one of the major factors underlying the commercial success of the Japanese automobile industry'. He further elaborates the characteristics of the Japanese system, 'It has become well known that Japanese suppliers show high reliability in meeting delivery schedules and quality requirements. This behaviour can be rationalized somewhat by reference to the economic mechanisms observed in the industry, such as the contractual provisions regarding the obligations of suppliers and the possible penalties they might face' (Asanuma 1992, p. 114). Asanuma (1989) labels this complex system 'manufacturer-supplier relationship', which is conducive to the development of relation-specific skills among the parts suppliers.

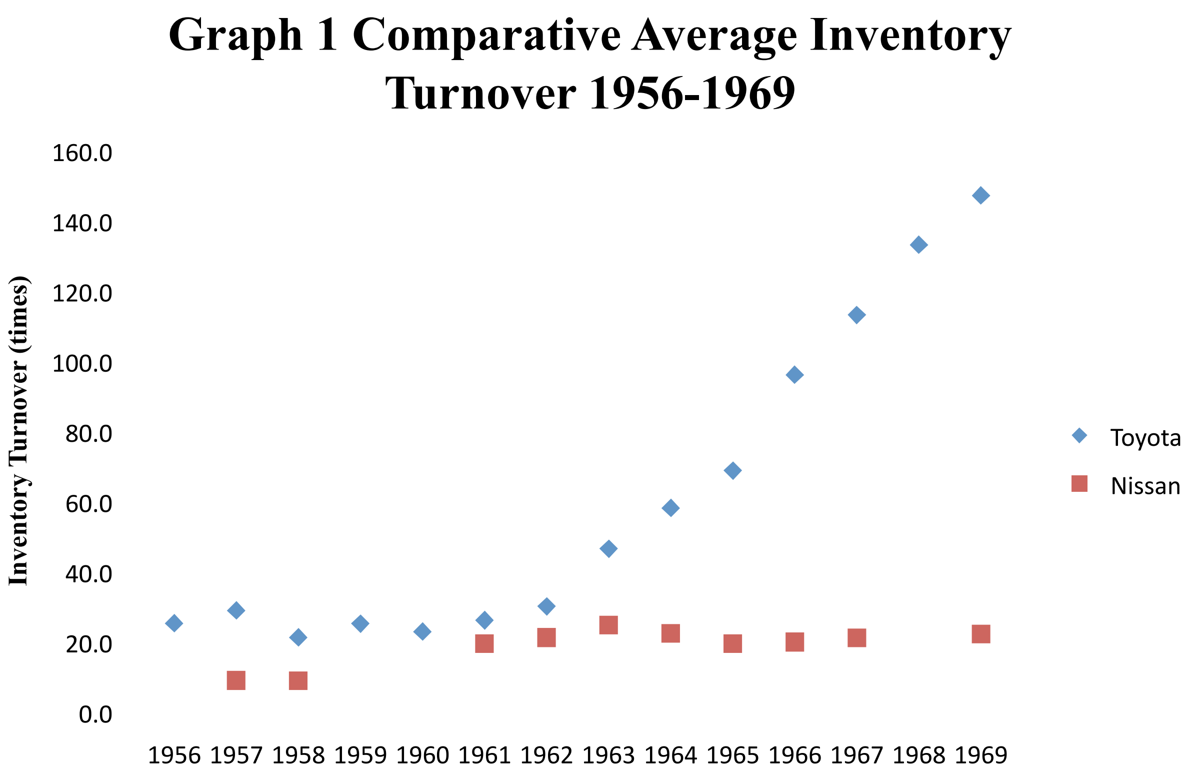
Womack, Jones and Roos (1990) describe this complex system found in the Japanese automobile industry as a 'lean production' system which 'combines the best features of both craft production and mass production – the ability to reduce costs per unit and dramatically improve quality while at the same time providing an ever wider range of products and ever more challenging work' (p. 277). One reason why Japanese assemblers were able to reduce unit cost was because they were able to engage their suppliers in Just-in-time delivery of the intermediate inputs and parts required for car production. The automakers were therefore able to achieve fast inventory turnover and keep inventory costs to the minimal. Quality improvement was achieved by requiring their supplier network to deliver parts with zero defects. Just-in-time delivery (reliability) and zero defects (quality) were two important criteria that Japanese auto manufacturers used to evaluate the effectiveness of their suppliers, and the size of future orders were predicated on how well the suppliers had performed in delivering both reliability and quality parts to the assemblers (Womack, Jones and Roos 1990, pp. 154-155).

The Toyota supplier network has achieved outstanding inventory and quality control within the Japanese automobile industry. Since all other Japanese assemblers were perceived to have adopted the same lean production system, existing literature has not offered a distinctive explanation as to why Toyota alone was a long way ahead of its domestic competitors in the 1960s. This paper compares Nissan's and Toyota's performance in inventory management, before and during the enactment of a specific Japanese industrial policy which aimed to promote the upstream industry for car manufacturing. The legislation is the *Provisional Act for the Promotion of the General Machinery Industry 1956-1970.* It shall be abbreviated as the *Provisional Act* or the *Act* throughout this paper. Anderson (2010) argues that this legislation provided incentives for Toyota and one of its most important technology parts suppliers – Denso[1] to cooperate in what Asanuma describes as a 'manufacturer-supplier relationship'. Nissan, however, remained vertically integrated in its relationship with its core technology parts suppliers. The two different governance structures (or economic mechanisms in Asanuma's terminology) explain the inter-firm performance variance in inventory control in the mid to late 1960s. The terms 'manufacturer-supplier relationship', 'network', 'inter-firm collaborative network', 'inter-firm collaboration governance', '*keiretsu', 'keiretsu* network', and 'supplier networks' will be used interchangeably throughout this paper to refer to the 'lean production system'.

The Toyota Production System (TPS) and inventory turnover

Existing literature marvels at Toyota's inventory control system. Rightly so, for Toyota's inventory turnover was outstanding. Graph 1 shows the average inventory turnover for both Toyota and Nissan from 1956 to 1970. Dividing gross sales by the average inventory kept on the premise of the assemblers gives the value of average inventory turnover. The smaller is the inventory kept, the bigger and faster is the inventory turnover. Graph 1 shows that Toyota persistently outperformed Nissan in average inventory turnover during this period. The gap between the two firms' performance became pronounced from 1963 onward. Average inventory is the average of three inventories: raw materials (RM), work-in-progress (WIP), and finished goods (FG). RM is the supply of intermediate inputs purchased from the assembler's supplier network. Just-in-time (JIT) delivery refers to this inventory group. It measures the extent of cooperation between the assembler and its suppliers in an inter-firm collaborative network, and accordingly the effectiveness of the supplier network as a whole. WIP, as the name suggests, is the inventory kept during the assembling process. It measures the operational efficiency of the assembler. FG is the inventory of cars ready for delivery from the assembler to its car dealers. The focus of existing literature is on the RM inventory, but the assumption is that both Toyota and Nissan had adopted an inter-firm collaboration governance structure.

[1] Denso was known as Nippon Denso during the *Provisional Act* period. This paper uses the firm's current name when referring to Nippon Denso.

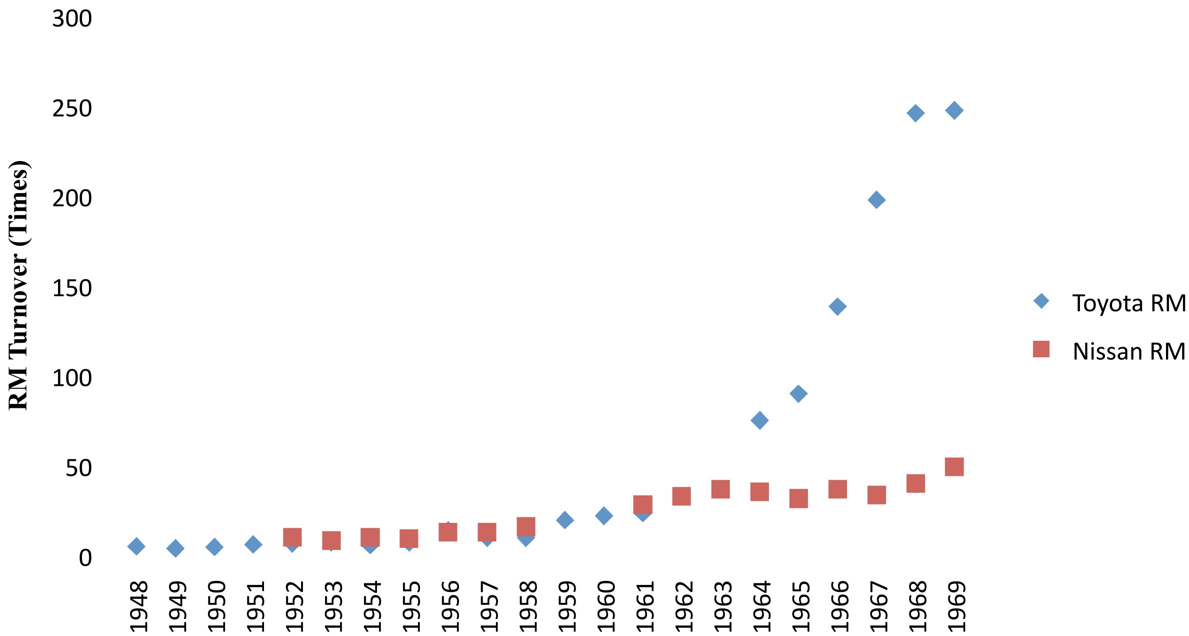


Source: Ohkurasho (various years)

Note: Nissan did not provide information on the firm's RM and WIP data in a number of periods, hence the gaps.

Graph 2 compares the RM inventory management of Toyota and Nissan. It shows the two firms were comparable in RM turnover up until 1962. Again, significant divergence occurred after that year, and Toyota continued to outperform Nissan by a long margin from 1964 (with missing data in 1962-1963). What could have caused this divergence? One reason could be the special cooperative agreement reached between Toyota and Denso in 1963. Denso was an important supplier of high value-added auto electrics components.

Graph 2 Comparative RM Turnover Yearly Data 1948-1969



Source: Ohkurasho (various years)

Note: Nissan did not provide information on the firm's RM and WIP data in a number of periods, hence the gaps.

Table 1 presents Denso's share of Toyota's coordination and administration costs in the second half of 1963. The first column shows the details of Denso's expenses measured in million yen. Gross sales, gross profit and operating profit are also included to establish Denso's size relative to Toyota's, the details of which are listed in the second column. It indicates that Toyota was 10.5 times bigger than Denso in terms of gross sales. Relative to gross sales, Toyota had a slightly higher operating profit than Denso, being 11.6 times. (If Toyota and Denso were equal, we would expect that ratio to be exactly 10.5 times.) However, Denso had a better gross profit ratio than Toyota, 8 times being less than 10.5 times. For the expenses items, a number smaller than 10.5 illustrates the opposite effect. It means Toyota spent proportionately less on these items compared to Denso. Column 3 shows that apart from consumables, Toyota's expenditure was relatively much lower in all categories. These include sales and general expenses, salaries and wages, advertising/PR, bad debts provisions, executives' expense accounts, and interstate/overseas travels. In four extreme instances, Toyota had incurred zero cost on patents usage fees, transport costs[2], packaging and the cost of returned goods, while Denso's costs in these areas were positive.

Table 1 Denso's share of Toyota's coordination and administration costs in the second half of 1963 (measured in million yen)

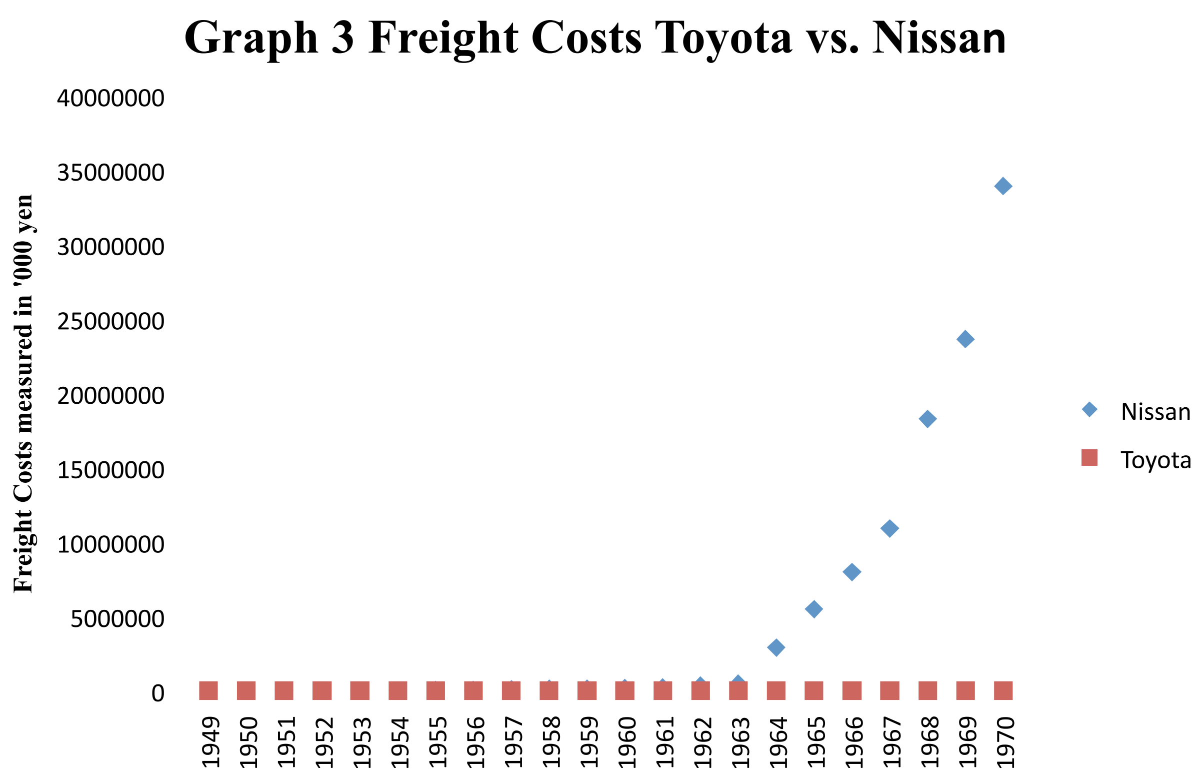
	Denso	Toyota	Toyota/Denso (times)
Gross Sales	10,348	108,754	10.5
Gross Profit	2,584	20,720	8
Operating Profit	1,230	14,297	11.6
Sales & general expenses	1,354	6,423	4.7
Patents usage fees	185	0	
Transport costs	76	0	
Packaging	57	0	
Returned goods	39	0	
Salaries & wages	161	504	3.1
Advertising / PR	151	298	2.0
Bad debts provisions	61	200	3.3
Executives expense accounts	37	66	1.8
Interstate/ overseas travels	37	41	1.1
Consumables	16	175	10.9

Source: Jidousha Buhin Kougyoukai & Jidousha Jaanaru (eds), (1965), *Nihon no jidousha buhin kougyou [Japanese automotive parts industry]*, Jidousha Jaanarusha, Tokyo, p. 89

Graph 3 compares the freight costs of components (transport costs) paid by Toyota and Nissan between 1949 and 1970. Major divergence occurred in 1963. After 1963, Nissan's costs escalated. Toyota's transport costs were positive prior to 1963. In the second half of 1963, Toyota's delivery costs fell to zero from 1.59 million yen in the previous year (Ohkurasho 1962 & 1963). This raises three questions: (1) why was Toyota's freight costs zero from 1963, (2)

[22] This is *shiharau unchin* in Toyota's accounting terminology and *hassouhi* in Nissan's accounting terminology. The English translations for both terms in this paper are: transport costs, freight costs, and costs of components delivery, used interchangeably.

why that was not the case with Nissan whereby its freight costs were always greater than zero, and (3) why Nissan's costs escalated from 1963 onward.



Why Toyota's freight costs were zero – the Toyota-Denso relationship as a case study

Toyota's transport costs were zero between 1963 and 1970, and Table 1 provides part of the answer. Denso spent 76 million yen on freighting parts. This must be Denso's full costs as Toyota's costs were zero. 76 million yen for Denso was a substantial amount, being almost half of the firm's expenditures of 161 million yen on salaries and wages. Toyota and all of its parts suppliers must have come to a similar agreement in 1963, whereby the suppliers would pay for the cost of components delivery; otherwise Toyota's transport costs would have been greater than zero.

To meet Toyota's JIT delivery requirement, the suppliers must pay for frequent deliveries of the right components with zero defects, in the right quantity (no more and no less than required) at the right time (so the assembler's inventory costs are minimal and close to zero). Delivering the right components incurs high coordination costs in the automobile industry for there are many parts involved (estimated by Ueda 1989, p.1 to be around 30,000 items) and each part may also come in many variations (for example, colour, size, function). Delivering the right quantity at the right time requires frequent delivery. In addition, suppliers bear the cost of returned goods, which is a disincentive for non-compliance of Toyota's zero defects requirement. The coordination costs of JIT delivery with zero defects are comprised of transport costs, packaging and returned goods in Table 1. When the parts suppliers agree to pay for JIT delivery costs, the whole of coordination cost is being redistributed from the assembler to the parts suppliers. The coordination cost of JIT delivery is relatively huge for the suppliers. For example, in the case of Denso in the second half of 1963, it amounted to 172 million yen, which is 13% of the firm's sales and general expenses. Denso paid more for Toyota's JIT program than it paid its people, for salaries and wages only constituted 12% of total expenses. Why would parts suppliers such as Denso agree to such demand?

Anderson (2010) details how the *Provisional Act* provided incentives for Toyota and its core suppliers to cooperate for at least fifteen years throughout the *Act*'s duration. The *Provisional Act* was proposed by the Ministry of International Trade and Industry (MITI) and legislated in 1956. It expired in 1970. As the name of the *Act* suggests, the targets for industry assistance were the components manufacturing industry, not their downstream assemblers, which were much better capitalized. The main aim of the legislation was to provide incentives for the assemblers to nurture small-medium enterprises (SMEs) under their own *keiretsu*[i] network (MITI 1956, pp. 58-59). One such incentive was the provision of low cost loans over an extended period to SMEs capitalized below 100 million yen. Funds were to be provided by MITI for investment in state-of-the-art capital facilities that could produce common components. In order to conserve scarce foreign reserves, which was a major concern for the Japanese government in the early 1950s, MITI approval was required before SME firms could obtain foreign exchange to purchase foreign machinery and to pay for technology transfers. The machinery industry was to be rationalized by combining firms into larger units and thus avoid excessive duplication. MITI's ultimate aim was to encourage the *keiretsu* parts suppliers to attain economies of scale and to become independent suppliers.

Denso was once housed within Toyota. It was spun-off to become an independent firm in 1949 as Toyota found itself on the eve of bankruptcy. It started as a SME and survived by diversifying both its product lines and customer bases, which included other car assemblers but not Nissan. Nissan, like its U.S. counterparts, manufactured auto electrics components in-house prior to 1956. Denso was an innovative company and had received multiple low-cost funding provided by MITI during the *Provisional Act* period. The firm grew rapidly and achieved economies of scale (Anderson 2004 & 2010). It would be in Denso's interest to cooperate with Toyota for the latter was the firm's biggest customer, buying about half of the firm's output (Anderson 2010). Between 1956 and 1970, Toyota and Nissan had about the same market share of roughly 30% each (Anderson 2003). Since Nissan had developed its own *keiretsu* in this period, Denso's customers were every other assembler but Nissan. Denso could ill afford to lose Toyota as a customer for sales volumes are essential to maintain economies of scale.

Additionally and specifically in the case of the Toyota and Denso relationship, the two firms were bound by a pre-existing tie. Denso's president, Torao Hayashi, worked under Kiichi Toyoda (founder of Toyota) when Denso was housed within Toyota. He was a great admirer of Toyota's founder (Anderson 2003).

Table 1 demonstrates that Denso had a lower operating profit than Toyota in the second half of 1963. Part of the reason was because Denso paid for the JIT program in full. The supplier could afford to do so for it had a higher gross profit than Toyota (25% on gross sales as opposed to 19% for Toyota). Denso acknowledged that economies of scale allowed the firm to lower its unit cost, and the firm was able to achieve scale economies predominantly as a result of the incentives provided in the *Provisional Act* (Nippon Densou Kabushiki Kaisha Shashi Henshuu Iinkai as cited in Anderson 2004, p. 18).

Why Nissan's freight costs were greater than zero

Both Asanuma (1989) and Womack, Jones & Roos (1990) take the Toyota and Nissan *keiretsu* supplier networks as one and the same, both having adopted inter-firm collaborative governance. Anderson (2010) argues that firm resource and capability heterogeneity led to two strategic logics being adopted by the two assemblers in response to the pay-off matrix brought about by the *Provisional Act*. Toyota switched to inter-firm collaboration in 1956 while Nissan remained unified in governance integrating its core suppliers. The three core suppliers in the Nissan *keiretsu* network (Atsugi Motor Parts, Kantou Seiki, and Nihon Radiator) were in fact Nissan's subsidiaries; whereas the two core suppliers in the Toyota *keiretsu (*Denso and Aisin*)* were 'independent' firms which had autonomy in making business decisions. Irrespective of which governance structure a firm adopts, procurement of parts incurs coordination costs, which include delivery costs, quality control costs and inventory costs. In Toyota's case all three costs were borne by independent parts suppliers outside the assembler's financial responsibility. In Nissan's case, making the firm's subsidiary suppliers pay for the coordination costs merely redistributed the costs from the parent firm to its subsidiaries. There was no incentive for Nissan to reduce its freight costs to zero as Toyota did from 1963 onward.

Why Nissan's freight costs escalated between 1963 and 1970

Nissan's freight costs increased from 302 million yen in the first half of 1964 to 2.6 billion yen in the following period. Prior to the second half of 1964, parts procurement costs (i.e. freight costs) and expenses associated with exports were reported separately, but from the second half of

1964 onward, the two expenditure items were added together and reported as freight costs. No explanation was provided in Nissan's annual report as to why it chose to combine these two different types of costs together.

Conclusion

This paper compares how Toyota and Nissan managed their inventory and JIT delivery in terms of coordination cost economy. It focuses on a specific period which lasted fifteen years and which coincided with the implementation of an industrial policy that aimed to motivate auto assemblers to form their own *keiretsu* supplier network and to nurture the SME parts suppliers within their *keiretsu* group. Ultimately the government wanted the nurtured SME suppliers to achieve scale economies and be independent of their assemblers. The specific legislation that had greatly impacted on the economic organization of the post-war automobile industry is the *Provisional Act for the Promotion of the General Machinery Industry 1956-1970.*

Denso was already an independent firm at the time the legislation came into effect, and for that reason, among others, achieved economies of scale rapidly. It was able to absorb the coordination costs of Toyota's JIT delivery from 1963 onward. Toyota has a governance structure of inter-firm collaboration, and that its relationship with its suppliers was highly cooperative, as demonstrated by its relationship with Denso. This paper identifies one of the sources of Toyota's competitive advantage. The might of Toyota's inventory turnover between 1963 and 1970 laid in its suppliers' willingness to pay entirely for a demanding JIT business philosophy that delivered zero defects and coordination cost economy for Toyota. Supplier willingness to pay, in the case of Denso as demonstrated in this paper, was supported by its ability to pay, via the effect of economies of scale. Denso was able to achieve economies of scale with the help of a government industrial policy that was designed to help SME suppliers to achieve that outcome.

The contractual economic mechanism observed by Asanuma (1992) and Womack, Jones & Roos (1990) is an accurate description of Toyota's governance during the *Provisional Act* period. Obligations (full payment of packaging and transport costs JIT style) and penalties (cost of returned / defective components, potential loss of future orders) were imposed by Toyota on its *keiretsu* suppliers. Womack, Jones & Roos (1990) describe the Toyota Production System as an unusual but successful combination of craft (scope) and mass (scale) production. Furthermore they brought the Toyota Production System (TPS) to the world's attention with the focus on Toyota's ability to deliver quality at lower costs. Toyota was able to lower unit cost with its fast (RM) inventory turnover and to improve quality at the same time by demanding its suppliers to comply with the firm's zero defects requirement. Womack, Jones & Roos (1990) have however overlooked the indirect role that scale economies played in Toyota's ability to lower unit cost. This paper argues one of the reasons that enabled Denso to give Toyota that impressive inventory turnover record was through its achievement of scale economies. The same reason provided a strong incentive for Denso to comply with the dictate of Toyota for fear of losing significant market shares.

Extant literature until very recently has not been able to explain specifically why Nissan lagged far behind Toyota in inventory turnover, since both firms were perceived to have adopted the same governance structure of an inter-firm collaboration *keiretsu* network. Anderson (2010) provides evidence that Toyota and Nissan had adopted two different governance structures during the *Provisional Act* period. This paper confirms that 1963 was an important year; the decisive battle for JIT supremacy was won by Toyota in this year. This paper also explains why Nissan underperformed in inventory turnover between 1956 and 1970, taking into account the nature of coordination cost economy within a vertically integrated firm.

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[i] *Keiretsu* in the automobile industry is a Japanese style business networking group. Extant literature perceives the Toyota and the Nissan *keiretsu* as having the same characteristics. Both *keiretsu* groups are thought to be bound by 'trust, commitment and cooperation' (Asanuma 1992, pp. 105-106).

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INNOVATION IN PEDAGOGY FOR ENGINEERS'ENTREPRENEURIAL CULTURE ?

Catherine LEGER-JARNIOU,
Enseignant-chercheur à DRM/Crepa, UMR CNRS
Universit2 Paris-Dauphine
Entrepreneurship Centre
Place de Lattre de Tassigny, 75775 PARIS, France
Phone : +33 144 05 4398
Fax : +33 144 05 4125
catherine.leger-jarniou@dauphine.fr

ABSTRACT

Is it possible to develop an entrepreneurial culture amongst students studying in engineering schools?. Business organisations recruit employees with new competencies (Zarifian, 2004), including entrepreneurial skills, and that, since engineering graduates will be required to display such skills, engineering schools will have to take this into account. Consequently, engineers have to acquire the appropriate relational and social values. As the education of engineers tends to focus on technical know-how, however, these new competencies do not always come naturally. We assume that a degree of "acculturation" is possible within the framework of a specifically designed constructivist educational programme in which the active participation of students is encouraged.

We attempt, in the first part of the paper, to clarify what is meant by the term entrepreneurial culture, based on Hjorth and Johannisson's perspective (2007). Then, we focus on one action-based learning programme designed to develop an entrepreneurial spirit in young students studying in engineering schools.

In the second part, we introduce the background context of the programme and describe the research methodology, which involved the use of a Likert scale questionnaire before and after the course followed by a series of interviews.

In the third part, we present some of the results. The most striking changes were observed in the following areas: self-confidence, followed by decision-making skills, a critical mindset and lastly, problem-solving skills. There was less change in criteria such as creativity, curiosity, persuasion and leadership. However, the criteria differed according to the entrepreneurial family background of the students.

INTRODUCTION

The present study aims to explore to what extent it is possible to develop an entrepreneurial culture in a population of engineering students. The study is original in that it comes within the framework of a new field, that of 'acculturation'. Indeed, many studies have been conducted on student populations in the field of entrepreneurship, but they mostly focused on analysing the intentions of students, in line with the work carried out by Kolvereid & Moen (1997) who attempted to measure whether an entrepreneurial training programme could make a difference. Their study was based on the two following hypotheses: firstly, that entrepreneurship graduates are more entrepreneurial than other business school graduates (Ajzen 1991, Dyer 1994), and secondly, that entrepreneurship graduates have stronger entrepreneurship intentions than other business school graduates. Based on the models developed by Shapero and Ajzen in particular, this study led to a number of others on entrepreneurial intentions (Autio, Keeley, Klofsten & Ulfstedt, 1997; Boissin, 2005; Fayolle, 2005; Klapper and Leger-Jarniou, 2006; Cooper & Lucas, 2007). Other researchers explored the behavioural differences between different ethnic and cultural groups (Roy, 1998), or measured the culture in existing organisations (Kuratko, Montagno & Hornsby, 1990) or in business schools (Hazedine, Miles 2007), or looked at entrepreneurship as a tool for economic regeneration (Herrmann, 2007). Our study is more in line with that of Lumpkin & Dess (1996), although their research focused more on measuring entrepreneurial trends in organisations.

However, the concept of an entrepreneurial culture remains vague and covers a number of realities. Some people believe it stimulates the spirit of enterprise (OECD, 1998) while others believe it encourages the entrepreneurial spirit.
In the first part of this paper, we attempt to clarify these two terms and their subsequent visions. In part 2, we present the context and the course methodology within the framework of a teaching programme that aims to develop the entrepreneurial spirit in young engineering students. We then describe the study methodology. In part 3, we present some of our findings are discuss about our results. We suggest that by introducing an interactive and engaging teaching approach founded on a specific strategy, young engineers can evolve in their practices and their behaviour and thus acquire an entrepreneurial culture. In the conclusion we discuss the limitations of the study and make recommendations to improve and extend the research.

WHAT DOES AN ENTREPRENEURIAL CULTURE MEAN?

To understand what an entrepreneurial culture involves, we firstly explore the idea of culture in general. We then clarify the term ‘entrepreneurship’ with respect to an entrepreneurial culture.

A. What is culture?

In 1982, Unesco described culture as "the whole complex of distinctive spiritual, material, intellectual and emotional features that characterize a society or social group."

Culture may be considered at both individual and collective level insofar as the two overlap given that individuals belong to a more global cultural entity in terms of standards, value systems, etc. At individual level, culture includes all the knowledge, instruction, know-how, skills and customs acquired through experience, while at collective level it represents all the social structures and collective behaviour that characterize a society (Petit Larousse, 1980).

According to Hofstede (1980), culture is the collective mental programming developed by a specific group of individuals. It is a fundamental system of values specific to a group or a given society that shapes the development of certain personality traits and leads individuals in a society to engage in behaviour that would not necessarily be observed in other societies.

B. What is entrepreneurship?

We still need to clarify this concept, pursuing Gartner's famous question (1990), "*what are we talking about when we talk about entrepreneurship?*" 'Entrepreneurship' is a wide term which can be understood at individual level (Kilby, 1971) at collective level, and with respect to a whole company (Birch, 1979), generating a number of different interpretations of the term.
Entrepreneurship has been assimilated at different times with entrepreneurial proclivity (Pellissier & Van Buer, 1996), entrepreneurial management (Stevenson & Jarillo, 1990), and entrepreneurial orientation (Lumpkin & Dess, 1996).

Initially, management literature considered entrepreneurship as relating to business creation and "the main entrepreneurial problem" (Miles & Snow, 1978) was to decide "*what business shall we enter?*"

Today, two opposing visions still prevail. For Berglund and Holmgren (2007), the term 'entrepreneurship' is ambiguous and considering it as a homogeneous phenomenon remains problematic. The first vision focuses on the creation of new organisations and identifying existing opportunities (Gartner, 1993; Aldrich (1999); Sharma and Chrisman (1999); Shane and Venkataraman (2000). This dominant vision correlates entrepreneurship with the sector of industry and business (Hjorth, 2003), relegating other values like ecology and social issues to second place (Steyaert and Hjorth, 2004). Apparently, the European Commission also subscribes to this somewhat narrow vision of entrepreneurship[1].

The second vision fits within the framework of a value creation process (Filion, (1991); Gibb (1992); Bruyat (1993); Hernandez (1999); Léger-Jarniou (2001b), in other words, it concerns a specific way of viewing things, linked to taking initiative and developing action, the behaviour of certain individuals who want to try new things or to do things differently simply because there is an opportunity for change (Block and Stumpf, 1992), and the desire to adapt to the changes, to experiment with new ideas and to act in an open and flexible way.
Our interest lies with the second idea (Léger-Jarniou, 2001a) which reflects the notion of the entrepreneurial spirit unlike the spirit of enterprise which corresponds to the former vision. The entrepreneurial spirit concerns both business-related situations and other situations linked to life as a citizen (i.e.: a Telethon).

The wider vision of entrepreneurship which interests us here is more to do with attitudes and ultimately, values. In general, education is considered to impact on three key areas: knowledge, know-how, and values and attitude ('savoir-être'). Knowledge refers to intellectual knowledge, know-how refers to practical competencies resulting from experience in a given activity, and values and attitudes corresponds to the ability to produce and master actions and reactions adapted to the environment through appropriate attitudes and behaviour. Education research on attitudes and behaviour focuses on finding the best pedagogical means to enable learners to achieve successful learning outcomes.

[1] Encouraging the spirit of enterprise is a key factor in creating jobs and increasing competitiveness and economic growth in Europe, in "*Helping to create an entrepreneurial culture. A guide on good practices in promoting entrepreneurial attitudes and skills through education*," document published by the European Commission, Enterprise Policy, 2004, 50 pages.

C. What is an entrepreneurial culture?

Johannisson (1984) defines culture as a system of common beliefs and values that gives those who share them a similar vision of the world. The author advocates that an entrepreneurial culture is a culture which promotes the personal characteristics associated with entrepreneurship, i.e. individualism, marginality, the need for personal achievement, risk-taking, self-confidence and social skills. It also promotes personnel success, forgives failure, encourages diversity as opposed to uniformity, and promotes change rather than stability.

We cannot study entrepreneurial culture without looking at the pedagogy which led to its development. According to Gartner, Bird, Starr (1992), teaching entrepreneurship differs from management teaching in that it includes the 'equivocal nature' inherent in starting up a business (situations, development of new products and new services, new markets and new organisations).
Furthermore, pure entrepreneurship inevitably leads to enactment (Weick, 1979). This concept is highlighted by Sarasvathy (2001) who introduced the two concepts "*management style of being*" and "*causatio*n." She uses cookery metaphors to illustrate her ideas: in the "causation" principle, recipes are followed to the letter while in the "management style of being" scenario, we try to create a dish using the ingredients we have to hand. We believe that the teaching of entrepreneurship is related to the principle of the "management style of being" which develops the learners' sense of values and attitude through bringing into play the famous *learning by doing* concept (Versalain and Stömmer (1998); Carrier (1998)).

Several recent studies (by Heinonen and Poikkijoki, 2006, among others) have again shown the need for a new educational model with an emphasis on experimentation, action and practice-based learning as a valid teaching approach. Cronin (2007), for example, explores the idea that using action-based learning model to teaching entrepreneurship may be more appropriate for the achievement of the learning outcomes associated with the holistic nature of the discipline. And this teaching approach needs to be developed in an environment which enhances the students' self esteem, knowledge and ability to act in accordance with the circumstances. The development of entrepreneurship behaviours and attitudes involves promoting the learning processes and the learning environment above all. This environment should encourage students to get actively involved rather than using passive learning strategies or simply reading about entrepreneurship. It demands a teaching style that focuses on action, and encourages learning via project-based experimentation, problem-solving and creativity. Kirby *et al* (2006) took a similar view, advocating the development of qualities such as creativity, persuasion, critical thinking, leadership and problem-solving in particular.
There is general agreement that an individual cannot really learn unless he or she is provided with an environment that is as close as possible to reality (Shepherd & Douglas, 1996).

With this in mind, project-based learning appears to be particularly well-adapted to entrepreneurship programmes as it acts simultaneously on different registers, i.e. knowledge, experience, skills, attitudes and personality (Hernandez, 1999).
Huybens, Bonami and Dubruille (1993) developed a schematic representation of knowledge in action designed for adults working in a professional context. They identified four types of knowledge: theoretical, procedural, practical and know-how. The first two are cognitive and are learnt through courses, conferences, etc., while the other two are practical in nature and are acquired through experimentation, observation and reproduction, and trial and error. Learning in this case is also both individual and collective.

ENTREPRENEURIAL CULTURE AND ENGINEERS

Despite the fact that every year in France around 8000 young graduates from higher education start their own business or take over an existing business as soon as they graduate (Hetzel Report, October 2006), there is a real concern to develop an entrepreneurial culture over and beyond simply starting or taking over a company and, as stated earlier, this requires serious reflection as regards the teaching approach used. This is particularly true given that the identity of the engineer has changed. Focused on technical and professional values at the beginning of the century (Lojkine, 1992), the engineer's identity now includes relational and social values (Veblen, 1971). Robin (1994) identified three levels of managerial development, namely, technical, managerial and strategic development, and engineers have also been affected by this evolution. It is becoming more commonly understood and acceptable that engineers need business, social and interpersonal skills to operate effectively in the organizational environments in which they work.

A. The context

The example of practice that we describe in our paper falls within the framework of this pedagogical issue.

Both Reynaud (2001) and Zarifian (2004) point out that nowadays employees are expected to be more polyvalent, adaptable, reactive, autonomous and responsible, what we would call the "development of the entrepreneurial spirit." The programme was therefore specifically designed to help our engineering students to develop their creativity and autonomy, as well as their self-confidence through having to take initiative and defend their opinions in teamwork situations. It aimed to make them more 'open to life' and help them "prepare for their own future."

In an interview, Alain Etchegoyen argued that "teachers must open up horizons. The main thing is to train responsible men and women. Three inextricable methods should be brought into play: a didactic element (to develop the idea of responsibility), a metaphoric game element, and an element in the form of an exercise (to give them responsibility)."

The entrepreneurship programme was included in the last year curriculum in a famous public engineering school. The programme was delivered during one entire week. The work was completed in teams of 5 or 6 students and at the end, a session was devoted to presentations of the final projects in front of the whole class and the teaching team.

The aims of the strategy are clear: the course was based around developing a business plan for a project chosen by the students themselves. The business plan in itself is not essential, however. Any other project that results in rapid entrepreneurial acculturation could have been used, but business plan seems to be a good tool for this purpose.

The following aspects, on the other hand, were essential:

- the collective development aspect: each team developed a personal project for an activity that could be economic, ecological, social, etc. The ideas for the project were chosen during an often fairly lively creative session,
- each team member also taught the other members via mutually enriching interaction,
- each team was given a name. The teaching staff only knew the team name and not the names of the individual members.

Project-based learning is underpinned by action: the team works towards a goal which has to be achieved within a given timeframe (Piaget). Insofar as the project is chosen by the group itself, the latter invest all of their energy in order to complete the task successfully. This approach is based on research and discovery whereby the students ask questions and provide answers in a collective process. In order to be successful, this approach requires a well-planned environment (with well-timed organisation for each stage, structured by simple documents and precise work sheets, and the goals and the work required to achieve these goals clearly spelt out at the beginning of each stage), and a stimulating environment that promotes communication, discussion and the commitment of each team member, and fosters trial and error (the teaching staff can be asked for help by email at any time outside class hours).

The teaching team is made up of three members: an academic, specialised in entrepreneurship and responsible for the programme, together with two professionals who have been teaching project management, the financial aspects of business and industrial property rights for a number of years. The team also teaches in other programmes and there is good communication between them. Two of them were present during the whole week.

All groups had access to Internet and a specially designed programme for budgeting (designed by the teaching team in collaboration with EBP company which commercialises it with great commercial success.

This is not a “business game” with rules and regulations and a set framework, but is a joint construction and is designed to be fun:

- each team is at liberty to choose its own project,
- each stage of the project has a set deadline and all the teams must finish within the given time limits (they must send their work by email once a fortnight following the student work sessions),
- the discovery of a new and unknown theme or activity presents the engineers with an additional challenge,
- each team is in pseudo competition with the others to present the ‘best’ project or more exactly the most interesting or the most ‘useful’ project,
- given the number of hours available for such a project, there is a certain amount of pressure which the students are nonetheless used to (exam revision, preparing special events, etc.). This pressure reinforces the game-like character of the programme,
- the order of the oral presentations is decided by a draw at the last moment, which increases the pressure.

B. Survey

The study included all the students in the 3rd year of the engineering school which offers four discipline areas: Electronics, Materials, Earth Sciences and the Agri-Food Industry. Out of the 80 questionnaires distributed, 56 proved usable.

The questionnaires were self-administered and covered various aspects of entrepreneurship. We will only mention the aspects relevant to our paper. The questionnaire was administered in two waves, i.e. at the beginning and at the end of the course so as to measure the changes in attitude and behaviour. Most of the questions put the students in specific situations and the answers were based on a 7-level Likert item scale. The questionnaire was followed up by four one-hour semi-structured interviews to check the answers and understand what lay behind them and to discern any nuances. The interviews were analysed using content analysis techniques.

In education, assessment is a key component of the learning process. According to Hadji (1992) "Assessment is the act by which we formulate a value judgement about a specific object (individual, situation, action, project, etc.) by comparing two sets of data. These data are either factual in nature, pertaining to the actual object being assessed, or they pertain to the ideal and to the expectations, intentions or projects applicable to the object."
Our main interest is in understanding what led to any changes identified rather than the statistical findings per se. We want to assess whether the words and feelings expressed by the students indicate a real evolution in their attitude and behaviour.

In the literature[2] the following characteristics are often put forward as typical of an entrepreneurial culture: innovation, creativity, attitude with respect to risk-taking, independence, perception of opportunities in the environment, awareness of the entrepreneur's social status and fear of failure associated with "losing face," ambition, originality, long-term planning, doubt and passion, achieving what makes sense, problem-solving skills, leadership and responsibility, self-confidence (negotiation, conviction, defending personal ideas and communication skills), flexibility/adaptation to others and to the environment, initiative, autonomy, time management and respect for deadlines, dynamism, critical mindset, and curiosity.

A recent Canadian study (Pelletier, 2007) gives teachers a large number of ideas on how to promote entrepreneurship as an educational value at school, indicating that it mobilises three types of resources: emotive resources which drive action, cognitive resources which enable the action to be conceived, and interactive cooperation and leadership resources between individuals. A measurement tool was created to assess the development of entrepreneurship skills based on a set of values, namely, creativity, solidarity, sense of responsibility, autonomy, self-confidence, team spirit, leadership and tenacity.

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[2] Areius & Minniti (2005), Begley *et al* (1997), Busenitz, Gomez & Spencer (2000), Davidsson (1995), Kolvereid & Obloj (1994), McGrath, McMillan & Scheinberg (1992), McGrath, MacMillan, Yang & Tsai (1992), Rai & Turpin (19987), Shane, Kolvereid & Westhead (1991), Wennekers, Tilburg, Hofstede & Thurik (2000)

This is quite similar to the idea of entrepreneurial orientation which can be characterized by five dimensions: autonomy, ability to innovate, risks-taking attitude, proactivity and aggressiveness competitive (Lumpkin & Dess, 1996).

We had to choose from these different, at times overlapping options, and the topics included in the study focused on the changes in entrepreneurial behaviour and attitudes after the programme was completed.
Of course, other aspects were also analysed, such as:

- family environment
- educational background and entrepreneurial experience (clubs and associations, training periods, part-time jobs, etc.)
- understanding who is an entrepreneur and what she/he does
- the main personality traits/motivations and their evolution, particularly with respect to career prospects.

The most interesting findings concerned the following eight criteria that we believe to be the most significant for our research:

- creativity,
- curiosity,
- persuasion [3],
- leadership [4],
- problem-solving skills
- decision-making,
- critical mindset,
- self-confidence.

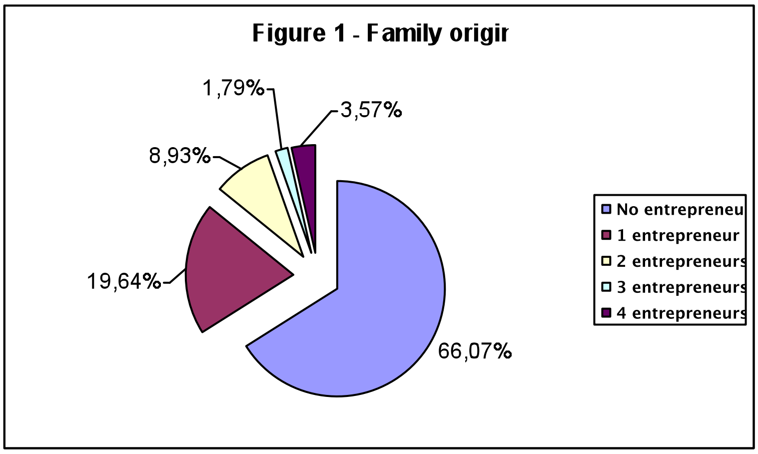
RESULTS & DISCUSSION

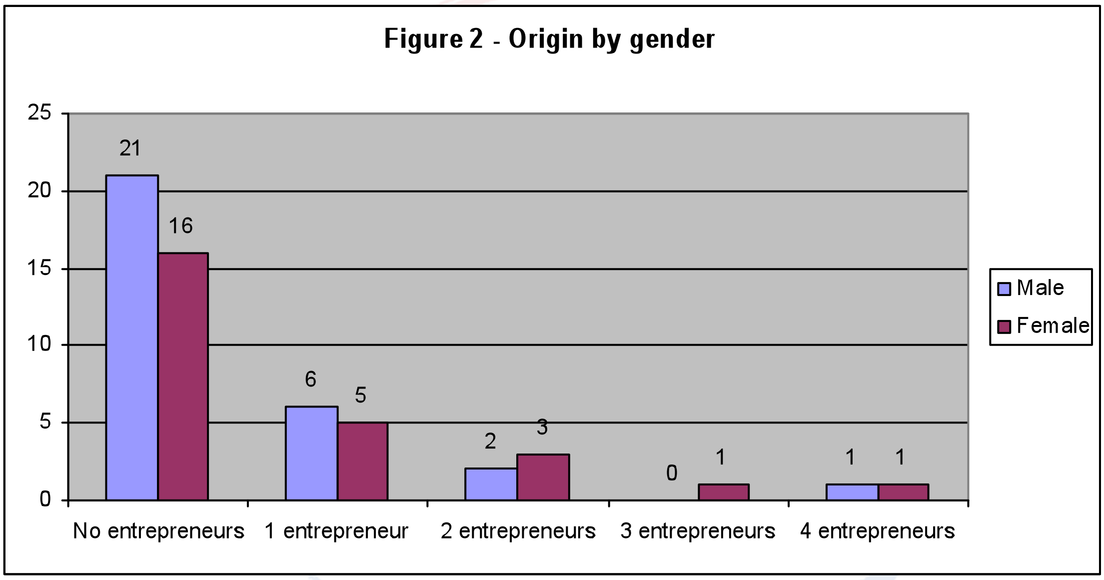
A. Results

Our first result concerns their origins.
We can divide the study population into 5 groups, as shown in figures 1 & 2, which included:

- 37 students (52% of the study cohort, with 21 boys and 16 girls) with no entrepreneurial family background,
- 11 students, (6 boys and 5 girls) who have one business owner in their family environment
- 5 students (2 boys and 3 girls) who have 2 business owners in their family environment,
- 1 student (one girl) with 3 business owners in their family environment and
- 2 students (one girl and one boy) with 4 business owners in their family environment

[3] Persuasion also implies negotiation and being able to carry the day.
[4] Leadership should be understood as the capacity to stand up to others and to motivate a team.





We then looked at the changes in behaviour and attitudes noted by the students themselves. This resulted in 4 different groups, as shown in figure 3.

- Group A, which included 11 students, considered there was no change in their behaviour at the end of the module. 8 of these students were from the category with no entrepreneurial background and the other 3 had only one business owner in their family.
  Seven of them were boys and four were girls. They had no entrepreneurial project, either because they had not previously thought about it, they believed they lacked experience, they felt it was too risky, or they preferred to be employees in order to have a manager as they did not feel mature enough to "go it alone."

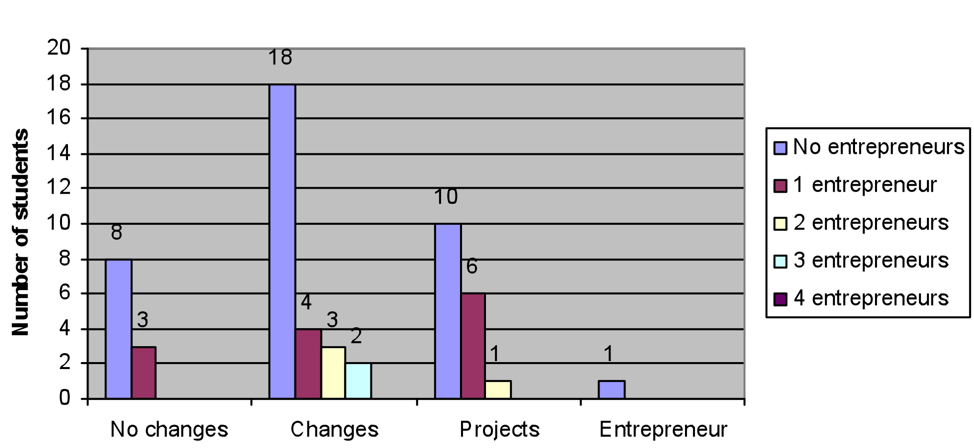
- Group B, which included 27 students, noted changes in their behaviour and attitudes. 18 of them (an equal number of boys and girls) did not come from an entrepreneurial background, while 4 had an entrepreneur in their environment (2 girls and 2 boys), 3 had two entrepreneurs in their environment (2 girls and a boy), and one girl had three business owners in her family environment.

They stated that they had no business start-up ambitions in the medium term, either because the sector was unsuitable (oil, earth sciences), or because they hadn't thought about it, or because they believed it was too risky.

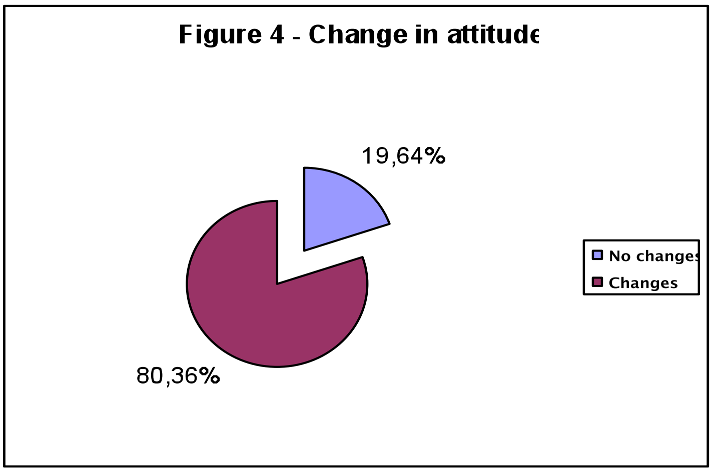
- Group C, with 17 students, identified changes in their behaviour following the course and all had business start-up projects in the medium term. Ten of them had no entrepreneurial background (an equal number of boys and girls), six of them had one entrepreneur in their environment (2 girls and 4 boys) and one boy had two business owners in his immediate circle.
  The reasons put forward for these projects were because they wanted to work with their family, succeed, enjoy the experience, set out their own vision, make their dream come true, and make money.

- There was just one student in Group D. He had already set up his own business while still at school, partly for fun and partly to earn money.
  With no entrepreneurial family background, he identified changes in his behaviour after the course and was quite ready to start a new business again.

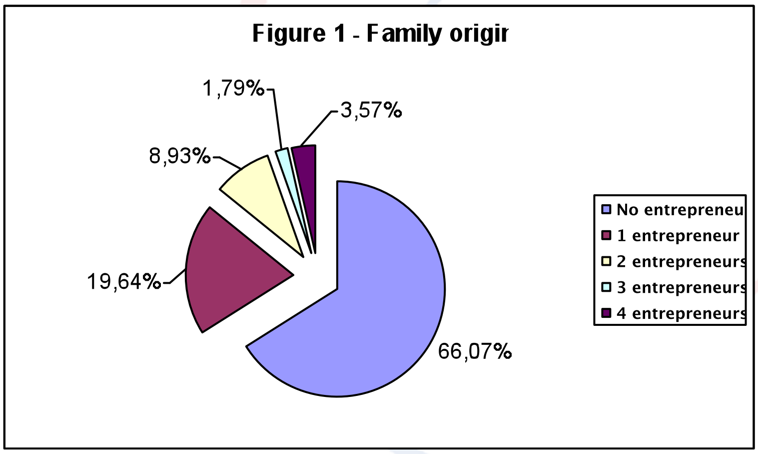
Figure 3 - Changes in beheaviour

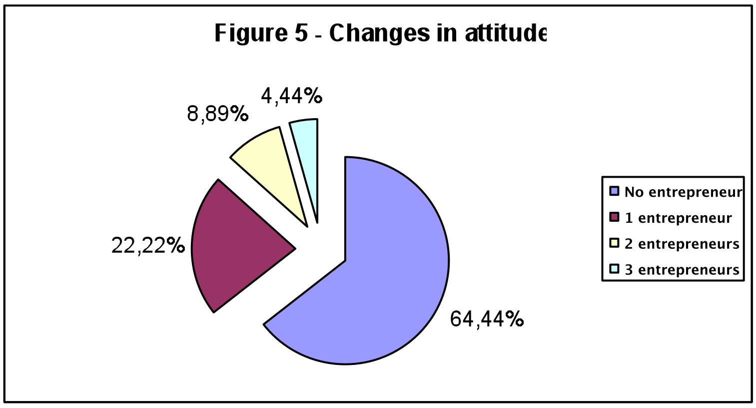


As third result, we can observe than 80% of the students changed attitude, as shown in figure 4.



The fourth result, which could be the most important one, is the fact that there is a strong relation between students' origins and their change in attitude and behaviour. On figures 1 & 5, we can observe that students who present the largest changes in attitude and behaviour are those who have no entrepreneurial family.





Our findings match those of Krueger who argued that belonging to an entrepreneurial family instils an entrepreneurial education. Students who belonged to this category obtained lest change than the others by the simple fact that they had been "immersed" in this universe for many years so the environment and its conditions were less intimidating for them, even if the project itself was outside the scope of their usual academic field. This also corresponds to Bourdieu's concept of social capital or the culture of the environment ("culture du milieu") (Morrison, 2000). This difference is particularly marked in the answers regarding "self-confidence" and in the comments provided by the students during the interviews.
Self-confidence is very similar to another concept, that of self-esteem, which enable the subjects to push themselves to their limits in order to undertake new or unusual projects, working as a team and to a very tight deadline.

The last result concerns the answers on the 8 chosen criteria to measure changes in attitude and behaviour.
The findings mainly show a one or two-point rise on a seven-point scale (and sometimes much more) in a number of criteria, which appears to indicate that there was fairly rapid progress in the entrepreneurial culture of this population. But we need to understand the conditions that led to this acculturation more deeply, and the following section explores this aspect.

Group A is of little interest in terms of our study, but the other three groups are worth comparing.
Most changes are found in groups B, C and D and the answers are interesting: they are quite identical. Table 1 shows the linear ranking criteria after the programme.

Ranking	Group B	Group C	Group D
Self-confidence	1	1	1
Critical mindset	2	3	3
Decision-making	3	2	2
Problem-solving skills	4	5	5
Creativity	5	4	4
Leadership	6	6	6
Persuasion	7	7	7
Curiosity	8	8	8

Table 1 – ranking of the criteria taken into account

The fact to have a medium-term project or not does not mainly change the results.
The features that showed the greatest change were self-confidence, followed by a critical mindset skills and decision-making attitude. There was less change in criteria such as creativity, curiosity, persuasion and leadership. The interviews confirmes that students are much more used with creativity, curiosity, persuasion and even leadership ; which explains the answers.

B. Discussion

The main aim of this programme was to develop the entrepreneurial culture of engineering students in order to influence their future entrepreneurial attitudes and behaviour.
A specific teaching approach is required to change mentalities and behaviours: traditional methods are knowledge-focused while practice, experiential learning and confrontation with new problems generate experience that progressively changes abilities, attitudes and personalities.

The study shows that such acculturation is possible providing different conditions are met, such as the use of constructivist and engaging teaching methods, and an environment that promotes learning and helps build self-confidence. Entrepreneurship is a state of mind. Engineers already possess the analytical tools necessary to succeed in business. By increasing those tools with business knowledge and entrepreneurial skills, they can deliver optimal returns to their future companies and also to themselves.

1. The need for a constructivist and engaging teaching approach

Krueger (2007) explored the belief structures of entrepreneurial thinking and its possible impact on teaching methods. Two of the fundamental models in Education are the behaviourist model and the constructivist model, giving rise to very different teaching and learning approaches (Brooks & Brooks, 1993; Hamilton & Hitz, 1996; Perkins, 1994). The traditional behaviourist model focuses on the acquisition of information that is stored in the learner's knowledge structure until it is updated by new information. The constructivist model is informed by the belief that learning is context-based and is therefore influenced by a number of factors. As individuals build ever-changing knowledge structures (similar to databases) it is important for learners to understand the cognitive changes going on, and it is equally important for teachers to understand how their minds work. This model enhances learning through the understanding of the learning process itself (Bandura, 1994).
Entrepreneurship pedagogy has become increasingly constructivist, focusing specifically on expert scenarios, teaching hard-to-grasp concepts and counterfacts (Saks & Gaglio, 2004), demanding that students to be self-sufficient or autonomous learners and making them reflect on their knowledge construction process (Morse & Mitchell, 2005). Why, then, are these teaching methods not more widespread (OPPE surveys in France and NCGE in the UK). Part of the answer may lie in Krueger's argument (2007) that we share and have also adopted. Problem-based teaching means teachers have to adapt from a position where they "have all the answers" to one where they "ask the questions." It is a time-consuming and energy-consuming approach which requires a specific teaching team that must be willing to accept the uncertainty associated with this position and must then excel in the uncertainty of project development.

The will to introduce an engaging environment enhances the collective team learning process. Incidentally, the notion of an engaging or game-like environment is reflected in the French term "*ludique*" which comes from the Latin word, "*ludus*" meaning both game and school. We only need to think about schoolyards where young children learn and grow through constantly playing to understand this concept. Engineering students enjoy games too. You just have to watch them between classes and during breaks playing cards or other games in the cafeteria. The uncertain nature of the entrepreneurship game, which they may find intimidating at first as they move away from their usual cognitive bases, encourages them to push their limits further and create their own "game rules."

Thus we believe that the entrepreneurial culture may be taught as long as specific teaching methods are used. To this end, Gibb's vision of the entrepreneurial learning model (1992) remains a valid model, namely:

- Reciprocal learning (mutually from one another and not only from the teacher),
- Learning by doing,
- Learning through interpersonal exchanges and debate and discussion,
- Learning by guided discovery,
- Learning from reactions of many different people,
- Learning in a flexible and informal environment,
- Learning under pressure from objectives to fulfil,
- Learning by borrowing from others,
- Learning from one's mistakes (by trial and error),
- Learning through problems-solving (guided discovery)

And we can add a new criteria which is:

- Learning with "fun".

And yet they are ready to devote a huge amount of energy to doing something they enjoy. They want to feel good about their work and they want to believe in what they do. They have ethical values[5] and are interested in firms that respect them, and in working environments that share common values with them.

2. A creative environment

The purpose of the programme is to provide a creative environment for them to engage in an entrepreneurial experience. In our programme, the student is the actor (there is an experiential dimension and a discovery paradigm), and the members of the teaching staff act mainly as facilitators. The immersion of individuals in a new environment (with new rules, values and knowledge) and permanent contact with teachers from another culture (management) leads to faster and stronger acculturation.
Learning results from the management of a concrete project and from fieldwork experience, in other words, from concrete situations that are close to reality. Mintzberg (1990) said that entrepreneurial activities simultaneously activate both the left side of the brain (calculation and planning) and the right side (intuition and affective factors). This brings us back to the aforementioned emotive, cognitive and interactive resources.

Students enjoy these experiences which are concrete (reduced conceptual input to give them time to develop their project), novel (as engineers they are unfamiliar with management), and engaging (they are encouraged to make their presentations as lifelike as possible). Atkinson (1993) stated that the need to succeed generated an entrepreneurial tendency as a means to enjoy the pleasure linked to success. This pleasure derives partly from being able to overcome obstacles. In addition, according to Forner (2005), individuals must also be able to take credit for the result (the "locus of control") and must continually renew their activities in order to maintain the level of pleasure.

[5] "Young graduates dream of fun and ethics", they "want to enjoy life, have fun, above all". They consider first and foremost their well-being, it is what we call the "me first" generation. *L'Expansion*, April 2003, n° 674.

This also corroborates with Deci and Ryan's findings (1987) that motivation increases with the feeling of competence. The belief that they have the necessary resources makes individuals more daring and increases their desire to continue. The fact that the students work in steps that lead up to the final construction of a business plan fosters this kind of feeling once an important stage has been successfully achieved ("*We were stuck because we couldn't find a figure, but it was pure joy once we found it*"). Facing challenges and pushing back the limits are part of the learning process ("*We will give you the best presentation!*").

Another key element in the learning process is the time allocated to the project construction (one entire week), which allows for back and forth monitoring, feedback on the initial hypothesis and also leaves time for mistakes. The rules are simple: the teaching staff is considered as a resource team that may lend a hand at any time, give advice or provide greater insight. This type of learning leaves the door open for mistakes and for subsequent progress. In fact, the mandatory grading takes the students' learning progress and the group behaviour into account as much as the development and presentation of the business plan, and these criteria are made clear to the students at the beginning of the programme.

CONCLUSION

This study aimed to show that through a well-planned constructivist and engaging teaching approach, an entrepreneurial culture can be developed, in other words appropriate entrepreneurial attitudes and behaviour in engineering students who are relatively unfamiliar with this domain.

Clear progress was seen in the responses made by the students at the end of the course, allowing for a certain degree of optimism, particularly with respect to the development of self-confidence, critical mindset attitude and decision making skills. We found that their knowledge and their know-how progressed to some extent, even if this was not the main aim, and that they also developed their values and attitudes. In addition, since learning requires context, the development of the latter skills led to enhanced knowledge and know-how. Understanding their answers through complementary interviews proved especially enlightening and should allow us to fine-tune the criteria used and the questions posed.

On the other hand, this study was limited to a student cohort from just one class, and it would be interesting to develop further comparisons. Some have already been made (Léger-Jarniou and Kalousis, 2008) but they must be extended. It would also be interesting to keep track of the reference population in the future to ascertain whether they have a better job or stronger entrepreneurial behaviour, or a more interesting career path than other engineers who did not take part in a similar programme.

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October 9

ABMC2010

2010

THE ASIAN BUSINESS COMPETITIVENESS 2010 AND BEYOND REFECTING THE YING AND YANG MECHANISM OF MACRO AND MICRO BUSINESS ENVIRONMENTS OF WHICH EXPONENTIAL INVERT AND REVERT WITH THE WORLD COMPETITIVENESS INDEX/ METRIC THAT CONSIDERING THE NEW INNOVATIVE GREEN ECONOMY/THE NATION 'S WEALTH ANATOMY. THE ASIAN GLOBAL COMPETITIVENESS INDEX (GCI) IN THE 21st. CENTURY ASSESSED BY WEF SHOWN THAT THE ASIA CONTINENT IS LINING UP WITH THE MOMENTUM OF THREE EMERGING YOUNG DRIVEN COUNTRIES NAMELY CHINA, INDIA AND RUSSIA. THESE INDUCE THE EXPONENTIAL ECONOMIC GROWTH (MDGs MODELS) MORE THAN 20-25% OF THE WORLD GDP IN 2020. MOREOVER, THE BIG POWERS OF EAST ASIA- JAPAN- STILL IN THE RUN WITH ASSUMPTION UPON THE DYMANICS LIFE TIME VALUE CREATION OF THE MILLENIUM DEVELOPMENT GOALS ACHIEVED IN 2015; AND KOREA, AEC ARE GETTING STRONGGER AS WELL. WHILE AS THE REST OF DEVELOPED COUNTRIES IN EUROPE AND THE UNITED STATES ARE GREATLY RECOVERY AND DRIVING THROUGH PATH OF INVERT GROWTH TILL 2010-2013. ALL THESE PICTURES PORTRAY AS THE ASSUMPTIONS THAT THE WORLD IS GENERATING A GREEN ORGANIC GROWTH AND A MILLENIUM DEVELOPMENT GOALS IN 2015. THE VITAL CHALLENGE AND OPPORTUNITIES MODELS SHALL BE a). THE HIGH PUBLIC DEBT OF ASIAN COUNTRIES IE. JAPAN PUBLIC DEBT 200% GDP, b).THE YING AND YANG MECHANISMS OF- FDI, ORGANIC NATION'S WEALTH ARBITRATION. c) THE STRATEGIC MACRO/MICRO BUSINESS SENTIMENTALISMS. d). THE WORLD MILLENIUM DEVELOPMENT GOAL MODELS MAXIMUM ACHIEVED IN 2015. e). THE SUSTAINABILITY OF THE WASTE. f). THE WORLD/ GLOBAL COMPETITIVENESS INDEX WELL BALANCED/ REBALANCED THE SUSTAINABILITY DEVELOPMENT OF A NATURAL DISASTER.

Asian Business & Management Conference Challenges and Opportunities by Ms. Suwanee Suwanthanasan.

Preface

ABMC 2010 OSAKA, a conference that induces an invaluable strategic Direction for the host country as Japan and the rest throughout Asia. As one of the team to share the thought of the life cycle value creations from the kingdom of Thailand, this paper is illustrating the models for the new green organic growth for the Asian economy in the 21 century and beyond.

The studying and hard work shall be respected the team of professional economist from the well-known parties especially SASIN, Professor Dean Jane, Professor Teamseak and Professor Adith and the kind support from Mr.Rapipongs Banchong-Silpa First Secretary, Royal Thai Embassy, Tokyo.

Note* -This paper is supported by the primary research data from the key parties and the software that fully demonstrate the newness models functions Microsoft Office 2010. Therefore, I would like to send my thanks you and deep appreciation to Mr.Rapipongs Banchong-Silpa First Secretary, Royal Thai Embassy, Tokyo.,

Mr. Ueangchai Kongsamatikij , The Economist magazine, Financial Times, Asian Wall Street Journal, Nikkei and The Asahi Shimbun, Newweek, Bangkok post and the nation.

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ABMC2010 Paper Objectives:

Focus cooperation tiers ABMC 2010, resulted the path of the life times value creation that create the Green Organic Growth Economy Models for the Asia and Asia and Pacific Cooperation Community (APEC) and the key strategic driver of the World Economic Outlook in the short term, middle term.

Further strengthens the path of UN in Millennium Development Goals – Milestones achieves 2015

Illustrates the path of the kingdom of Thailand resolving the Country Economic in 2009-2010 on behalf of the Prime Minister Abhisit Vejjacheva team, consequences the wealth and economic growth half year 10% and the whole year 5-6%

Enhances the potential vital drivers of Green Organic Growth Strategy in Asia community with the – Clean Development Mechanism for the Kyoto 2012 resolving, EWEC free trade zone, GMS, Logistic Models ; in order to portray the creative value for further cooperative tier with key players in the WEO.

Relook the path of Strategic Environment Assessment in Nations that be a risks reflected the Wisdom of Nation Wealth Models by Studying the UNEP year book 2009-2010.(Nature Disaster in China – urgently flood and landslide, Pakistan-big tragedy from floods reflected 20MM peoples, and Thailand- the flood along the key provinces).

World Economic Outlook

Macro Economy Models (Ideas)

Based upon the recently study from UN and IMF,(Bloomberg Business week, Financial Times, Wall Street Journal)

The global crisis recovery as of August 2010, shown that Asian Continent contributed the key part of growth strategy with China jumped to No.2 raking replaced Japan. While as the lucrative Europe star German is gaining the No. 1 position vs. United States.

Market nervousness concerning the fiscal positions of several European high-income countries poses a new challenge for the world economy. This arises as the recovery is transitioning toward a more mature phase during which the influence of rebound factors (such as fiscal stimulus) fades, and GDP gains will increasingly depend on private investment and consumption.

To ensure longer-term sustainability, fiscal policy in many high-income countries needs to be tightened sharply over the next several years. Although politically difficult, a policy that favors a more aggressive reining-in of deficits will, by reducing high-income country borrowing costs, favor medium-term growth in both developing and high-income countries.

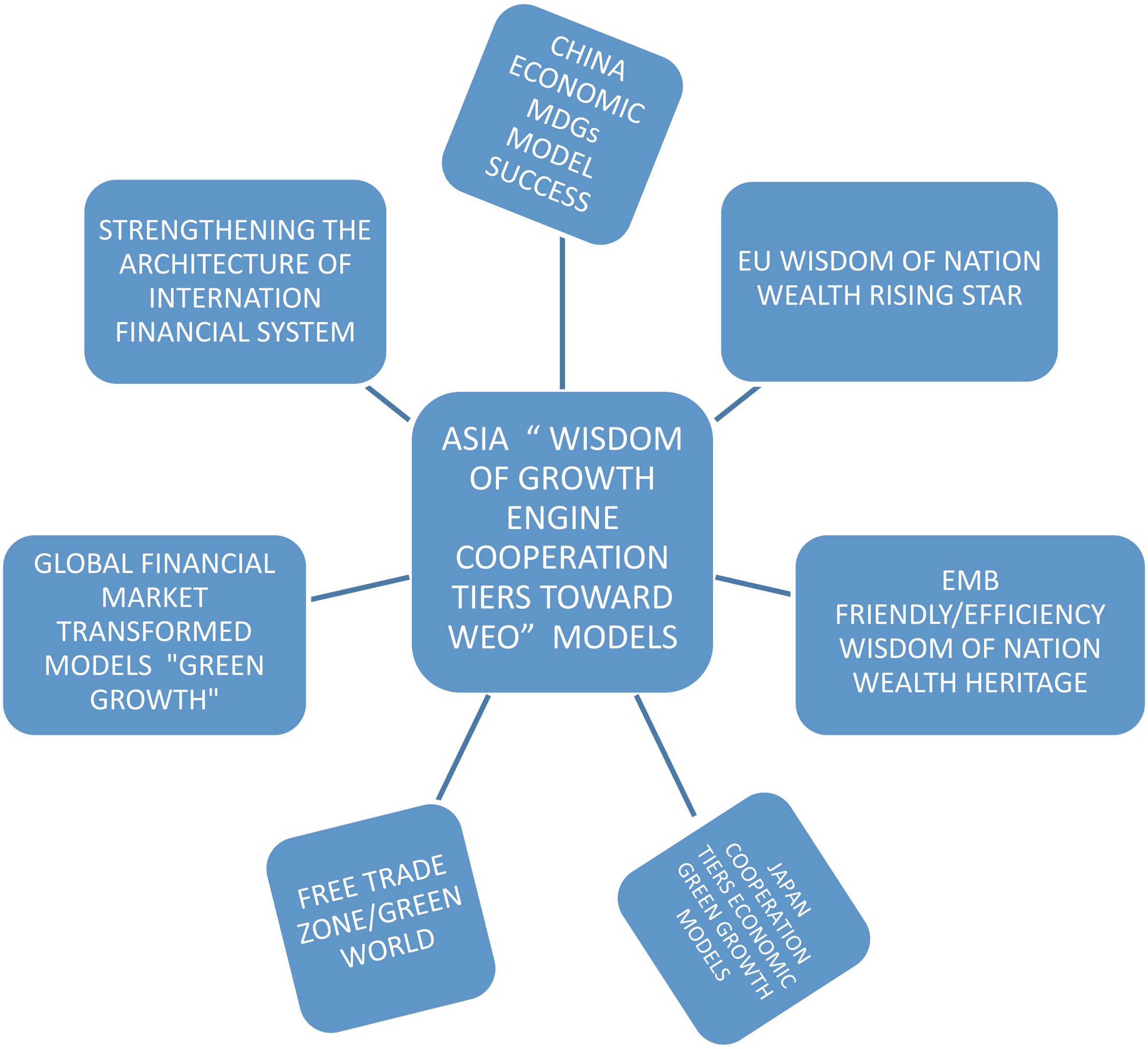
Limited fiscal space in low-income countries means that if official development assistance were to decline, policymakers in low-income countries could be forced to cut growth enhancing infrastructure and human capital investments. As a result, the number of people living on $2 or less per day in 2020 could be higher by as much as 79 million

The new trend for further studying shall be factorized the architectures of the wisdom of nation wealth heritage.

Factorize... (GCI, GFS, Macro-Micro business environment, MGDs, *sentimentalism*, GRS (SD), *architect*)

Ie. Global financial system (Forces, driven, metric, .. simulation, risk averse, yield)

Green Growth, sustainable economic growth, climate change, environment



Multi-dimensions diagram shown the relationship of the Asia " Wisdom of Growth Model towards WEO"

World Economic Outlook Update
Restoring Confidence without Harming Recovery

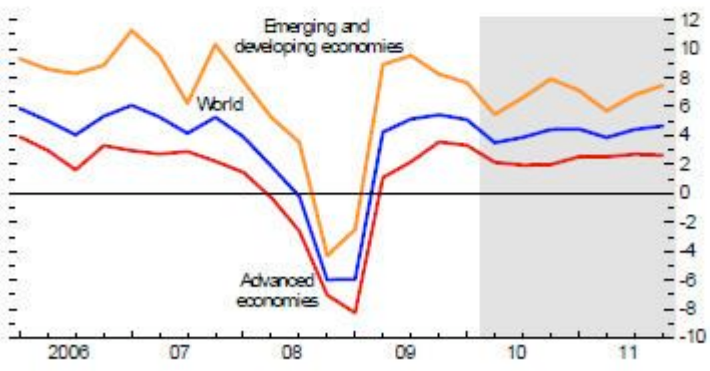
Sources: IMF
July 7, 2010

World growth is projected at about 4½ percent in 2010 and 4¼ percent in 2011. Relative to the April 2010 World Economic Outlook (WEO), this represents an upward revision of about ½ percentage point in 2010, reflecting stronger activity during the first half of the year. The forecast for 2011 is unchanged (Table 1; Figure 1: CSV|PDF). At the same time, downside risks have risen sharply amid renewed financial turbulence. In this context, the new forecasts hinge on implementation of policies to rebuild confidence and stability, particularly in the euro area. More generally, policy efforts in advanced economies should focus on credible fiscal consolidation, notably measures that enhance medium-run growth prospects, such as reforms to entitlement and tax systems. Supported by accommodative monetary conditions, fiscal actions should be complemented by financial sector reform and structural reforms to enhance growth and competitiveness. Policies in emerging economies should also help rebalance global demand, including through structural reforms and, in some cases, greater exchange rate flexibility.

A strengthening global economy is battered by financial shocks

The world economy expanded at an annualized rate of over 5 percent during the first quarter of 2010. This was better than expected in the April 2010 WEO, mostly due to robust growth in Asia. More broadly, there were encouraging signs of growth in private demand. Global indicators of real economic activity were strong through April and stabilized at a high level in May. Industrial production and trade posted double-digit growth, consumer confidence continued to improve, and employment growth resumed in advanced economies (Figure 2: CSV|PDF). Overall, macroeconomic developments during much of the spring confirmed expectations of a modest but steady recovery in most advanced economies and strong growth in many emerging and developing economies.

Figure 1. Global GDP Growth
(Percent; quarter-over-quarter, annualized)



Source: IMF staff estimates.

Nevertheless, recent turbulence in financial markets—reflecting a drop in confidence about fiscal sustainability, policy responses, and future growth prospects—has cast a cloud over the outlook. Crucially, fiscal sustainability issues in advanced economies came to the fore during May, fuelled by initial concerns over fiscal positions and competitiveness in Greece and other vulnerable euro area economies.

Table 1. Overview of the *World Economic Outlook* Projections
(Percent change, unless otherwise noted)

			Year over Year				Q4 over Q4		
			Projections		Difference from April 2010 WEO Projections		Estimates	Projections	
	2008	2009	2010	2011	2010	2011	2009	2010	2011
World Output[1]	**3.0**	**–0.6**	**4.6**	**4.3**	**0.4**	**0.0**	**2.0**	**4.2**	**4.3**
Advanced Economies	**0.5**	**–3.2**	**2.6**	**2.4**	**0.3**	**0.0**	**–0.5**	**2.3**	**2.6**
United States	0.4	–2.4	3.3	2.9	0.2	0.3	0.1	3.2	2.6
Euro Area	0.6	–4.1	1.0	1.3	0.0	–0.2	–2.1	1.1	1.6
Germany	1.2	–4.9	1.4	1.6	0.2	–0.1	–2.2	1.3	1.7
France	0.1	–2.5	1.4	1.6	–0.1	–0.2	–0.4	1.5	1.7
Italy	–1.3	–5.0	0.9	1.1	0.1	–0.1	–2.8	1.1	1.3
Spain	0.9	–3.6	–0.4	0.6	0.0	–0.3	–3.1	–0.1	1.2
Japan	–1.2	–5.2	2.4	1.8	0.5	–0.2	–1.4	1.1	3.0
United Kingdom	0.5	–4.9	1.2	2.1	–0.1	–0.4	–3.1	2.1	1.9
Canada	0.5	–2.5	3.6	2.8	0.5	–0.4	–1.1	4.0	2.6
Other Advanced Economies	1.7	–1.2	4.6	3.7	0.9	–0.2	3.1	3.4	4.6
Newly Industrialized Asian Economies	1.8	–0.9	6.7	4.7	1.5	–0.2	6.1	4.3	6.3
Emerging and Developing Economies[2]	**6.1**	**2.5**	**6.8**	**6.4**	**0.5**	**–0.1**	**5.7**	**6.9**	**6.8**
Central and Eastern Europe	3.1	–3.6	3.2	3.4	0.4	0.0	2.0	2.3	3.5
Commonwealth of Independent States	5.5	–6.6	4.3	4.3	0.3	0.7	...	...	...
Russia	5.6	–7.9	4.3	4.1	0.3	0.8	–3.8	3.7	3.9
Excluding Russia	5.3	–3.4	4.4	4.7	0.5	0.2	...	...	...
Developing Asia	7.7	6.9	9.2	8.5	0.5	–0.2	9.8	9.0	8.7
China	9.6	9.1	10.5	9.6	0.5	–0.3	12.1	9.8	9.6
India	6.4	5.7	9.4	8.4	0.6	0.0	7.3	10.3	8.0
ASEAN-5[3]	4.7	1.7	6.4	5.5	1.0	–0.1	5.1	4.9	6.8
Middle East and North Africa	5.3	2.4	4.5	4.9	0.0	0.1	...	...	...
Sub-Saharan Africa	5.6	2.2	5.0	5.9	0.3	0.0	...	...	...
Western Hemisphere	4.2	–1.8	4.8	4.0	0.8	0.0	...	...	...
Brazil	5.1	–0.2	7.1	4.2	1.6	0.1	4.4	5.3	4.3
Mexico	1.5	–6.5	4.5	4.4	0.3	–0.1	–2.4	3.5	4.3

Memorandum									
European Union	0.9	−4.1	1.0	1.6	0.0	−0.2	−2.2	1.3	1.7
World Growth Based on Market Exchange Rates	1.8	−2.0	3.6	3.4	0.4	0.0	...	...	...
World Trade Volume (goods and services)	**2.8**	**−11.3**	**9.0**	**6.3**	**2.0**	**0.2**	**...**	**...**	**...**
Imports									
Advanced Economies	0.5	−12.9	7.2	4.6	1.8	0.0	...	...	...
Emerging and Developing Economies	8.6	−8.3	12.5	9.3	2.8	1.1	...	...	...
Exports									
Advanced Economies	1.8	−12.6	8.2	5.0	1.6	0.0	...	...	...
Emerging and Developing Economies	4.5	−8.5	10.5	9.0	2.2	0.6	...	...	...
Commodity Prices (U.S. dollars)									
Oil[4]	36.4	−36.3	21.8	3.0	−7.7	−0.8	...	...	...
Nonfuel (average based on world commodity export weights)	7.5	−18.7	15.5	−1.4	1.6	−0.9	...	...	...
Consumer Prices									
Advanced Economies	3.4	0.1	1.4	1.3	−0.1	−0.1	0.8	1.1	1.5
Emerging and Developing Economies[2]	9.3	5.2	6.3	5.0	0.1	0.3	4.9	6.1	4.1
London Interbank Offered Rate (percent)[5]									
On U.S. Dollar Deposits	3.0	1.1	0.6	0.9	0.1	−0.8	...	...	...
On Euro Deposits	4.6	1.2	0.8	1.2	−0.1	−0.4	...	...	...
On Japanese Yen Deposits	1.0	0.7	0.5	0.6	−0.1	−0.1	...	...	...

Note: Real effective exchange rates are assumed to remain constant at the levels prevailing during April 29–May 27, 2010. Country weights used to construct aggregate growth rates for groups of economies were revised. When economies are not listed alphabetically, they are ordered on the basis of economic size. The aggregated quarterly data are seasonally adjusted.

[1]The quarterly estimates and projections account for 90 percent of the world purchasing-power-parity weights.

[2]The quarterly estimates and projections account for approximately 79 percent of the emerging and developing economies.

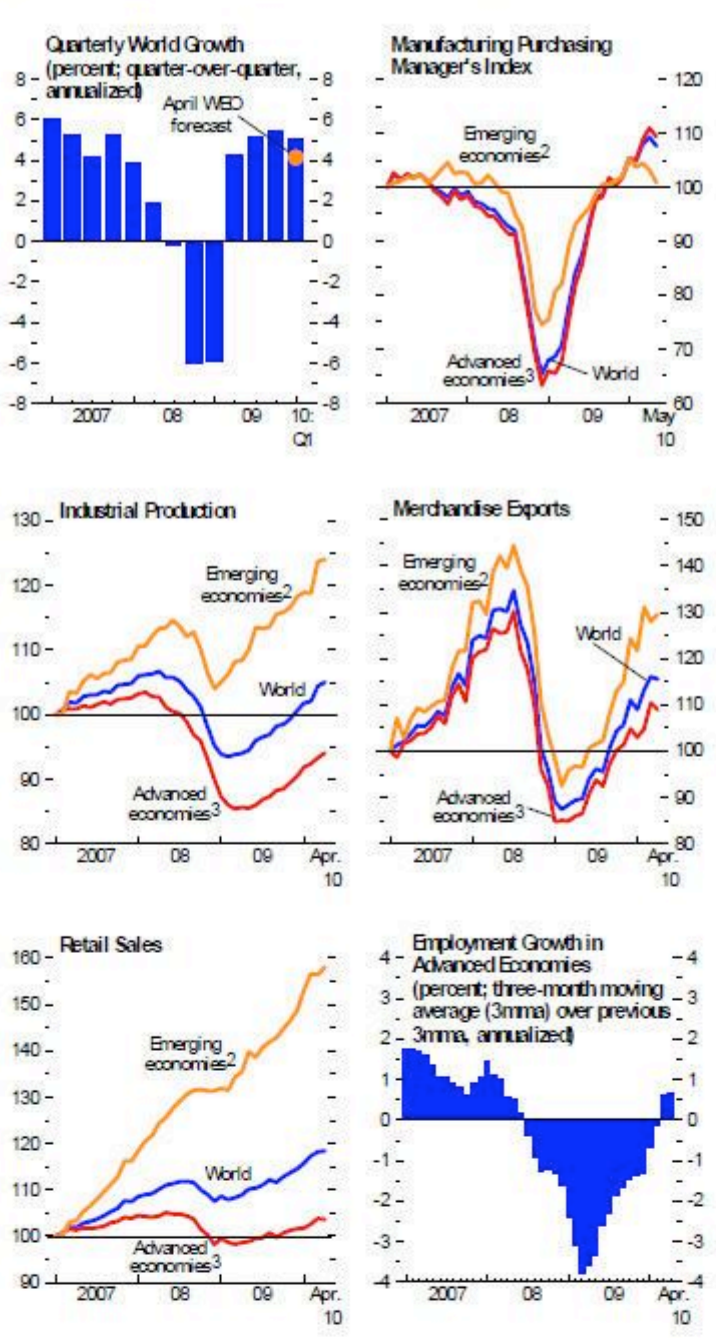
[3]Indonesia, Malaysia, Philippines, Thailand, and Vietnam.

[4]Simple average of prices of U.K. Brent, Dubai, and West Texas Intermediate crude oil. The average price of oil in U.S. dollars a barrel was $61.78 in 2009; the assumed price based on future markets is $75.27 in 2010 and $77.50 in 2011.

[5]Six-month rate for the United States and Japan. Three-month rate for the Euro Area.

Concern over sovereign risk spilled over to banking sectors in Europe. Funding pressure reemerged and spread through interbank markets, fed also by uncertainty about policy responses. At the same time, questions about sustainability of the strength of the global recovery surfaced

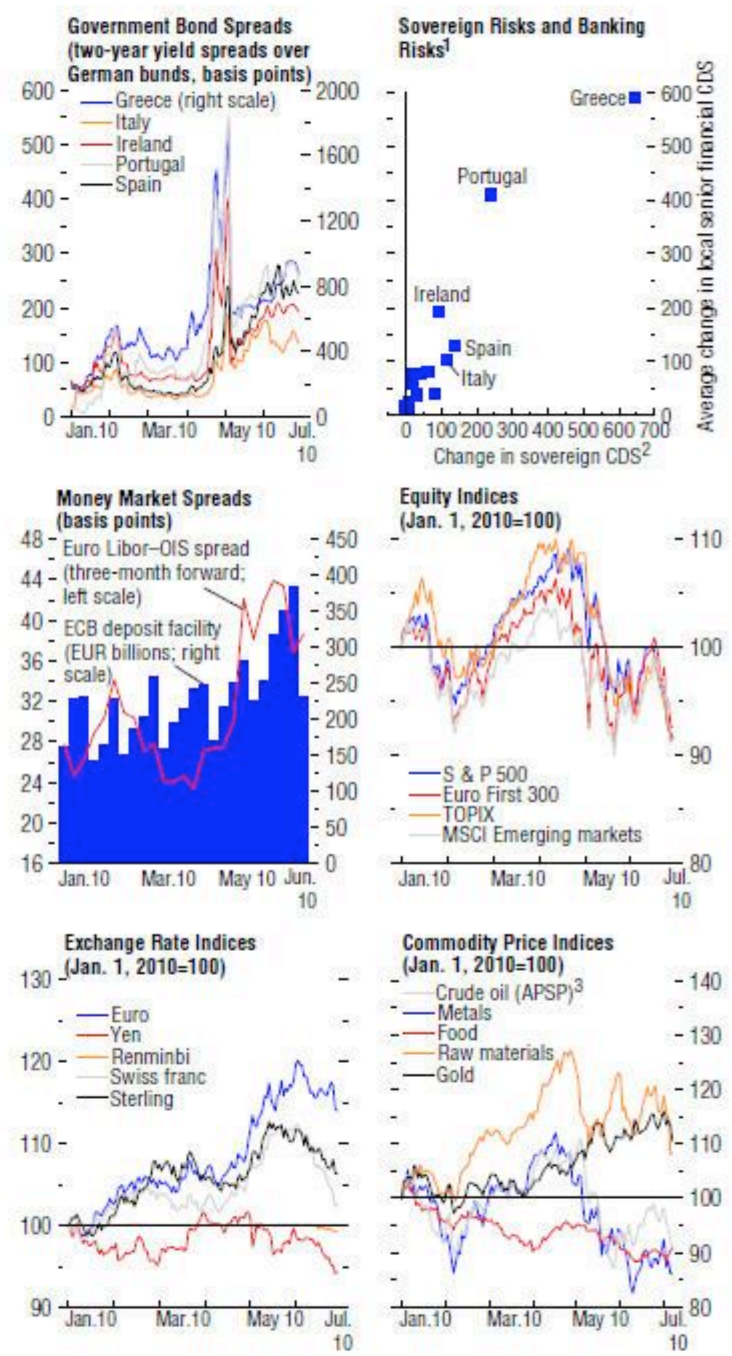
Figure 2. Recent Economic Indicators[1]
(Index; January 2007 = 100; unless noted otherwise)



Sources: Haver Analytics; and IMF staff calculations.
[1]Not all economies are included in the regional aggregations. For some economies, monthly data are interpolated from quarterly series.
[2]Argentina, Brazil, Bulgaria, Chile, China, Colombia, Estonia, Hungary, India, Indonesia, Latvia, Lithuania, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Romania, Russia, South Africa, Thailand, Turkey, Ukraine, and Venezuela.
[3]Australia, Canada, Czech Republic, Denmark, euro area, Hong Kong SAR, Israel, Japan, Korea, New Zealand, Norway, Singapore, Sweden, Switzerland, Taiwan Province of China, United Kingdom, and United States.

As risk appetite waned and markets scaled back expectations for future growth, assets in other regions, including emerging markets, also experienced substantial sell-offs. This spilled over into sharp movements in currency, equity, and commodity markets (Figure 3: CSV|PDF).

Figure 3. Recent Financial Market Developments



Sources: Bloomberg Financial Markets; Datastream; and IMF staff calculations.
[1]October 2009–June 2010.
[2]CDS = credit default swap rates.
[3]APSP = average petroleum spot price.

In principle, the renewed financial turbulence could spill over to the real economy through several channels, involving changes in domestic and external demand and in relative exchange rates. The supply of bank credit could be curtailed by heightened uncertainty about financial sector exposure to sovereign risk as well as increased funding costs, notably in Europe. Moreover, lower consumer and business confidence could suppress private consumption and investment. Fiscal consolidation could also dampen domestic demand. To the extent that higher risk premiums were accompanied by depreciation of the euro, the latter would boost net exports and mitigate the overall negative effect on growth in Europe. However, the negative growth spillovers to other countries and regions could be substantial because of financial and trade linkages. Lower risk appetite could initially reduce capital flows to emerging and developing economies. But relatively more robust growth prospects and low public debt could eventually result in higher capital flows, as some emerging market economies become a more attractive investment destination than some advanced economies.

Global recovery will continue, despite more financial turbulence

At this juncture, the potential dampening effect on growth of recent financial stress is highly uncertain. So far, there is little evidence of negative spillovers to real activity at a global level. Hence, the projections below incorporate a modest negative effect on growth in the euro area. The euro area projections also hinge on the use, as needed, of the new European Stabilization Mechanism (aimed at preserving financial stability) and, more important, on successful implementation of well-coordinated policies to rebuild confidence in the banking system. As a result, financial market conditions in the euro area are assumed to stabilize and improve gradually. The additional fiscal consolidation triggered by the financial turmoil (of about ½ percent of GDP) is projected to detract from euro area growth in 2011 (about ¼ percentage point relative to the April 2010 WEO), whereas the negative impact of tighter financing conditions will be countered by the positive effects of euro depreciation.

Contagion to other regions is assumed to be limited and the disruption in capital flows to emerging and developing economies to be temporary. But there is a downside scenario: further deterioration in financial conditions could have a much greater adverse effect on global growth as a result of cross-country spillovers through financial and trade channels.

Overall, output in advanced economies is now expected to expand by 2½ percent in 2010, a small upward revision of ¼ percentage point, due mostly to stronger-than-expected growth during the first quarter, especially in advanced economies in Asia. Indeed, on a Q4-over-Q4 basis, the forecast is broadly unchanged at 2¼ percent, implying lower growth during the second half of 2010 on account of the financial turbulence.

For 2011, growth in advanced economies remains broadly unchanged from the April 2010 WEO, at 2½ percent. Somewhat stronger projected growth in the United States (owing to gathering momentum in private demand) is offset by slightly weaker projected growth in the euro area (due to the turbulence). Overall, the WEO forecast continues to be consistent with a modest recovery in advanced economies, albeit with substantial differentiation among them. Challenging the recovery in these economies are high levels of public debt, unemployment, and in some cases, constrained bank lending.

For 2011, output growth in emerging and developing economies is expected to edge down to 6½ percent on an annual basis. This forecast is broadly unchanged from the April 2010 WEO. However, growth is now projected at 6¾ percent on a Q4-over-Q4 basis, which represents a downward revision of ½ percentage point. The projections are consistent with still-robust growth overall in emerging and developing economies, but with considerable diversity among them. Key emerging economies in Asia (Box 1: PDF) and in Latin America continue to lead the recovery. Given the relatively modest effects to date of the financial turbulence on euro area growth and on commodity prices, growth prospects remain favorable for many developing countries in sub-Saharan Africa as well as for commodity producers in all regions. Nimble policy responses and stronger economic frameworks are helping many emerging economies rev up internal demand and attract capital flows. The ongoing rebound in global trade is also supporting the recovery in many emerging and developing economies.

Box 1. Economic Outlook for Asia and Pacific Region

Asia's strong recovery from the global financial crisis continued in the first half of 2010, despite renewed tension in global financial markets. First-quarter GDP outturns were generally stronger than anticipated at the time of the April 2010 WEO, and high-frequency indicators suggest that economic activity remained brisk during the second quarter.

Economic activity in the region has been sustained by continued buoyancy in exports and strong private domestic demand. As envisaged in the April 2010 WEO, exports are being boosted by the global and domestic inventory cycles and by the recovery of final demand in advanced economies. Private domestic demand maintained its 2009 momentum across the region, despite less stimulative policy conditions and increased volatility in capital inflows and equity valuations after the euro area financial turbulence. In particular, private fixed investment has strengthened on the back of higher capacity utilization and the still relatively low cost of capital.

Against this background, GDP growth forecasts for Asia have been revised upward for 2010, from about 7 percent in the April WEO to about 7½ percent. For 2011, when the inventory cycle will have run its full course and the stimulus is withdrawn in several countries, Asia's GDP growth is expected to settle to a more moderate but also more sustainable rate (about 6¾ percent.)

Asia: Real GDP
(Year-over-year percent change)

	2009	2010	2011
		Latest projection	
Asia	**3.6**	**7.5**	**6.8**
of which			
Japan	-5.2	2.4	1.8
Australia	1.3	3.0	3.5
New Zealand	-1.6	3.0	3.2
Newly Industrialized Asian Economies	**-0.9**	**6.7**	**4.7**
Hong Kong SAR	-2.8	6.0	4.4
Korea	0.2	5.7	5.0
Singapore	-1.3	9.9	4.9
Taiwan Province of China	-1.9	7.7	4.3
China	9.1	10.5	9.6
India	5.7	9.4	8.4
ASEAN-5	**1.7**	**6.4**	**5.5**
Indonesia	4.5	6.0	6.2
Malaysia	-1.7	6.7	5.3
Philippines	1.1	6.0	4.0
Thailand	-2.2	7.0	4.5
Vietnam	5.3	6.5	6.8

Source: World Economic Outlook database.

The pace and drivers of growth will continue to differ substantially across the region. In China, given the strong rebound in exports and resilient domestic demand so far this year, the economy is now forecast to grow by 10½ percent in 2010, before slowing to about 9½ percent in 2011, when further measures are taken to slow credit growth and maintain financial stability. In India, growth is expected to accelerate to about 9½ percent in 2010, as robust corporate profits and favorable financing conditions fuel investment, and then to settle to 8½ percent in 2011. Both Newly Industrialized Asian Economies (NIEs) and ASEAN economies are expected to grow by about 6½ percent in 2010, as a result of surging exports and private domestic demand, before moderating to 4¾ percent and 5½ percent, respectively, in 2011. In Japan, growth is now expected to reach about 2½ percent in 2010, due mainly to stronger-than-expected exports during the first half of 2010, before easing to about 1¾ percent in 2011 as the fiscal stimulus gradually tapers off. In Australia and New Zealand, growth is expected to be about 3 percent in 2010, before accelerating to 3½ and 3¼, respectively, in 2011, with still-robust commodity prices boosting private domestic demand.

Although baseline growth forecasts for 2010 have been revised upward, downside risks have intensified for the second half of the year and for 2011 following the financial turbulence in the euro area. Asia has only limited direct financial linkages to the most vulnerable euro area economies, but a stall in the European recovery that spilled over to global growth would affect Asia through both trade and financial channels. Many Asian economies (especially NIEs and the ASEAN economies) are highly dependent on external demand, and their export exposure to Europe is at least as large as their export exposure to the United States. However, in the event of external demand shocks, the large domestic demand bases in some of the Asian economies that contribute substantially to the region's growth (China, India, Indonesia) could provide a cushion to growth. Significant contagion effects from a Europe-wide credit event could materialize through bank funding and corporate financing, especially in those regional economies that are more dependent on foreign currency financing. Further spikes in global risk aversion also could precipitate capital outflows from the region and could weaken equity valuations, undermining the positive feedback loop between favorable financial conditions and domestic demand.

It is worth noting, however, that in the event of such contagion, Asian central banks could swiftly redeploy tested instruments to overcome market seizures, as shown by the reestablishment of the U.S. dollar liquidity swap facility announced by the Bank of Japan in May 2010. Many regional economies also have room for further policy maneuver and could delay the planned withdrawal of monetary and fiscal stimulus in order to mitigate adverse spillovers to the real economy.

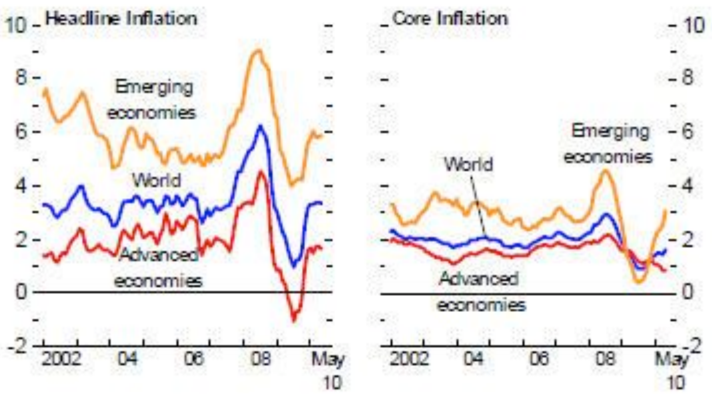
Inflation to remain mostly subdued

Prices of many commodities fell during the financial market shocks in May and early June, reflecting in part expectations for weakened global demand. Prices recovered some ground more recently, as concern about the real spillovers of the financial turbulence has eased. At the same time, waning appetite for risk prompted gold prices to settle higher. In line with futures market developments, the IMF's baseline petroleum price projection has been revised down to $75.3 a barrel for 2010 and $77.5 a barrel for 2011 (from $80 and $83, respectively, in the April 2010 WEO). Projections for the nonfuel commodity price index have remained broadly unchanged, partly reflecting stronger-than-expected market conditions through April.

Inflation pressures are expected to remain subdued in advanced economies (Figure 4: CSV|PDF). The still-low levels of capacity utilization and well-anchored inflation expectations should contain inflation pressures in advanced economies, where headline inflation is expected to remain around 1¼-1½ percent in 2010 and 2011. In a number of advanced economies, the risks of deflation remain pertinent in light of the relatively weak outlook for growth and the persistence of considerable economic slack.

In contrast, in emerging and developing economies, inflation is expected to edge up to 6¼ percent in 2010 before subsiding to 5 percent in 2011.

Figure 4. Global Inflation
(Twelve-month change in the consumer price index unless otherwise noted)

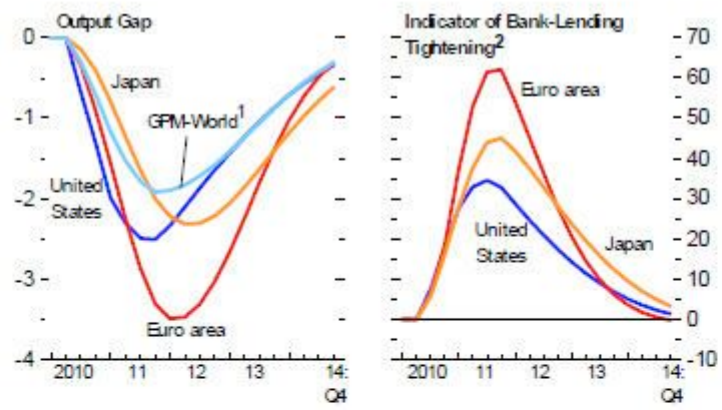


Sources: Haver Analytics; and IMF staff calculations.

Downside risks to global growth are much greater

Downside risks have risen sharply. In the near term, the main risk is an escalation of financial stress and contagion, prompted by rising concern over sovereign risk. This could lead to additional increases in funding costs and weaker bank balance sheets and hence to tighter lending conditions, declining business and consumer confidence, and abrupt changes in relative exchange rates. Given trade and financial linkages, the ultimate effect could be substantially lower global demand. To illustrate the likely growth effects, Figure 5 (CSV|PDF) presents an alternative scenario using the IMF's Global Projection Model (GPM). The scenario assumes that the magnitude of shocks to financial conditions and domestic demand in the euro area are as large as those experienced in 2008. The model simulation also incorporates significant contagion to financial markets, particularly in the United States, where reductions in equity prices dampen private consumption. Given negative financial and trade spillovers, growth is suppressed in other regions as well. In this downside scenario, world growth in 2011 is reduced by about 1½ percentage points relative to the baseline

Figure 5. Downside Scenario: Additional Worsening in Financial Stress
(Percentage points deviations from baseline)



Source: Global Projection Model simulations.
[1]GPM-World represents approximately 87.5 percent of world GDP.
[2]Bank lending tightness is defined as unweighted average of the responses to questions with respect to tightening terms and conditions published by the quarterly senior loan opinion survey on bank lending practices.

In addition, growth prospects in advanced economies could suffer if an overly severe or poorly planned fiscal consolidation stifles still-weak domestic demand. There are also risks stemming from uncertainty about regulatory reforms and their potential impact on bank lending and economy-wide activity. Yet another downside risk is the possibility of renewed weakness in the U.S. property market. These downside risks to growth in advanced economies also complicate macroeconomic management in some of the larger, fast-growing economies in emerging Asia and Latin America, which face some risk of overheating.

Daunting policy challenges lie ahead

Against this uncertain backdrop, the overarching policy challenge is to restore financial market confidence without choking the recovery.

In the euro area, well-coordinated policies to rebuild confidence are particularly important. As discussed in the July 2010 *Global Financial Stability Report (GFSR) Update*, immediate priorities in the financial sphere include: making the new European Stabilization Mechanism fully operational, resolving uncertainty about bank exposures (including to sovereign debt), ensuring that European banks have adequate capital buffers, and continuing liquidity support.

At a global level, policies should focus on implementing credible plans to lower fiscal deficits over the medium term while maintaining supportive monetary conditions, accelerating financial sector reform, and rebalancing global demand.

"Growth-friendly" medium-term fiscal consolidation plans are urgently needed

Of utmost importance are firm commitments to ambitious and credible strategies to lower fiscal deficits over the medium and long term. Such plans could include legislation creating binding multiyear targets and should emphasize policy measures that reform pension entitlements and public health care systems, make permanent reductions in non-entitlement spending, improve tax structures, and strengthen fiscal institutions. Such steps should mitigate the type of adverse short-term effects on domestic demand that fiscal consolidation has commonly caused in the past by reducing the fiscal burden for the future and boosting the economy's supply potential.

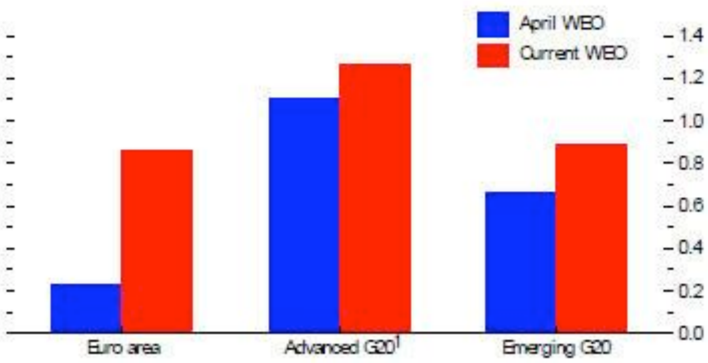
In the near term, the extent and type of fiscal adjustment should depend on country circumstances, particularly the pace of recovery and the risk of a loss of fiscal credibility, which can be mitigated by the adoption of credible medium-term consolidation plans.

Most advanced economies do not need to tighten before 2011, because tightening sooner could undermine the fledgling recovery, but they should not add further stimulus. Current fiscal consolidation plans for 2011, which envisage a fiscal retrenchment corresponding to an average change in the structural balance of 1¼ percentage points of GDP, are broadly appropriate (Figure 6: CSV|PDF).

Economies facing sovereign funding pressures have already had to embark on immediate fiscal consolidation; in these economies, strong signals of commitment through politically-difficult, upfront measures are necessary. More generally, countries that are unable to credibly commit to medium-term consolidation may find themselves compelled by adverse market reactions to undertake more frontloaded adjustments.

Meanwhile, fast-growing advanced and emerging economies can start to tighten now. For some, it may be preferable to use fiscal policy rather than monetary policy to contain demand pressures if tighter monetary conditions could exacerbate pressure from capital inflows. In contrast, in economies with excessive external surpluses and relatively low public debt, fiscal tightening should take a backseat to monetary tightening and exchange rate adjustment, in order to facilitate the necessary rebalancing toward domestic demand.

Figure 6. Fiscal Adjustment in 2011
(Change in structural balance; percent of GDP)



Source: IMF staff estimates.
[1]Advanced G20 includes euro area countries (Germany, France, Italy).

Monetary and exchange rate policies should support global demand rebalancing

Monetary policy remains an important policy lever. Given subdued inflation pressures, monetary conditions can remain highly accommodative for the foreseeable future in most advanced economies. This will help mitigate the adverse effects on growth of earlier and larger fiscal consolidations as well as of financial market jitters. Moreover, if downside risks to growth materialize, monetary policy should be the first line of defense in many advanced economies. In such a scenario, with policy interest rates already near zero in several major economies, central banks may need to again rely more strongly on using their balance sheets to further ease monetary conditions.

Monetary policy requirements are more diverse for emerging and developing economies. Some of the larger, fast-growing emerging economies, faced with rising inflation or asset price pressures, have appropriately tightened monetary conditions, and markets are pricing in further moves. But monetary policy actions must remain responsive in both directions. In particular, should downside risks to global growth materialize, there may need to be a swift policy reversal.

In emerging economies with excessive external surpluses, monetary tightening should be supported with nominal effective exchange rate appreciation as excess demand pressures build, including in response to continued fiscal support to facilitate demand rebalancing or renewed capital flows. In this context, any concerns about exchange rate overshooting could be addressed by fiscal tightening to ease pressure on interest rates, by some buildup of reserves, by macroprudential measures, and possibly by stricter controls on capital inflows—mindful of the potential to create new distortions—or looser controls on outflows.

Financial system reform needs to be accelerated

Recently renewed financial strains underscore the urgent need to reform financial systems and restore the health of banking systems. In many advanced economies, more progress is needed on bank recapitalization; bank consolidation, resolution, and restructuring; and regulatory reform. In some cases, larger capital buffers are required to absorb the ongoing and potential future deterioration in credit quality and to meet expected higher capital standards. In the absence of complete banking sector recapitalization and restructuring, the flow of credit to the economy will continue to be impaired. As discussed in the July 2010 *GFSR Update*, bank funding remains a concern, given upcoming debt rollovers.

Greater transparency is also a priority. Resolving uncertainty about bank exposures, including to sovereign debt, could alleviate pressure in the European interbank markets and help improve market sentiment. As discussed in the July 2010 *GFSR Update*, publishing the results of the ongoing stress tests in Europe is a step in the right direction. But this should be complemented by credible plans to strengthen capital levels as needed and by further efforts to increase the transparency of the activities of European financial institutions that are not publicly traded and do not publish quarterly accounts.

There is also a pressing need to reduce ongoing uncertainty about the regulatory environment and to implement long-awaited reforms. Otherwise, policy opacity could hinder banks' willingness to supply credit and support the recovery. Hence, credible and consistent plans and timetables for implementing regulatory reform need to be developed and to reduce uncertainty. Unilateral measures should be avoided as they could have unintended consequences, especially if market confidence suffers.

Global demand rebalancing and key structural reforms are essential to support future growth

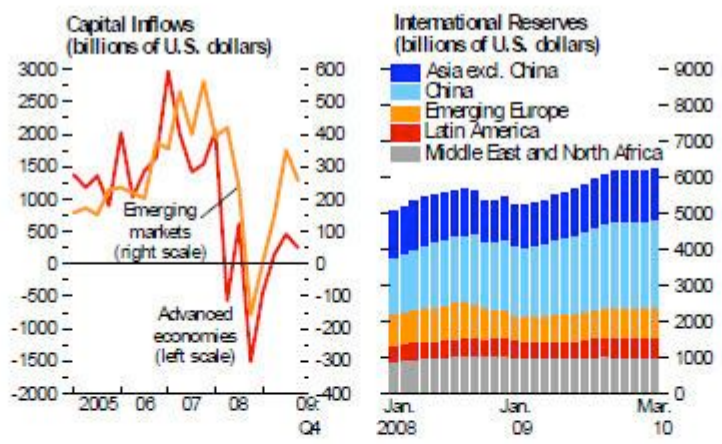
Last but not least, the ongoing rebalancing of global demand must be supported by bold policy action. To some extent, financial markets and capital flows are already facilitating global demand rebalancing through currency pressures, although many economies have been resisting them by building up reserves (Figure 7: CSV|PDF).

In economies with excessive external surpluses, the transition toward domestic sources of demand should continue, helped by structural policies to reform social safety nets and to improve productivity in the service sector as well as, in a variety of cases, more flexible exchange rates. In economies with excessive external deficits, fiscal consolidation and financial sector reform should help rebalance demand.

However, successful fiscal adjustment is difficult without strong growth. Structural reform, particularly in product and labor markets, is needed to raise potential growth and improve competitiveness, particularly in many economies facing large fiscal adjustment. Also, tax-reform efforts should give preference to measures that encourage investment, because such policies are less likely to dampen domestic demand in the near term.

In sum, ambitious and complementary policy efforts are needed to promote strong, sustainable, and balanced global growth over the medium term.

Figure 7. Capital Flows to Emerging Markets



Sources: Bloomberg Financial Markets; Capital Data; IMF, *International Financial Statistics*; and IMF staff calculations.

http://www.imf.org/external/pubs/ft/weo/2010/update/02/index.htm

WEO August 25, 2010 (Financial Times)

Indices set to confirm German ascendancy

Grapgp20 (awaiting for the latest view from financial times)

NIKKEI GSR PROJECT

NIKKEI GSR PROJECT
http://www.nikkei.co.jp/gsr/global/ (1 of 2) [25/8/2553 14:59:44]
GSR is a new concept developed in Japan that goes beyond conventional notions of corporate responsibility, such as
legal compliance and risk management. It is a way of thinking that focuses on "aggressive CSR".proactive behaviors aimed
at bringing about a better society. Under this concept, companies collaborate globally with governments and civil society
in working within their business processes to resolve global issues, such by reducing carbon dioxide emissions and
developing renewable energy to combat global warming, taking steps to reduce poverty, and acting to address water issues.

April 20, 2010
"The Takeda Initiative"
Koichi Kanada, Senior Director, Corporate Communications Department TAKEDA PHARMACEUTICAL COMPANY LIMITED.
"Sompo Japan Advances CSR in Partnership with Civil Society Organizations"
Masao Seki, Associate Director, Chief CSR Officer SOMPO JAPAN INSURANCE INC.
May 20, 2010
"China's Worsening Environmental Problems: Road to Improvement Still Far Ahead"
Masaki Yamazaki, Senior Economist, Japan Center for Economic Research.
"Water Environment Undertakings in China"
Tadashi Takamizawa, General Manager, CSR Office, Asahi Kasei Corp.

"Corporate Social Responsibility in China and the Integrated Recycling System of Fuji Xerox"

2010 Asia business management conference

Milestone

A  $e^{-i\omega t}$sia [Map of China, Chinese Flag, China Information, Map of China Cities - worldatlas.com]

L IFE

Business

Time

Management

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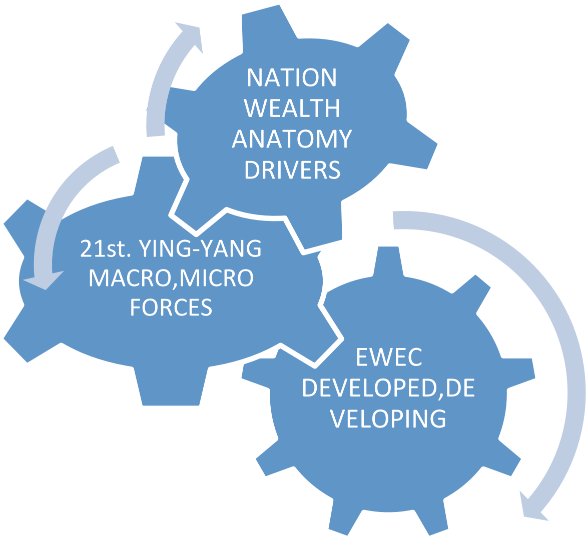
Diagram for Wisdom of Nation Wealth Anatomy



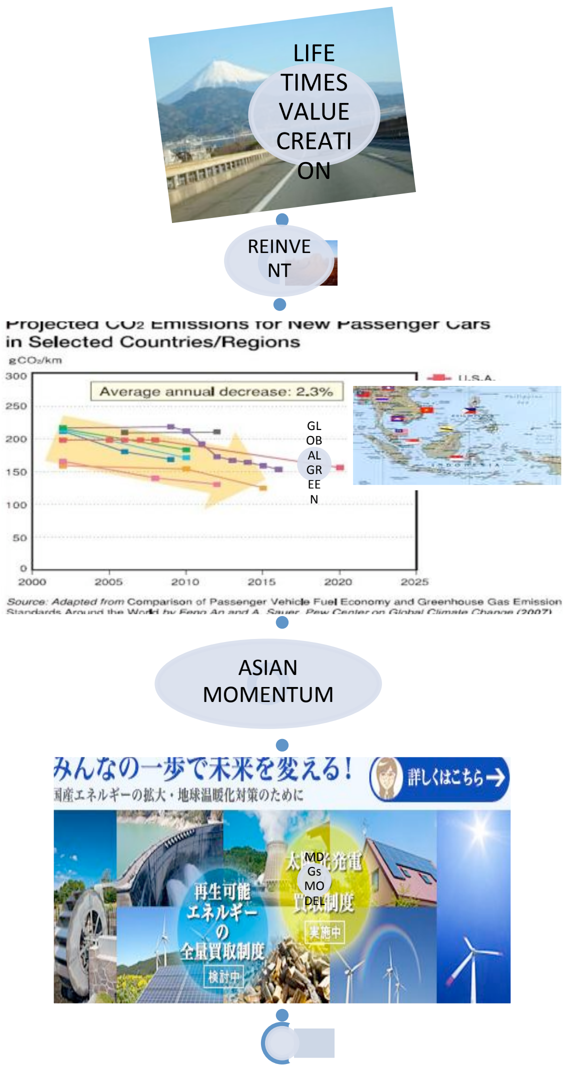
2007: The World Economic Forum established the Community of Global Growth Companies in the People's Republic of China with the mission to enable emerging multinationals to develop into the next generation of global champions and become a major force driving economic development.

Japan Economy's Digest

時下ますますご清祥の段、お慶び申し上げます。日頃は大変お世話になっております。

Brand identity

Cultural
Proposition
Life times Value creation



แดนปลาดิบเปิดโฉมแผนยุทธศาสตร์การเติบโตฉบับใหม่

จาก สถานเอกอัครราชทูต ณ กรุงโตเกียว

(http://www.thaiceotokyo.jp/thai/ หรืออีเมล์ infosect@thaiembassy.jp)

การที่ญี่ปุ่นเป็นประเทศแรกในเอเชียที่สามารถไล่กวดประเทศตะวันตกจนกลายเป็นหนึ่งในมหาอำนาจทางเศรษฐกิจได้ในปัจจุบันคงไม่ใช่เรื่องธรรมดา นโยบายเศรษฐกิจนับเป็นปัจจัยสำคัญในการผลักดันความสำเร็จและความอยู่รอดของรัฐบาลญี่ปุ่น โดยเฉพาะในภาวะเศรษฐกิจปัจจุบันที่ประเทศมีหนี้สาธารณะสูงถึง 200 เปอร์เซ็นต์ของ GDP การจัดเก็บรายได้ทางภาษีลดลงเนื่องจากประชากรในวัยทำงานลดลงการเข้าสู่สังคมคนชราและการไม่ใช้จ่ายของประชากรเนื่องจากห่วงกังวลว่าจะต้องเก็บไว้ใช้ในอนาคต ย่อมส่งผลให้เศรษฐกิจญี่ปุ่นเติบโตได้น้อยมาก เพื่อให้พ้นภาวะชะงักงันทางเศรษฐกิจและสามารถกลับมาผงาดในเวทีเศรษฐกิจโลกอีกครั้ง ญี่ปุ่นจึงได้ออกแผนยุทธศาสตร์การเติบโตฉบับใหม่ (new growth strategy) เพื่อช่วยผลักดันให้ญี่ปุ่นเป็นมหาอำนาจในสาขาต่างๆ ภายในปี 2020 สถานเอกอัครราชทูต ณ กรุงโตเกียว มีข้อมูลดีๆ เกี่ยวกับแผนยุทธศาสตร์ฉบับนี้มาฝากกัน

• **ด้านสิ่งแวดล้อมและพลังงาน:** มีเป้าหมายจะสร้างตลาดมูลค่า 50 ล้านล้านเยนและตำแหน่งงาน 1.4 ล้านตำแหน่ง โดยจะให้ครึ่งหนึ่งของยอดขายรถยนต์ทั้งหมดเป็นรถประหยัดพลังงาน ทั้งนี้ รัฐบาลเตรียมออกกฎหมายภายในปี 2556 เพื่อมุ่งส่งเสริมการพัฒนาเมืองที่เป็นมิตรกับสิ่งแวดล้อมและส่งเสริม Smart Grid (ระบบเครือข่ายการผลิตไฟฟ้าแบบทันสมัย) เพื่อช่วยลดการปล่อยก๊าซ CO2

• **ด้านสาธารณสุข:** มีเป้าหมายจะสร้างตำแหน่งงานเกี่ยวกับการบริการสุขภาพ 2.8 ล้านตำแหน่งและเปิดรับผู้ป่วยจากต่างประเทศถึง 500,000 คนต่อปี คาดว่าจะสร้างรายได้ให้แก่เศรษฐกิจปีละ 1 ล้านล้านเยน รวมทั้งมีแผนจะออกวีซ่าประเภทรับการรักษาพยาบาล “medical treatment stay visa” เพื่อไปให้ถึงเป้าหมายดังกล่าวอีกด้วย

• **ตลาดในเอเชีย:** มุ่งเน้นการส่งออกด้านสาธารณูปโภค เช่น ส่วนประกอบและเทคโนโลยีสำหรับโรงงานไฟฟ้านิวเคลียร์ และรถไฟ ซึ่งญี่ปุ่นมีความเชี่ยวชาญอยู่แล้ว รวมทั้งยังจะมีการส่งเจ้าหน้าที่ ผู้เชี่ยวชาญเรื่องสาธารณูปโภคไปประจำประเทศสำคัญ เช่น จีน อินเดีย และจะใช้กลไกการเงินของญี่ปุ่นที่มีอยู่เช่น JBIC ในการสนับสนุนเป้าหมายข้างต้น

• **ด้านการท่องเที่ยวและชุมชนท้องถิ่น:** มีเป้าหมายที่จะเพิ่มจำนวนนักท่องเที่ยวให้ถึง 25 ล้านคนและจะเพิ่มการส่งออกสินค้าเกษตร ประมง และวัสดุธรรมชาติให้ถึง 1 ล้านล้านเยนในปี 2560 โดยจะมีการสนับสนุนให้สร้างอาคารใหม่แทนอาคารเก่าที่ชำรุดทรุดโทรม รวมทั้งกำหนดเขต

พิเศษที่จะมีการผ่อนผันกฎข้อบังคับเรื่องการก่อสร้างโรงงานและมาตรการภาษีอีกด้วย

• **ด้านวิทยาศาสตร์และเทคโนโลยี:** มีเป้าหมายที่จะทำให้สถาบันวิจัยและพัฒนาของญี่ปุ่นติด 50 อันดับของโลกในด้านต่างๆ เพิ่มขึ้นเป็น 100 แห่งอย่างต่ำ

• **ด้านการจ้างงานและทรัพยากรมนุษย์:** มีเป้าหมายให้เด็กมีคุณภาพทางวิชาการในระดับโลก และเพิ่มจำนวนโรงเรียนอนุบาล และศูนย์เลี้ยงเด็กที่ได้รับการรับรองโดยรัฐบาล รวมทั้งพัฒนาบริการอื่นๆ เกี่ยวกับการเลี้ยงดูเด็กอีกด้วย

อย่างไรก็ตาม ยุทธศาสตร์ฉบับใหม่นี้ ไม่ได้กล่าวถึงมาตรการการลดภาษีเงินได้นิติบุคคลของญี่ปุ่นซึ่งสูงถึง 40 เปอร์เซ็นต์ในขณะที่ประเทศพัฒนาแล้วส่วนใหญ่อยู่ในระดับ 20-30 เปอร์เซ็นต์ คาดว่าแผนยุทธศาสตร์การเจริญเติบโตรูปแบบใหม่นี้จะเสนอต่อคณะรัฐมนตรีภายในสิ้นเดือนมิถุนายนนี้ อย่างไรก็ตามปัญหาเรื่องภาษีนิติบุคคลจะเป็นอุปสรรคอย่างหนึ่งที่อาจทำให้เกิดความล่าช้าเนื่องจากความเห็นที่ขัดแย้งกันระหว่างกระทรวงการคลังญี่ปุ่นกับกระทรวงเศรษฐกิจและการค้าญี่ปุ่น รวมทั้งยังไม่ชัดเจนว่านโยบายของนายกรัฐมนตรี Naoto Kan ที่ต้องการปรับโครงสร้างภาษีทั้งระบบจะส่งผลกระทบและเชื่อมโยงกับเป้าหมายต่างๆ ภายใต้ยุทธศาสตร์ฉบับใหม่มากน้อยเพียงไร ซึ่งคงต้องเป็นเรื่องที่เราต้องติดตามกันอย่างใกล้ชิดต่อไป

สำเนาข่าวตัดหนังสือพิมพ์ โยมิอุริ ฉบับวันที่ 16 มิถุนายน 2553

การที่ญี่ปุ่นเป็นประเทศแรกในเอเชียที่สามารถไล่กวดประเทศตะวันตกจนกลายเป็นหนึ่งในมหาอำนาจทางเศรษฐกิจได้ในปัจจุบันคงไม่ใช่เรื่องธรรมดา นโยบายเศรษฐกิจนับเป็นปัจจัยสำคัญในการผลักดันความสำเร็จและความอยู่รอดของรัฐบาลญี่ปุ่น โดยเฉพาะในภาวะเศรษฐกิจปัจจุบันที่ประเทศมีหนี้สาธารณะสูงถึง 200 เปอร์เซ็นต์ของ GDP การจัดเก็บรายได้ทางภาษีลดลงเนื่องจากประชากรในวัยทำงานลดลงการเข้าสู่สังคมคนชราและการไม่ใช้จ่ายของประชากรเนื่องจากห่วงกังวลว่าจะต้องเก็บไว้ใช้ในอนาคต ย่อมส่งผลให้เศรษฐกิจญี่ปุ่นเติบโตได้น้อยมาก เพื่อให้พ้นภาวะชะงักงันทางเศรษฐกิจและสามารถกลับมาผงาดในเวทีเศรษฐกิจโลกอีกครั้ง ญี่ปุ่นจึงได้ออกแผนยุทธศาสตร์การเติบโตฉบับใหม่ (new growth strategy) เพื่อช่วยผลักดันให้ญี่ปุ่นเป็นมหาอำนาจในสาขาต่างๆ ภายในปี 2020 สถานเอกอัครราชทูต ณ กรุงโตเกียว มีข้อมูลดีๆ เกี่ยวกับแผนยุทธศาสตร์ฉบับนี้มาฝากกัน

• **ด้านสิ่งแวดล้อมและพลังงาน:** มีเป้าหมายจะสร้างตลาดมูลค่า 50 ล้านล้านเยนและตำแหน่งงาน 1.4 ล้านตำแหน่ง โดยจะให้ครึ่งหนึ่งของยอดขายรถยนต์ทั้งหมดเป็นรถประหยัดพลังงาน ทั้งนี้ รัฐบาลเตรียมออกกฎหมายภายในปี 2556 เพื่อมุ่งส่งเสริมการพัฒนาเมืองที่เป็นมิตรกับสิ่งแวดล้อมและส่งเสริม Smart Grid (ระบบเครือข่ายการผลิตไฟฟ้าแบบทันสมัย) เพื่อช่วยลดการ

ปล่อยก๊าซ CO_2

• **ด้านสาธารณสุข:** มีเป้าหมายจะสร้างตำแหน่งงานเกี่ยวกับการบริการสุขภาพ 2.8 ล้านตำแหน่งและเปิดรับผู้ป่วยจากต่างประเทศถึง 500,000 คนต่อปี คาดว่าจะสร้างรายได้ให้แก่เศรษฐกิจปีละ 1 ล้านล้านเยน รวมทั้งมีแผนจะออกวีซ่าประเภทรับการรักษาพยาบาล “medical treatment stay visa” เพื่อไปให้ถึงเป้าหมายดังกล่าวอีกด้วย

• **ตลาดในเอเชีย:** มุ่งเน้นการส่งออกด้านสาธารณูปโภค เช่น ส่วนประกอบและเทคโนโลยีสำหรับโรงงานไฟฟ้านิวเคลียร์ และรถไฟ ซึ่งญี่ปุ่นมีความเชี่ยวชาญอยู่แล้ว รวมทั้งยังจะมีการส่งเจ้าหน้าที่ ผู้เชี่ยวชาญเรื่องสาธารณูปโภคไปประจำประเทศสำคัญ เช่น จีน อินเดีย และจะใช้กลไกการเงินของญี่ปุ่นที่มีอยู่เช่น JBIC ในการสนับสนุนเป้าหมายข้างต้น

• **ด้านการท่องเที่ยวและชุมชนท้องถิ่น:** มีเป้าหมายที่จะเพิ่มจำนวนนักท่องเที่ยวให้ถึง 25 ล้านคนและจะเพิ่มการส่งออกสินค้าเกษตร ประมง และวัสดุธรรมชาติให้ถึง 1 ล้านล้านเยนในปี 2560 โดยจะมีการสนับสนุนให้สร้างอาคารใหม่แทนอาคารเก่าที่ชำรุดทรุดโทรม รวมทั้งกำหนดเขตพิเศษที่จะมีการผ่อนผันกฎข้อบังคับเรื่องการก่อสร้างโรงงานและมาตรการภาษีอีกด้วย

• **ด้านวิทยาศาสตร์และเทคโนโลยี:** มีเป้าหมายที่จะทำให้สถาบันวิจัยและพัฒนาของญี่ปุ่นติด 50 อันดับของโลกในด้านต่างๆ เพิ่มขึ้นเป็น 100 แห่งอย่างต่ำ

• **ด้านการจ้างงานและทรัพยากรมนุษย์:** มีเป้าหมายให้เด็กมีคุณภาพทางวิชาการในระดับโลก และเพิ่มจำนวนโรงเรียนอนุบาล และศูนย์เลี้ยงเด็กที่ได้รับการรับรองโดยรัฐบาล รวมทั้งพัฒนาบริการอื่นๆ เกี่ยวกับการเลี้ยงดูเด็กอีกด้วย

อย่างไรก็ตาม ยุทธศาสตร์ฉบับใหม่นี้ ไม่ได้กล่าวถึงมาตรการการลดภาษีเงินได้นิติบุคคลของญี่ปุ่นซึ่งสูงถึง 40 เปอร์เซ็นต์ในขณะที่ประเทศพัฒนาแล้วส่วนใหญ่อยู่ในระดับ 20-30 เปอร์เซ็นต์ คาดว่าแผนยุทธศาสตร์การเจริญเติบโตรูปแบบใหม่นี้จะเสนอต่อคณะรัฐมนตรีภายในสิ้นเดือนมิถุนายนนี้ อย่างไรก็ตามปัญหาเรื่องภาษีนิติบุคคลจะเป็นอุปสรรคอย่างหนึ่งที่อาจทำให้เกิดความล่าช้าเนื่องจากความเห็นที่ขัดแย้งกันระหว่างกระทรวงการคลังญี่ปุ่นกับกระทรวงเศรษฐกิจและการค้าญี่ปุ่น รวมทั้งยังไม่ชัดเจนว่านโยบายของนายกรัฐมนตรี Naoto Kan ที่ต้องการปรับโครงสร้างภาษีทั้งระบบจะส่งผลกระทบและเชื่อมโยงกับเป้าหมายต่างๆ ภายใต้ยุทธศาสตร์ฉบับใหม่มากน้อยเพียงไร ซึ่งคงต้องเป็นเรื่องที่เราต้องติดตามกันอย่างใกล้ชิดต่อไป

日本人の最初の国はアジアでは西になる国を追って、経済大国には、現在の静的、単純な話ではないです。経済政策を成功と我が国の存在を運転する重要な要素です。現在の経済国の公的債務を中心に 200% の税収のために、人口減少の米国市民とは、将来的に格納されている値確かに日本の経

済をなることの懸念のために人口の費用の減少を格納するには、国内総生産はほとんどの成長をされているのでデッドロックとの経済状態のうち、戻ってくる、フォーラム世界経済で異彩を放つ。日本では、(プッシュを支援する新しい新たな成長戦略) を拡張するための戦略をリリースした日本は、超大国で、さまざまな分岐年内 2020、場所、東京で大使この預金一緒・環境問題やエネルギー戦略の良い情報をある: 野生動物作成市場価値は 50 万円と、位置に 140 万台で、半分のすべての車の車エネルギーを節約するように。政府準備立法都市、フレンドリーな環境の開発の推進に焦点を当てる、CO2 ガス排出・イスラエル人を削減するスマートグリッド (ネットワーク、電気、現代） を促進する 2013 年以内: 海外 500000 人年間 2. 8 get 病気健康サービスと場所の位置を作成することを目指して。各年 1 万百万円、経済に収益を得ることを期待し、カテゴリ okwisa 治療です。」「医療滞在ビザをターゲットに到達しますします。・アジア市場: エクスポート側、ユーティリティ、コンポーネントおよび技術の原子力発電所の焦点し、鉄道が日本にも専門スタッフを送信するには専門家に国の中国、インド、日本、・観光と地域社会の上の目標をサポートするには、国際協力銀行などに含まれる金融機構などの主要なユーティリティは、: 目標は 25 万人に到達するには、観光客の数を増やすことですし、農業水産と自然の素材をエクスポートするには追加されます最大 1 万 2560 年に 100 万円規制対象建設工場と税金対策を拡張する新しい建物は古い悪化しているし、効果を区切る代わりとなる建物を奨励しています。・科学とテクノロジー: 目標研究・開発が日本を作ることですトップ 50 単位の 100 の最小・雇用および人的リソース: 子供学術品質で世界と家族についての他のサービスの開発など、政府が認定されているセンター気に幼稚園と子の数の増加を対象とします。ただし、この新しい戦略法人所得税は、最大 40%、ほとんどの国レベルの 20 〜 30% に達するこの新しいフォーマットを拡張するための戦略がキャビネットあたり 6 月末内で提供される日本で特定対策は含まれません。ただし、法人税の問題は、減速により大蔵省の日本の経済省と商業の間の競合を表示する可能性があります、税制を再構築する首相直人館の貧しいポリシーなどに影響します、およびターゲットと関連付けられている、障壁の一つだりましょう。新しい戦略の下でほどは密接に従う必要があるだりましょう。

วันที่ 24 มิ.ย. 53

ศูนย์บริการข้อมูลธุรกิจไทยในจีน : ThaiBizChina.Comกรมเศรษฐกิจระหว่างประเทศ | กระทรวงการต่างประเทศyunnansea

กรมเศรษฐกิจระหว่างประเทศ | กระทรวงการต่างประเทศcn

กรมเศรษฐกิจระหว่างประเทศ | กระทรวงการต่างประเทศvn

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energy and environmental constraints, human security concerns, the necessity of constant

innovation, and economic performance and opportunity disparities within and across the economies

the Growth Strategy aims to achieve economic growth that is balanced, inclusive, sustainable, innovative and secure

Balanced Growth

9. APEC could contribute to balanced growth by re-energizing its work on structural reforms, building on ongoing efforts under the Leaders' Agenda to Implement Structural Reform. APEC should

Inclusive Growth

10. All our citizens should have the opportunity to thrive in the global market economy. APEC should contribute to inclusive growth by promoting policies in fields such as job creation, human resource development and utilization, SMEs and entrepreneurship development, creating new economic opportunities for women, and more inclusive access to finance.

Sustainable Growth

11. In order to shift to a green economy, APEC should further promote energy efficiency and the development of a low-carbon energy sector. APEC should work to improve access for environmental goods and services (EGS), to develop EGS sectors, and promote energy conservation activities through green ICT.

Innovative Growth

12. APEC should contribute to innovative growth by improving the Research & Development environment and effectively providing policy and regulatory infrastructure conducive to innovation, such as those related to ICT application, digital prosperity, professional workforce mobility, protection of intellectual property (IP) rights, and standardization.

Secure Growth

13. APEC should promote the human security agenda to provide the secure environment necessary for economic growth. APEC can contribute to secure growth by continuing to promote policies in fields such as counter terrorism, prevention and countering of emergency preparedness, pandemic diseases, and food security.

14. In addition to the foregoing general conclusions from each session, the participants from member economies as well as from industry and academia had an active discussion, shared ideas, and exchanged views on how APEC could promote these growth attributes in concrete terms.

จับกระแสสถานการณ์เศรษฐกิจโลก

ข่าวสารการเกษตรญี่ปุ่นที่น่าสนใจในรอบสัปดาห์

จาก สถานเอกอัครราชทูต ณ กรุงโตเกียว

(http://www.thaiceotokyo.jp/thai/ หรืออีเมล์ thaityo@mfa.go.th, commsect@thaiembassy.jp)

สำนักงานที่ปรึกษาการเกษตรต่างประเทศ ประจำกรุงโตเกียว มีข่าวสารการเกษตรญี่ปุ่นที่น่าสนใจในรอบสัปดาห์ เพื่อเป็นสาระและเกร็ดความรู้มาฝากท่านผู้อ่าน ดังนี้

1. หน่วยวิจัยญี่ปุ่นประสบความสำเร็จในการเพาะเลี้ยงปลาไหลครั้งแรกในโลก

หน่วยงานวิจัยด้านประมงเมืองโยโกฮามา จังหวัดคานากาวา ประสบความสำเร็จในการผสมพันธุ์ปลาไหลเพาะเลี้ยงรุ่นลูก (Second-generation) เป็นครั้งแรกของโลก โดยใช้สเปิร์มผสมกับไข่เทียมที่ผลิตขึ้นเอง ความสำเร็จครั้งนี้เป็นก้าวแรกของการนำไปสู่การป้องกันการสูญพันธุ์ของปลาไหล เนื่องจากในช่วง 30 ปีที่ผ่านมา ปริมาณปลาไหลลดลงถึงร้อยละ 90 ปัจจุบันการเพาะเลี้ยงปลาไหลใช้วิธีเพาะเลี้ยงปลาไหลขนาดเล็กเป็นตัวใสๆ (glass eels) หรือปลาไหลช่วงวัยเจริญพันธุ์ (juvenile eels)

2. บริษัทผู้นำเข้าผักผลไม้สดที่ใหญ่ที่สุดในญี่ปุ่น

บริษัท Tokyo Seika Trading Co.,Ltd ผู้นำเข้าผักผลไม้สดที่ใหญ่ที่สุดในญี่ปุ่นให้ข้อมูลว่า บริษัท ฯ มีการติดต่อสื่อสารโดยตรงกับผู้จัดหาของ (suppliers) ผู้ค้าปลีก (retailers) และซุปเปอร์มาร์เก็ต เพื่อจะได้มีความเข้าใจที่ถูกต้องยิ่งขึ้นถึงสิ่งที่ผู้ค้าปลีกและผู้บริโภคต้องการ และยังได้ร่วมพัฒนากลยุทธ์การหาพันธมิตร (alliance) กับฝ่ายตลาด เพื่อรักษาขีดความสามารถในการแข่งขันในตลาดอีกด้วย ทั้งนี้ ปัญหาที่ผู้นำเข้าผักผลไม้ประสบบ่อยๆ ได้แก่ เรื่องความปลอดภัยของอาหารและแนวโน้มการบริโภคผลไม้สดที่ลดลงของญี่ปุ่น เนื่องจากผู้บริโภคนิยมบริโภคผลไม้ปอกเปลือกแล้วพร้อมบริโภค หรือ เครื่องดื่มเสริมสุขภาพที่ทำจากผลไม้มากขึ้น

ปัจจุบันบริษัท ฯ นำเข้ากล้วยมากที่สุด คิดเป็นร้อยละ 60 ของปริมาณนำเข้ารวม รองลงมาได้แก่ เกรพฟรุ๊ต ส้ม และกีวี นอกจากนี้ บริษัท ฯ ยังจำหน่ายกล้วยและสับปะรดภายใต้ยี่ห้อ Del Monte โดยจะจัดส่งสินค้าโดยตรงจากคลังสินค้าที่ท่าเรือถึงลูกค้า อาทิ ซุปเปอร์มาร์เก็ตทั่วประเทศ ซึ่งแตกต่างจากเมื่อก่อนที่สหกรณ์ผู้ผลิตจะต้องฝากขายสินค้ากับผู้ค้าส่งที่ได้รับอนุญาต และผู้ค้าส่งจะจำหน่ายสินค้าผ่านการประมูล แต่ปัจจุบันซุปเปอร์มาร์เก็ตต่างๆ เปลี่ยนนโยบายการจัดซื้อโดยไม่

ต้องการซื้อผ่านการประมูล

3. สุกรจากการโคลนนิ่งเซลล์ Fetal pigskin ตัวแรกในญี่ปุ่น

นายอาคิระ โอนิชิ นักวิจัยแห่งสถาบันวิจัยซึคุบะ จังหวัดอิบารากิ และทีมวิจัย ประสบความสำเร็จในการผลิตสุกรโดยการโคลนจากเซลล์ Fetal pigskin ตัวแรกในญี่ปุ่น สุกรโคลนนิ่งจะมีอายุเฉลี่ย 10-15 ปี

Asia Culture and Society Value

Culture Asia

http://cultureasia.com/ (1 of 5) [18/8/2553 10:29:46]

http://cultureasia.com/

A rt,

M usic

F ashiom

F ilm

E ntertainment

R eligious and Spirituality

R elationship

En vironment and Nature

Social Policies

A future within reach: reshaping institutions in a region of disparities to meet the Millennium Development Goals in Asia and the Pacific

Approaches to Comprehensive National Policies on Ageing: Government-NGO Cooperation

THE CARE OF THE STATE AND THE FAMILY: Understanding Care of the Elderly through Macro and Micro Perspectives

Information Security for Economic and Social Development

Strategic Asian Mapping Scenario- (Thoughts)

Economic Model…. Transform ,/….. Cycle,./ Life Value Creation ,… Wealth

日本は緑ビジネス有機性波の acceralation に直面している

Jp facing the acceralation‖□‖ of the green business organic wave

日本面对绿色企业有机波浪的 acceralation

일본은 녹색 사업 유기 파의 **acceralation** 를 직면하고 있다

Japan stellt das acceralation der organischen Welle des grünen Geschäfts gegenüber

япония смотрит на acceralation волны зеленого дела органической

Japan is facing the acceralation of the green business organic wave

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™Ω© **GODS WORK(WTO,UN,IMF,WEF,UNEP,G20,WB,…)**

U **Privatization party index**

EWEC

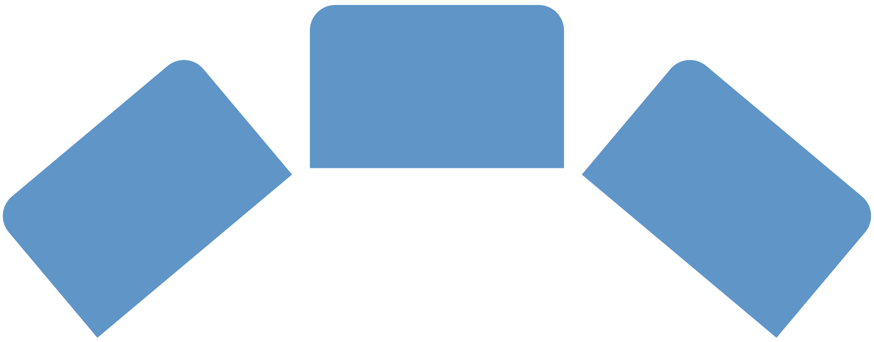
NANING –SG CORIDOR

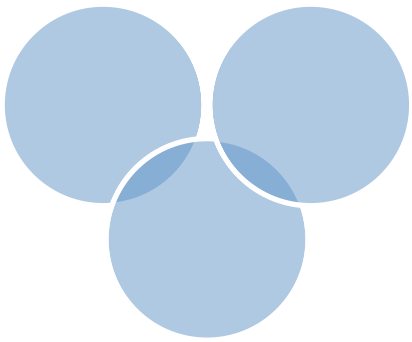
KUNMING –BKK(MY,) LOGISTIC BY RAPID TRAIN

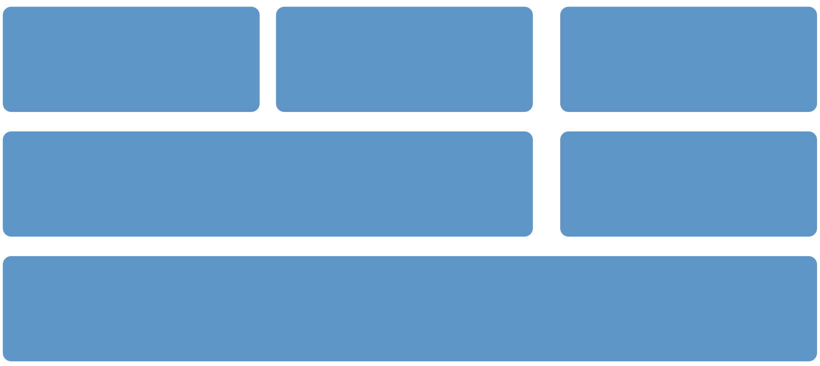
CEPEA

South Pacific Free Trade

Strategic Mapping Scenarios



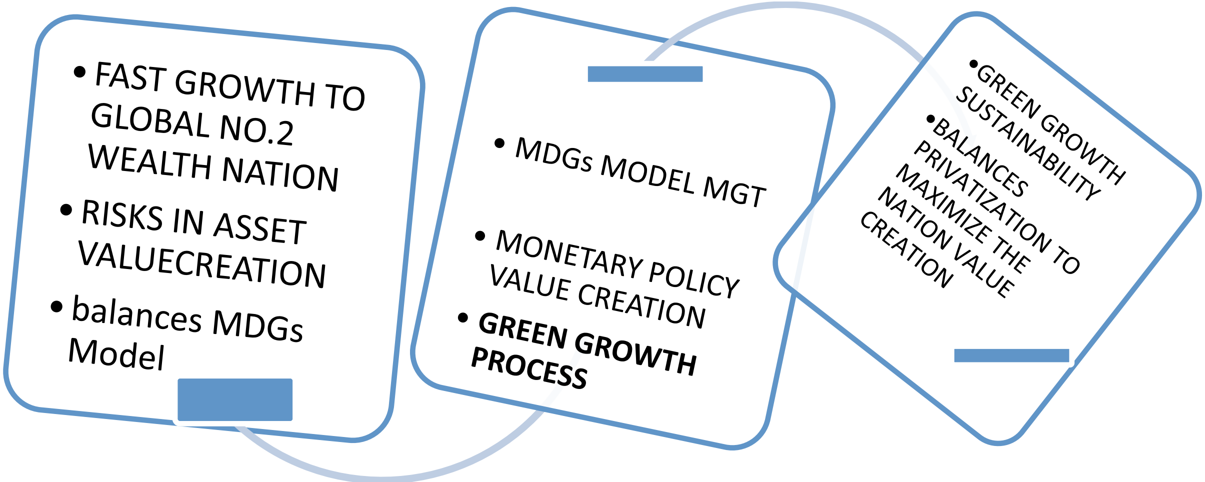




Asian Economic Outlook (~25 Countries)

APEC 2010 Promotion Council of Yokohama

CHINA WEALTH NATION



China starts to implement carbon credit with in 5 yrs.

ASIA " WISDOM OF GROWTH ENGINE COOPERATION TIERS TOWARD WEO" MODELS

นายอลงกรณ์ พลบุตร รัฐมนตรีช่วยว่าการกระทรวงพาณิชย์จะนำคณะผู้แทนไทยเข้าร่วมประชุมกรอบความร่วมมือทางเศรษฐกิจรอบอ่าวเป่ยปู้ (Pan Beibu Gulf Economic Cooperation - PBGEC) ครั้งที่ 5 จัดขึ้น ณ นครหนานหนิง เขตปกครองตนเองกวางสี ระหว่างวันที่ 12-13 สิงหาคม 2553 เพื่อเปิดเส้นทางโลจิสติกส์การค้าใหม่ระหว่างไทยกับกลุ่มประเทศในอนุภูมิภาคเป่ยปู้ ซึ่งประกอบด้วย 3 มณฑลของจีน ได้แก่ กวางสี กวางตุ้ง และไหหนาน และประเทศในอาเซียนที่อยู่ในย่านอ่าวเป่ยปู้ หรือ "อ่าวตังเกี๋ย" ได้แก่ เวียดนาม ฟิลิปปินส์ บรูไน มาเลเซีย สิงคโปร์ อินโดนีเซีย โดยไทยได้เข้าร่วมเป็นสมาชิกรายล่าสุดของอาเซียนตั้งแต่ปี 2552 และจะเข้าร่วมประชุมครั้งนี้ในฐานะประเทศสมาชิกเป็นครั้งที่ 2

กรอบความร่วมมืออ่าวเป่ยปู้เป็นตลาดที่น่าจับตามอง มีประชากร 1.9 พันล้านคน เป็นขั้วเศรษฐกิจใหม่ที่มีอัตราเติบโตทางเศรษฐกิจสูงสุดในเอเชียแปซิฟิก และเป็นฐานการผลิตสินค้าเกษตร เช่น ข้าว ยางพารา ผลไม้ และอุตสาหกรรมที่สำคัญ เช่น อิเล็กทรอนิกส์ อุปกรณ์ไฟฟ้า เครื่องจักรกล และสินค้าแร่ต่าง ๆ เช่น เหล็ก ถ่านหิน ทองแดง โดยมีมูลค่าการค้าระหว่างกันเฉลี่ยต่อปีมากกว่า 7 แสนล้านเหรียญสหรัฐฯ โดยไทยเป็นคู่ค้าที่สำคัญอันดับที่ 2 (รองจากมาเลเซีย) โดยไทยมีมูลค่าการค้ากับมณฑลกวางสี กวางตุ้ง และไหหนาน คิดเป็นสัดส่วนประมาณร้อยละ 20 ของมูลค่าการค้าทั้งหมดในกลุ่มอ่าวเป่ยปู้ โดยสินค้าหลักที่ไทยส่งออกใน 3 มณฑลของจีน ได้แก่ ผลิตภัณฑ์ปิโตรเลียม แผงวงจรไฟฟ้า ผลิตภัณฑ์มันสำปะหลัง ยางสังเคราะห์ และผลไม้ โดยทั้ง 3 มณฑลข้างต้น เป็นประตูการค้าสำคัญและมีสัดส่วน 1/3

ของมูลค่านำเข้าสินค้าไทยทั้งหมดในตลาดจีน

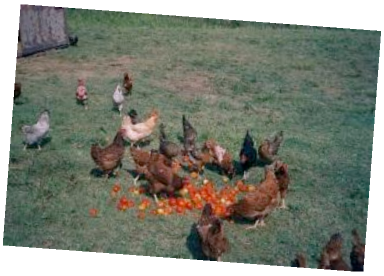
ภายใต้กรอบอนุภูมิภาคอ่าวเป่ยปู้จะมีโครงการพัฒนาหลักที่เน้นเรื่องโลจิสติกส์ของการขนส่งทางทะเล (Maritime Logistics) ซึ่งจะช่วยเสริมกับกรอบความร่วมมืออนุภูมิภาคลุ่มน้ำโขง (GMS) ที่เน้นเรื่องโลจิสติกส์ของการขนส่งทางถนน (Road Logistics) เชื่อมโยงกลุ่มอินโดจีนและจีนตอนใต้ ทำให้อนุภูมิภาคในอาเซียน โดยเฉพาะไทย ลาว เวียดนาม มีการเชื่อมต่อกับจีนตอนใต้อย่างครบวงจรตามแนวคิด “หนึ่งแกน สองปีก” (One Economic Belt – Two Corridors) ที่ช่วยเสริมการเปิดตลาดการค้าและการลงทุนของอาเซียนกับจีน เมื่อต้นปี 2553 นี้ อาเซียนกับจีนได้ยกเลิกภาษีนำเข้าสินค้ากว่าร้อยละ 90 ของรายการสินค้าระหว่างกันแล้ว

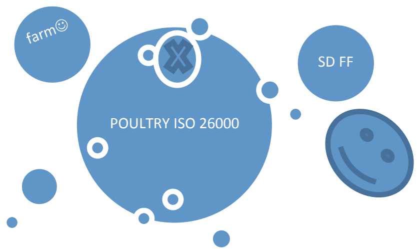
นอกจากนี้ ในการประชุมฯ ประเทศภาคีจะเดินหน้ายกระดับการพัฒนาระบบโลจิสติกส์ทางทะเล ได้แก่ การพัฒนาท่าเรือน้ำลึก การเปิดเส้นทางเดินเรือประจำเส้นทางที่ให้บริการเดินเรือตรงระหว่างท่าเรือหลักในอาเซียนและ 3 มณฑลของจีน เช่น ท่าเรือเป่ยไห่ ท่าเรือฝางเฉิง และท่าเรือชินโจว การส่งเสริมการขนส่งต่อเนื่องหลายรูปแบบ การจัดทำเขตปลอดอากร การอำนวยความสะดวกด้านพิธีการการค้า และการส่งเสริมกิจกรรมการค้าระหว่างกัน ซึ่งจะช่วยลดเวลาและต้นทุนการค้าระหว่างไทยกับตลาดในอภูมิภาคอ่าวเป่ยปู้

Case : The customer order decoupling point at a poultry processor (This case is based on Van der Vorst *et al*. 2001,..........*modified thru ideas ISO 26000 by suwanee s.*)

ISO 26000

At Wings & Legs, a large poultry processor, the working day starts very early in the morning. Before a single cock-a-doodle has sounded,☺ live *chickens* are delivered to the processing plant where they are cleaned, processed, packed and **stored**.





MODEL :

Case : The Green Agribusiness

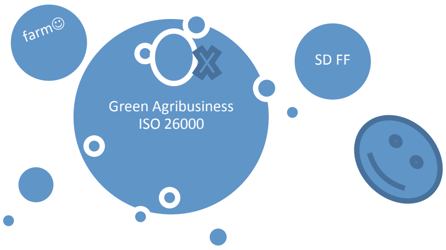
The importance of Green Agribusiness

Green Agribusiness denotes the collective business activities that are performed from farm to fork. It covers the supply of agricultural inputs, the production and transformation of agricultural products and their distribution to final consumers. Agribusiness is one of the main generators of employment and income worldwide.

Agribusiness is characterized by raw materials that are mostly perishable, variable in quality and not regularly available. The sector is subject to stringent regulatory controls on consumer safety, product quality and environmental protection. Traditional production and distribution methods are being replaced

FAO of the UN : Agribusiness Development

ISO 26000



Model:

Community : Sustainability Development Ω

Ecological- Friendly/ Efficiently Footprint

Thailand

Climate Thailand Conference 2010: CTC 2010

The 1 " National Carbon Neutral Conference

Abstract

Climate Thailand 2010
National Risk and Opportunities in Global Climate Changes

The consequence of the globe revolution-Global Climate Change- in 21 century can be measureable in many metrics, of which the United Nation has been continuous developing the related issues and resolution in each nation to be sustainable development and being the green business. The key metrics in Thailand shall be the ideas of the Eco-Friendly/Efficiency Footprint that cover the topics of the holistic all key performances indicators- factors- that resulted from the industry processes in the business to achieve **Clean , Eco-City, Eco- Efficiency/Friendly**. The one example in the Oil and Fuel SD(picture below) and another excellent- lead project in Thailand for the Clean Energy is **the Energy Complex from PTT**.

Picture one

Before flue gas desulfurization was installed, the air-polluting emissions from this power plant in New Mexico contained excessive amounts of sulfur dioxide

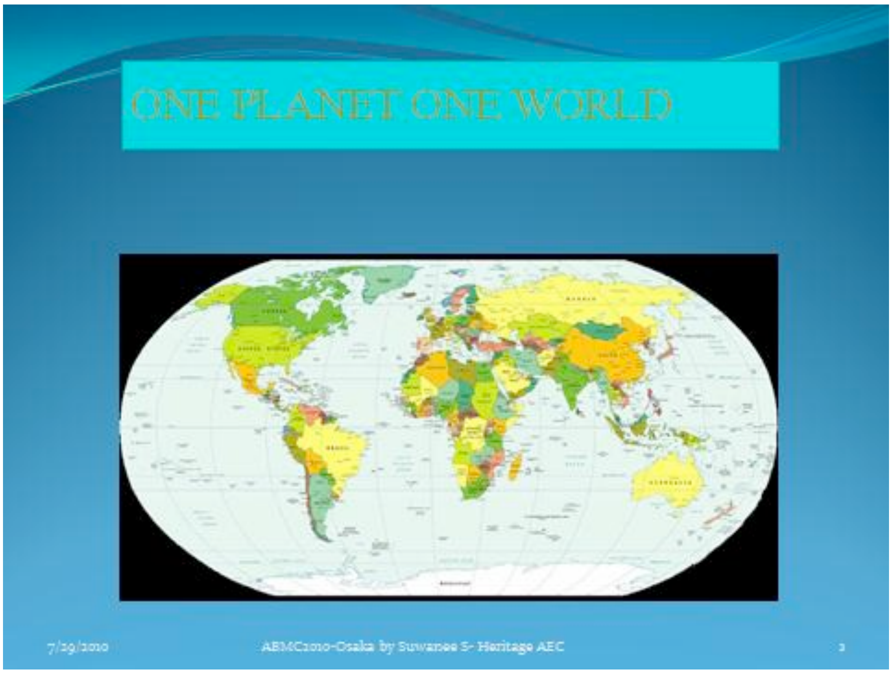
ASIA WISDOM OF NATION WEALTH GREEN ORGANIC GROWTH MODEL

√‾ΣWFTAEU.......

the Global Challenges of the 21st Century - The Future of the Global Financial System

APPENDIX

World Economic Outlook



APEC JAPAN 2010

:

Home>Meetings>The APEC Growth Strategy High-Level Policy Round Table Toward Higher Quality

APEC JAPAN 2010 | Meetings/The APEC Growth Strategy High-Level Policy Round Table Toward Higher Quality Growth for APEC

http://www.mofa.go.jp/policy/economy/apec/2010/docs/gshlprt.html (1 of 4) [21/8/2553 10:04:47]

Growth for APEC

The APEC Growth Strategy High-Level Policy Round Table Toward Higher Quality Growth for APEC

The APEC Growth Strategy High-Level Policy Round Table in Beppu

1. The High-Level Policy Round Table (hereinafter, the "Round Table") was held in Beppu, Japan from 7 to 8 August, 2010 under the chairmanship of H.E. Masayuki Naoshima, Minister of Economy, Trade and Industry, Japan and H.E. Satoshi Arai, Minister of State for National Policy and Minister of State for Economic and Fiscal Policy, Japan.

2. We, all participating APEC economies' heads of the delegations including ministerial level officials,
welcomed especially the participation of the following individuals: President of Asian Development Bank; Executive Director of International Energy Agency; Chairperson of the Governing Board, Economic Research Institute for ASEAN and East Asia

(ERIA); and Vice President, East Asia and Pacific of the World Bank. We also welcomed the participation of the APEC Business Advisory Council (ABAC) and five eminent persons.
3. Last year, the APEC Economic Leaders agreed to formulate an APEC Growth Strategy in 2010 to shape the region's growth following the financial and economic crisis. APEC is formulating its Growth Strategy for the first time since its inception. Further to the discussions among Senior Officials and Trade Ministers, the Round Table was the first opportunity for the APEC member economies to focus on comprehensive and dedicated discussion with regard to the APEC Growth Strategy, enabling the participating heads of delegations to lead the discussion and to employ their expertise to add significant value to the Growth Strategy and to develop a shared understanding on the direction thereof before it is finalized for consideration by APEC Ministers and Leaders. We shared the view that this Round Table would be recorded as a landmark event for APEC.

APEC's Need for a Growth Strategy
4. The APEC region has become the world's growth center by promoting free and open trade and investment and strengthening regional economic integration (REI). Recognizing that liberalization and facilitation of trade and investment will contribute to the growth in the APEC economies, we will continue efforts in this area to achieve further growth in the region. However, in recent years, new challenges have come to the forefront, and have therefore been added to APEC's agenda, such as energy and environmental constraints, human security concerns, the necessity of constant innovation, and economic performance and opportunity disparities within and across the economies. Therefore APEC must give greater attention than ever before to these new issues as well with a view to achieving further prosperity and collective well-being through long-term and sustained growth.
5. As the world's leading growth center, the APEC region has a great responsibility for the future course of the global economy beyond the region as well as for the welfare and prosperity of its own people.
APEC should contribute to improving the quality of growth in the global economy as well through its Growth Strategy, as envisaged by the APEC Economic Leaders last year.
6. The Ministers responsible for Trade declared in Sapporo this year that "the Growth Strategy aims to achieve economic growth that is balanced, inclusive, sustainable, innovative and secure." These Five Attributes for economic growth give APEC economies guidance on how to pursue high quality growth. They are being emphasized in the APEC Growth Strategy because APEC has come to understand that otherwise the next generation will not be able to enjoy sustained growth. APEC should address all Five Attributes collectively and comprehensively, because they are interrelated and mutually reinforcing and thus require collective commitment and implementation to be realized in practice.
7. The APEC Growth Strategy should have sufficient action-oriented elements such as an action plan and follow-up mechanisms to translate the Five Attributes into collective concrete actions by the member economies, whose progress should be reviewed on an annual basis and reported to the Leaders in 2015, at which point the Leaders may consider the future direction of the Growth Strategy. APEC will also look into ways to take stock of APEC's collective progress with regard to the Five Attributes.

Individual Sessions

8. In addition to the above broad statements, we agreed to summarize each session's discussion on the

Five Attributes, as follows:

Balanced Growth

9. APEC could contribute to balanced growth by re-energizing its work on structural reforms, building on ongoing efforts under the Leaders' Agenda to Implement Structural Reform. APEC should

Inclusive Growth

10. All our citizens should have the opportunity to thrive in the global market economy. APEC should contribute to inclusive growth by promoting policies in fields such as job creation, human resource development and utilization, SMEs and entrepreneurship development, creating new economic opportunities for women, and more inclusive access to finance.

Sustainable Growth

11. In order to shift to a green economy, APEC should further promote energy efficiency and the development of a low-carbon energy sector. APEC should work to improve access for environmental goods and services (EGS), to develop EGS sectors, and promote energy conservation activities through green ICT.

Innovative Growth

12. APEC should contribute to innovative growth by improving the Research & Development environment and effectively providing policy and regulatory infrastructure conducive to innovation, such as those related to ICT application, digital prosperity, professional workforce mobility, protection of intellectual property (IP) rights, and standardization.

Secure Growth

13. APEC should promote the human security agenda to provide the secure environment necessary for economic growth. APEC can contribute to secure growth by continuing to promote policies in fields such as counter terrorism, prevention and countering of emergency preparedness, pandemic diseases, and food security.

14. In addition to the foregoing general conclusions from each session, the participants from member economies as well as from industry and academia had an active discussion, shared ideas, and exchanged views on how APEC could promote these growth attributes in concrete terms.

The APEC Growth Strategy: Work toward Yokohama

15. We shared the view that we should communicate with our respective Senior Officials and encourage them to continue work on all aspects of the Growth Strategy toward finalizing it at the November APEC Economic Leaders' Meeting in Yokohama by duly reflecting discussions and conclusions at this Round Table. We will also grant political support to the Growth Strategy deliberating process toward the APEC Economic Leaders' Meeting in Yokohama.

Thai economy to continue growing satisfactorily

- **Photo**
  - 

BANGKOK, Aug 11 – The Thai economy is set to continue growing satisfactorily without impediments given the improved economic figures and conditions in the first half of this year, according to a veteran banker.

Speaking after the annual meeting between Bank of Thailand (BoT) officials and representatives of 15 foreign commercial banks, Pakorn Wanglee, manager of the Royal Bank of Scotland, said the improved economic conditions would contribute to the loan growth in the future.

The Foreign Commercial Banks Association was interested in Thailand’s economic outlook inquired about the interest trend, foreign exchange rate movement, and liquidity in the system. At present, the liquidity is as high as Bt3 trillion, which is considered excessive.

“The central bank explains it has managed the liquidity through the repo and swap markets to ensure it reaches equilibrium. As for the baht, the bank has supervised the currency movement to avert its fluctuation,” said Mr. Pakorn.

He added the business performance by foreign bank branches under the current economic situation and regulatory conditions had proceeded without obstruction.

Thailand Economic Monitor - June 2010 - Download graphs

Available in: ภาษาไทย

Click on a thumbnail to access the higher resolution version (you may want to enlarge the resulting browser window to get the largest view possible). To save a copy, right-click on the hi-res image and choose "Save As" or

"Save Image as".

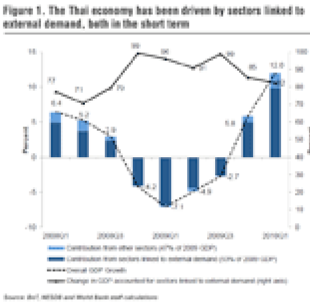


Figure 1.
The Thai economy has been driven by sectors linked to external demand,
both in the short term…

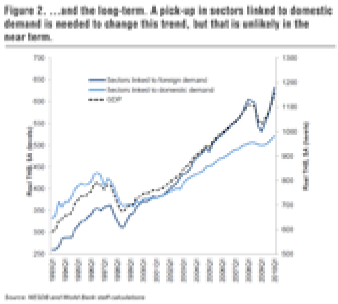


Figure 2.
…and the long-term. A pick-up in sectors linked to domestic demand is needed to change this trend, but that is unlikely in the near term.

Figure 3.
Import demand, especially from China, has rebounded and is expected to remain on firm footing in the medium term, providing a basis for continued growth in the Thai economy.

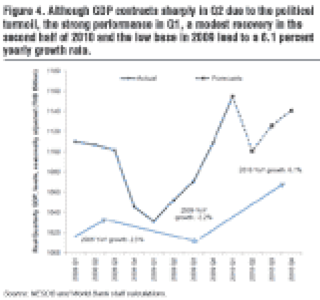


Figure 4.
Although GDP contracts sharply in Q2 due to the political turmoil, the strong performance in Q1, a modest recovery in the second half of 2010 and the low base in 2009 lead to a 6.1 percent yearly growth rate.

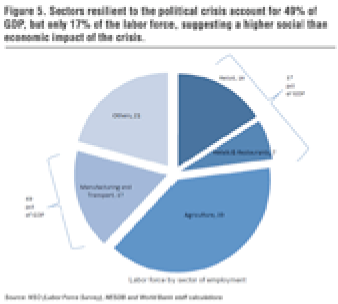


Figure 5.
Sectors resilient to the political crisis account for 49 percent of GDP, but only 17 percent of the labor force, suggesting a higher social than economic impact of the crisis.

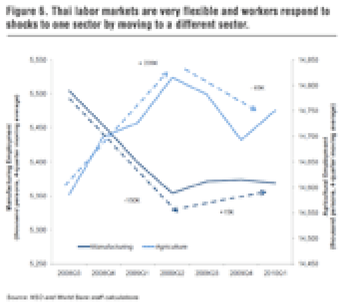


Figure 6.
Thai labor markets are very flexible and workers respond
to shocks to one sector by moving to a different sector.

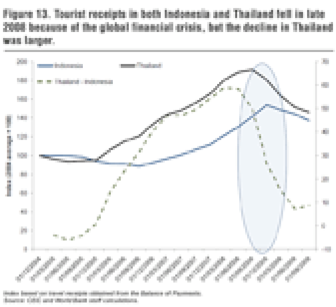


Figure 13.
Tourist receipts in both Indonesia and Thailand fell in late 2008 because of the
global financial crisis, but
the decline in Thailand was larger.

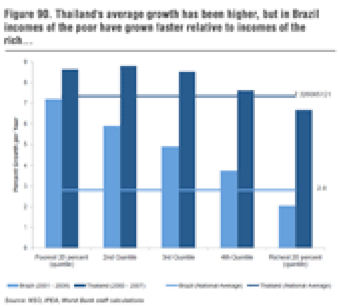


Figure 90.
Thailand's average growth has been higher, but in Brazil incomes of the poor have
grown faster relative to
incomes of the rich…

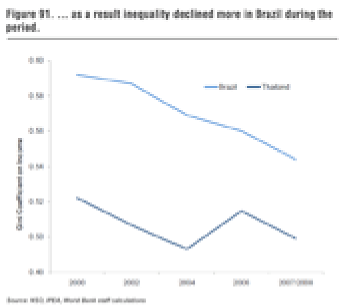


Figure 91.
…as a result inequality declined more in Brazil during the period.

Japan Economy's Digest

Income Gap Wider As Irregular Workers Rise: Labor Ministry

Suwanee Suwanthanasan August 14, 2010 Heritage AP Thailand

TOKYO (Nikkei)--Japan's income gap is widening as companies are hiring more irregular workers, the Labor Ministry said Tuesday in its fiscal 2010 report on the country's labor market.

The ministry noted that companies were prompted to hire more irregular workers in light of eased regulations on labor dispatch service. The number of workers earning an annual salary of 1-2.5 million yen was in particular on the increase over the decade through 2007, according to the ministry's latest White Paper on the Labour Economy.

In the 2000s, the ratio of irregular workers, including those dispatched from manpower agencies, grew at a faster clip, with the ratio now accounting for more than 30% of the country's overall labor force.

This is mainly attributed to the fact that "Major firms, hoping to curtail personnel costs, expanded the hiring of irregular workers over those on a regular payroll," the white paper says. The ministry suggested in the paper that it is imperative for employers to turn irregular workers into permanent employees, so employers can provide higher wages and ensure stable job conditions.

Meanwhile, the number of those fresh from university and college having difficulty finding a job has also increased lately, with hiring appetite souring at firms."It is necessary for companies seeking sustainable management to make viable recruitment plans without being affected by short-term economic trends," the ministry said in the paper.

Finance Minister Stresses Need To Avoid 'Excessive' Rise In Yen

TOKYO (Kyodo)--Finance Minister Yoshihiko Noda said Tuesday that he will keep in mind the need to avoid the yen's ''excessive'' rise. ''Excessive fluctuations and chaotic moves would have repercussions on the stability of the economy and finance,'' he told the House of Representatives Financial Affairs Committee. ''The basic line is that foreign exchange is determined in the market.''

The financial chief indicated, however, that market intervention is still possible, saying, ''I want to refrain from commenting on whether to intervene into foreign exchange.''
Noda was responding to a question posed by an opposition Liberal Democratic Party lawmaker on how to deal with the yen's recent appreciation against other major currencies.

The U.S. dollar, for example, plunged in New York on Friday to as low as 85.95 yen, a level unseen in local trading since July 1995. That prompted Noda to say at the time, ''I will carefully watch market movements.

Key Econ Gauge Up 1.2 Points In July: Teikoku Databank

TOKYO (NQN)--Japan's economic diffusion index rose 1.2 points from June to 33.5 in July, marking the seventh straight month of increase, Teikoku Databank Ltd. said Wednesday The rise in confidence came on brisk exports to emerging markets and a gradual recovery in domestic demand.

However, subindexes for the electronics and auto-related sectors, which have served as main engines for the domestic economy, grew at a much slower pace last month. Teikoku Databank said the economy is still on a recovery track but lacks vigor. Looking ahead, the DI is expected to improve 2.0 points from July to 35.5 in three months, and increase 1.5 points to 35.0 in six months. The research company said that although the economy will likely maintain its recovery momentum, it may experience a pause down the road. Teikoku Databank polled 22,557 companies nationwide in late July, obtaining valid responses from 50.7%. The DI ranges from 0 to 100, with 50 serving as the boom-or-bust line.

Nikkei's Consumer Spending Index Fell In July

TOKYO (Nikkei)--A consumer spending index declined in July, the first drop in five months, suggesting that a worsening corporate earnings outlook has dampened sentiment. Nikkei Inc.'s Consumption Forecasting Indicator dropped 2 points to 81.8, falling back to the level seen in April, when the economy was abuzz with signs of rejuvenation. Facing economic uncertainty, consumers apparently held back on spending on travel, leisure and durable goods.

The index is based on a six-point survey of Tokyo metropolitan area residents. Prospects for job hunting improved slightly, but consumers grew less willing to spend on travel and leisure, with that part of the survey losing 4.1 points. The residents also became less optimistic about employers, with that section of the survey suffering a 2.6-point drop.

The index, which is benchmarked to 100 for December 2004, tends to precede patterns of actual spending on such things as audiovisual gear and travel by six months.

Econ Minister To Push For Vietnam Nuclear Deal

HANOI (Nikkei)--Economy, Trade and Industry Minister Masayuki Naoshima will meet with Vietnamese officials in mid-August to try to persuade the government to select Japanese companies for its nuclear power plant project, it has been learned. Naoshima is expected to meet Vietnamese Prime Minister Nguyen Tan Dung and other officials, and may propose new financial and technological assistance for the 750 billion yen (8.66 billion dollar) project.

Masayuki Naoshima These will be the first ministerial level talks between the two countries focusing on nuclear plant construction.Early this year, a consortium of Japanese companies, including Toshiba Corp. , Mitsubishi Heavy Industries Ltd. and Hitachi Ltd. , lost out to Russian state-run nuclear power firm Rosatom in the first phase of Vietnam's nuclear project. The project calls for the construction of two nuclear plants that would be the first in Southeast Asia.This spring, Tokyo and Japanese companies intensified their efforts to win the second phase of the project, which calls for the construction of two more nuclear plants.Prime Minister Naoto Kan's government is hoping to expand exports of goods and services for infrastructure projects. Kan is scheduled to meet his Vietnamese counterpart in Hanoi in late October.

Govt To Introduce Consumer Protection Law In 2012

TOKYO (Nikkei)--A Consumer Affairs Agency panel on Wednesday will publish an outline of a study aimed at strengthening consumer protections against fraud, with a view to introducing legislation in 2012.

The outline focuses on three areas. The first proposes new penalties on companies that profit from false food origin labels. Under existing law, businesses can be fined only for failure to comply with the law and continuing to label products fraudulently. The government will consider changing the rules to seize profits gained illicitly. Details on the types of violations subject to sanctions, which agency will be responsible for enforcement, and how fines will be used, will be worked out later.

Home renovation scams are the second area slated for legislation. Some unscrupulous contractors have committed repeated fraud by changing their names and methods of operation after being caught. To prevent home improvement contractors from deliberately dissolving their companies, and in order to confiscate profits from scams, the government plans to give agencies the authority to force contractors suspected of fraud into bankruptcy and freeze their accounts.

The third area will focus on reforms aimed at making it easier for students to get tuition refunds. The government will also promote discussions on introducing a class-action lawsuit system, in which victims or consumer protection groups can act as representatives of a larger group of plaintiffs in litigation.

Business groups have voiced concerns about the class-action proposal in particular because if the range of plaintiffs is broadened too much, it may be difficult for corporate defendants to estimate damages and seek settlements. The Japan Business Federation (Nippon Keidanren) fears that class-action suits could hinder the operations of their members if lawsuits become rampant, as they are in the U.S. The government will aims to flesh out details on proposed legislation covering the three areas by next summer.

Minimum Wage Hike Call Aims At Broader Increase

TOKYO (Nikkei)--An advisory panel to the Labor Ministry gave top priority to boosting the nation's general wage levels in proposing to raise hourly minimum wages for this fiscal year by a nationwide average of 15 yen to 728 yen, up from the average 10 yen hike recommended a year earlier.

The decision is a sign of the government's resolve to raise the nationwide average for the hourly minimum wage to 1,000 yen by 2020, and to lift the incomes of minimum wage earners in 12 prefectures above those of welfare recipients.

To achieve those goals, minimum wages will need to rise by an average 3% in nominal terms or more than 2% in real terms every year through fiscal 2020.Panel members representing labor stressed the need to meet the goals as soon as possible, while those speaking for management called for a greater focus on economic growth.

Govt To Aid Private-Sector Exports Of Low-Carbon Tech

TOKYO (Nikkei)--The government is set to sign bilateral agreements with nine countries, aiming to give a boost to Japanese firms looking to export their energy-efficient technologies.
As part of its effort to fight global warming, the Ministry of Economy, Trade and Industry (METI) will map out a "bilateral offset mechanism" that will allow Japan to offset carbon emissions through exports of low-carbon technologies and equipment.

The offsets fall under the rubric of the Copenhagen Agreement, reached during the Copenhagen summit on climate change last December. This is the first time Japan will make use of the offset mechanism. Indonesia, the world's largest producer of geothermal energy, hopes the power source can help it address electricity shortages. METI has selected 15 projects proposed by the private sector. Of the nine countries where the projects are to be implemented, the government has already reached basic agreements with Indonesia, Vietnam, the Philippines and India. It plans to start talks soon with Thailand, Laos, Myanmar, China and Peru.

Indonesia is hosting four of the projects. Mitsubishi Corp. (8058) will build a geothermal power plant, while Marubeni Corp. (8002) will undertake a forest conservation project. Marubeni and Tokyo Electric Power Co. (9501) will build an advanced-technology coal-fired power station in Vietnam, and Nomura Research Institute Ltd. (4307) will take part in a project to promote construction of eco-friendly houses in China. Japan emits some 1.3 billion tons of greenhouse gases a year. The 15 projects, when fully implemented, are expected to cut 5-10 million tons worth of emissions.

Autoparts Firms Rolled Into Combined Net Profit For 1st Qtr

TOKYO (Nikkei)--Sales growth in Asia helped 35 leading autoparts suppliers swing to an aggregate 156.6 billion yen net profit in the three months ended June 30 from the year-earlier 65.9 billion yen loss. Their earnings power has improved thanks to such streamlining measures as consolidating factories. Net profit returned to 91% of the level for the April-June quarter of 2008, just before the financial crisis
.
Combined sales surged 41% to 3.86 trillion yen, while combined operating earnings moved from an 86.7 billion yen loss to a 274.2 billion yen profit.Denso Corp.'s (6902) operating

result improved by 85.8 billion yen to lift the firm 70.6 billion yen into the black. Sales growth pushed up profit by 83.9 billion yen. Demand recovered rapidly not only in China, but also in Southeast Asia, including Thailand and Indonesia.

Keihin Corp. (7251) saw Asia sales soar 46% thanks to increased production by main client Honda Motor Co. (7267). Keihin's operating profit hit a record for the fiscal first quarter. Sales were up in Japan and North America as well. European automobile production rose more than expected as the euro's decline made European manufacturers' exports more competitive, according to Yoichiro Nomura, a senior executive at Takata Corp. (7312), whose European sales jumped 27%. The 35 firms' combined sales were still 15% less than the figure of the April-June quarter of 2008, but the total operating profit exceeded its corresponding tally in the pre-crisis quarter by 11%. Even though sales are low, profitability has improved after streamlining.

Akebono Brake Industry Co. (7238) closed three domestic plants in fiscal 2009. Its first-quarter operating profit hit a record in fiscal 2010. Eighteen of the 35 firms upgraded earnings forecasts for the full year through March 2011.

Japan's June Current Account Surplus Down 18.2% On Year

TOKYO (Kyodo)--Japan's current account surplus in June fell 18.2 percent from a year earlier to 1,047.1 billion yen, falling for two months in a row, as the income surplus dipped sharply amid falls in income from dividend payments and interest on bonds, the Finance Ministry said Monday. For the first six months of 2010, the balance came to a surplus of 8,526.2 billion yen, up 47.3 percent from the same period last year, as the goods trade surplus shot up more than six-fold, buoyed by robust exports of such items as automobiles to the United States and Asia, according to the ministry's preliminary data.

In June alone, the current account balance -- the broadest gauge of trade in goods and services -- registered the 17th straight monthly surplus in the reporting month. The surplus in the income account, covering such items as returns from Japanese overseas investments, dwindled 46.0 percent to 462.1 billion yen, as income from dividend payments fell due to sluggish performance at subsidiaries and interest on bonds also declined amid low interest rates, a ministry official said.

The balance of trade in goods and services posted a surplus of 658.8 billion yen, up 35.4 percent.

Exports climbed 29.2 percent to 5,563.1 billion yen for the seventh straight month of expansion, while imports jumped 29.6 percent to 4,794.1 billion yen, rising for the sixth consecutive month. The deficit in services trade, which includes payments for transport and tourism, shrank by 10.6 billion yen from a year earlier to 110.2 billion yen.
In the January-June period, the balance of trade in goods and services came to a surplus of 3,262.4 billion yen compared with a deficit of 358.6 billion yen in the same period last year.

The surplus in goods trade totaled 4,060.1 billion yen, soaring 527.5 percent, the second biggest expansion after 912.5 percent marked in the second half of 2009, as growth in exports offset the increase in imports helped by surging crude oil prices. Exports logged a 39.6 percent jump to 31,386.4 billion yen in the six-month period, the first growth in four half-year periods, while imports rose 25.1 percent to 27,326.2 billion yen, rising for the first time in three periods. The balance of services trade narrowed its deficit by 207.9 billion yen from a year earlier to 797.8 billion yen.

The income surplus slipped 14.6 percent to 5,882.2 billion yen on falls in income from dividends and interest in bonds.

China Quarterly Update, June 2010

Photo courtesy of of joshDubya through a Creative Commons license

OVERVIEW

- China's economy has continued to grow robustly, with some softening recently.
- China's economic outlook remains favorable.
- Such prospects warrant further normalization of the macroeconomic stance, while keeping flexibility.
- Policy making needs to take into account several features of the medium term outlook.
- Moreover, further reforms are needed to ensure economic growth remains sustainable socially and with regard to energy and the environment.

RECENT ECONOMIC DEVELOPMENTS

- China's economic growth has remainedstrong(Figure1
- Growth has continued to be supported by an expansionary macro policy stance.
- But growth has recently become more broad-based(Figure 2).
- ***The slowdown in government-led investment (GLI) has partly been offset by strong real estate investment(Figure 3).***
- *Household consumption growth has remained solid, in line with a favorable labor market (Figure 4).*
- Export volumes have recovered fast in the last 12 months, reflecting improved global demand and further market share gains (Figure 5).
- In spite of this, China's trade surplus has declined sharply since 2008 due to surging import volumes and declining terms of trade (Figure 6).
- ***China's terms of trade have deteriorated***

substantially up until recently (Figure 7).

- The peg of the RMB to the US dollar transmits swings in the US dollar to China's exchange rate.
- Inflation has picked up somewhat because of higher food prices, but core inflation remains low (Figure 8).
- However, property prices have surged on the back of the expansionary monetary stance and have triggered measures.

- Consumer price inflation has picked up.

ECONOMIC PROSPECTS

- Growth prospects in many high income countries are subdued and fragile.
- However, the global recovery has evolved better than expected and forecasts for global growth have been revised up since early this year.
- Nonetheless, the uncertainties and risks around the central global forecast are large.
- With spare capacity in many industries, globally, price pressures are likely to remain subdued.
- In China, growth is likely to ease somewhat.
- In 2010, growth should be less investment-driven and benefit from more favorable external trade.
- The external surplus should ease down somewhat this year and next (Figure 9).
- Inflation is likely to remain contained this year (Figure 10).
- Risks are two way and balanced.
- **Medium term projections**.
    - ***Considering the prospects for its 3 key determinants, trend growth is on course to decline in 2010-20, but to a still respectable rate.***
    - Looking ahead via the expenditure perspective, our scenario has several features.

ECONOMIC POLICIES

- China's baseline macro prospects warrant a normalization of the overall macroeconomic stance (Figure 11/Figure 12).

- Heightened uncertainty calls for policy flexibility rather than continued stimulus by default.

- Policy making needs to take into account several features from the medium and long term outlook.

Fiscal policy

- The headline budget deficit rightly implies broadly neutral fiscal policy, although the broader fiscal stance is not clear.
- The central authorities are rightly aiming to control lending by LGIPs.

- In current circumstances, it is important to have flexibility in fiscal policy implementation.
- Fiscal policy and public finance reforms are key in keeping growth sustainable and rebalancing the economy.

Monetary policy

- The authorities have outlined a less expansionary overall monetary policy stance and taken some steps towards achieving that (Figure 13/Figure 14).
- In China's case, the gains from letting interest rates play a larger role in monetary policy are likely higher than the costs.
- If policymakers remain concerned about capital flows, macro prudential regulation and more exchange rate flexibility would help.

Reform of Social Protection and Labor Market Policies

- Social protection and labor market policies and programs have taken on sharply increased importance in China in recent years.

- Despite these major strides, a number of challenges remain which will need to be addressed during the 12th 5YP period and beyond.
    - Enhancing coherence and extending coverage
    - Establishing appropriate financing arrangements
    - Reforms to facilitate rural-urban integration and development of a competitive labor market.

Case : The customer order decoupling point at a poultry processor (This case is based on Van der Vorst *et al*. 2001)
At Wings & Legs, a large poultry processor, the working day starts very early in the morning. Before a single cock-a-doodle has sounded,☺ live *chickens* are delivered to the processing plant where they are cleaned, processed, packed and **stored**.
The next day, packages of fresh poultry meat are distributed to several large retail distribution centres and a large number of smaller retail stores; the same evening many people will enjoy their chicken Tandoori or fried chicken legs. The product is simple and the whole operation seems ***efficiently executed***.

However, the sales manager complained that the delivery performance had decreased in the last couple of months. Moreover, he complained that retailers are less satisfied with the quality of products they receive. Several times in that month, product freshness and product weight were not according to specifications. The operations and purchase managers responded that the sales department made sales agreements with retailers that could not be met in such a short time. They needed to have prior information on promotional activity so they could respond more effectively. They needed to have better forecasts of future sales so they could match the supply of chicken with the demand for poultry products.
The food and retail market that Wings and Legs serves is *very dynamic*. During recent years, the assortment of most retailers has increased by a factor of 4 to 5 times. A single retail outlet used to store 4 000 to 5 000 different products; now they have 20 000 to 30 000 different products. Obviously, this has had an effect on the assortment of Wings & Legs itself. They introduced a large number of new fresh poultry products to remain competitive. Poultry meat was packed in more variations and combinations and processed in many more different ways. They introduced new seasonings and microwaveable ready-meals based on poultry products. Their own assortment grew from 100 different products to 450 different products and product-variations.28 *Supply chain management and logistics Agro-industrial supply chain management: concepts and applications* 29
The demand for poultry products by end-consumers shows a very variable pattern, and seems unpredictable. This may look strange at first sight, but is explained by the heavy use of promotional activities at the retail stage in the supply chain; promotional activities are not always communicated in detail to Wings & Legs. The size of consumer reaction to a promotion is not easy to predict. If there were no promotional activities, consumer demand actually shows a more or less seasonal pattern, which is relatively predictable. The promotional activities initiated by the larger retail companies place heavy strains on Wings & Legs and the upstream supply chain. An opportunity to level demand is to eliminate all promotional activities. However, this encounters much resistance from the retail companies involved; promotions of poultry products are a favourite instrument for competitors to bring in new customers. Meat products are the most expensive components of evening meals and a reduction of sales price is therefore very interesting for consumers.
In addition, the poultry processor itself initiates promotional activities. This is usually motivated by the need to sell excess capacity. Over-production of specific poultry products will always be the case, because the demand for the different component poultry products is not equal or 'balance'. Wings, chicken breast and legs are all part of the same chicken, but demand for each product is not the same most of the time.
An important characteristic of fresh poultry products is product perishability. Processed poultry stays fresh for a limited number of days, after which the quality deteriorates and the products are not allowed for human consumption. Product freshness is an important performance indicator in the poultry supply chain. Retail companies demand the highest

product freshness possible. One can see that there exists a strong relationship between product freshness, lead-times and inventory turnaround. If turnaround is low and leadtimes are long the chance of product obsolescence increases. All products where the best-beforedate has been exceeded are written-off and sold to downstream food-processing industries for a lower price.

Furthermore, the end of the supply chain is characterized by very tight lead times; retail companies demand a delivery time of 18 to 48 hours. Retail companies place their orders every day and products are delivered at a high frequency rate, many times per week, thus stock is held at the poultry processor, this clearly requiring higher levels of service for poultry products. The poultry processor has to comply with a minimum delivery reliability of 99 percent, even in the case of promotions.

The supply chain of Wings & Legs can be characterized as a chain of strongly interconnected processes with minimal possibilities for buffering of products and materials.

This is caused by the nature of the product exchanges in the supply chain. At the hatchery, eggs are hatched during three weeks and the newborn chicks are immediately transported to the broiler houses. At the broiler houses chickens are fattened over nine weeks and when the agreed delivery-date or specified weight is reached, they are delivered to the poultry processor. Because the 'goods flow' in this supply chain concern live birds, processes cannot be buffered very easily and short-term coordination is of utmost importance. In Figure 10 the average lead times of each phase in the production of chickens and poultryproducts are shown.

Case – August 1st.2010 The **consequences of the FX- Yen Appreciattion** shown the **Electrical Industry in Japan declining stages**.

บริษัทอิเล็กทรอนิกส์ญี่ปุ่นยอดขายตก
เหตุเงินเยนแข็งค่า

ญี่ปุ่น 31 ก.ค. -
เงินเยนแข็งค่าส่งผลให้บริษัทอิเล็กทรอนิกส์ญี่ปุ่นยอดขายหดกว่า 8 หมื่นล้านบาท ในไตรมาสที่ 2 ที่ผ่านมา
บริษัทผู้ผลิตสินค้าอิเล็กทรอนิกส์ 7 แห่งในญี่ปุ่น เผยผลประกอบการประจำไตรมาสที่ 2 พบว่า ยอดขายรวมลดลงมากกว่า 2,500 ล้านดอลลาร์สหรัฐ หรือราว 8 หมื่นล้านบาท โดยโซนี่มียอดขายลดลง 850 ล้านดอลลาร์สหรัฐ หรือราว 27,000 ล้านบาท ฮิตาชิ ลดลง 750 ล้านดอลลาร์สหรัฐ หรือราว 24,000 ล้านบาท และโตชิบา 460 ล้านดอลลาร์สหรัฐ หรือราว 14,000 ล้านบาท ส่วนสาเหตุที่ทำให้ผลประกอบการของบริษัทเหล่านี้ลดลงนั้นเป็นเพราะค่าเงินเย็นแข็งค่า ส่งผลกระทบต่อการส่งออกสินค้า และทำให้เสียเปรียบในการแข่งขันกับบริษัทคู่แข่งจากเยอรมนีและเกาหลีใต้. –สำนักข่าวไทย

By DAVID BARBOZA dated August 15,2010
The New York Times

SHANGHAI — After three decades of spectacular growth, China passed Japan in the second quarter to become the world's second-largest economy behind the United States, according to government figures released early Monday.

The milestone, though anticipated for some time, is the most striking evidence yet that **China's ascendance is for real and that the rest of the world will have to reckon with a new economic superpower**.

The recognition came early Monday, when Tokyo said that Japan's economy was valued at about $1.28 trillion in the second quarter, slightly below China's $1.33 trillion. Japan's economy grew 0.4 percent in the quarter, Tokyo said, substantially less than forecast. That weakness suggests that China's economy will race past Japan's for the full year.

Experts say unseating Japan — and in recent years passing Germany, France and Great Britain — underscores China's growing clout and bolsters forecasts that China will pass the United States as the world's biggest economy as early as 2030. America's gross domestic product was about $14 trillion in 2009.

Case : OSAKA NOTE

รายงานเรื่อง "บริษัทญี่ปุ่นมีบทบาทลดลงในตลาดโลก"

สำนักงานส่งเสริมการค้าระหว่างประเทศ ณ นครโอซากา

หนังสือพิมพ์ Nikkei ได้ทำการสำรวจส่วนแบ่งตลาดโลกของผลิตภัณฑ์สำคัญ ประจำปี 2009 ซึ่งจากการสำรวจทั้งหมด 26 ประเภท บริษัทญี่ปุ่นติดอันดับหนึ่งใน 6 ประเภท เช่น รถยนต์ หลอดไฟ LED สีขาว เป็นต้น แต่เนื่องจากการบุกตลาดของบริษัทจีน เกาหลีใต้ ทำให้ญี่ปุ่นมีส่วนแบ่งตลาดลดลง แสดงให้เห็นว่าบทบาทของบริษัทญี่ปุ่นในตลาดสากล มีแนวโน้มที่จะลดลงอย่างเห็นได้ชัด

ท่ามกลางการไล่ตามจากประเทศพัฒนาใหม่ สินค้าที่บริษัทญี่ปุ่นมีความแข็งแกร่งอย่างมากคือ กล้องถ่ายรูป เห็นได้จากการที่บริษัทญี่ปุ่นติดอันดับต้นๆ กล่าวคือ กล้องถ่ายรูปดิจิตัลของ Nikon เพิ่มส่วนแบ่งตลาดขึ้นเนื่องจากประสบความสำเร็จในการขยายการจำหน่ายกล้องรุ่นกระทัดรัด หรือกล้องถ่ายวิดีโอของ Panasonic รุ่นที่มีน้ำหนักเบาที่สุดในโลก เป็นที่นิยมในยุโรป ทำให้ส่วนแบ่งตลาดเพิ่มขึ้น

นอกจากนี้ Flash Memory แบบ NAND โตชิบาก็เพิ่มส่วนแบ่งตลาดได้มากกว่าร้อยละ 30 เป็นครั้งแรก ซึ่งทำให้สามารถไล่ตาม Samsung Electronics โดยมีส่วนต่างน้อยลงไม่ถึง 10 ทั้งนี้ เป็นผลมาจากที่ตัดสินใจเพิ่มการผลิตอย่างรวดเร็ว ให้สอดคล้องกับความต้องการที่ฟื้นตัวขึ้น

ระบบการบำบัดน้ำที่ทำให้น้ำทะเลกลายเป็นน้ำจืด (RO Membrane) Nitto Denko หรือ Toray Industries ก็รับงานขนาดใหญ่จากตะวันออกกลางและเอเชีย

ในอีกด้านหนึ่ง ประเภทเกี่ยวกับ IT ต้องประสบกับการแข่งขันที่ดุเดือด ซึ่งจอ LCD นั้น บริษัทเกาหลีใต้ 2 ค่าย คือ Samsung และ LG เพิ่มส่วนแบ่งที่เมื่อรวมกันแล้ว มากกว่าร้อยละ 40 เลยทีเดียว แม้ว่า Sharp จะติดอันดับที่ 5 แต่มีส่วนแบ่งไม่ถึงร้อยละ 10

ด้านหลอดไฟ LED สีขาว Nichia Corp. สามารถรักษาอันดับที่หนึ่งได้ติดต่อกันเป็นปีที่ 4 แต่ส่วนแบ่งลดลง 4.5 จุด แสดงให้เห็นอย่างชัดเจนว่า ถูกกดดันจากบริษัทเกาหลีใต้ที่ใช้ยุทธศาสตร์การลงทุนอย่างอาจหาญ

จากความต้องการอันมหาศาลของประเทศพัฒนาใหม่ ทำให้มีสินค้าหลายประเภทที่ขยายตลาดได้ แต่บริษัทญี่ปุ่นไม่สามารถติดตามกระแสนั้นได้ อย่างความต้องการรถยนต์ เช่น ในประเทศจีน เพิ่มขึ้น แต่ส่วนแบ่งของโตโยต้ากลับลดลง 1.1 จุด ในขณะที่ Volkswagen ของเยอรมัน ที่มีจุดแข็งในประเทศพัฒนาใหม่สามารถเพิ่มส่วนแบ่งตลาดได้

โซลาร์เซลล์ที่กำลังเติบโตอย่างรวดเร็ว Q-Cell ของเยอรมัน ซึ่งเป็นอันดับหนึ่งเมื่อปีที่แล้ว อ่อนกำลังลง ส่วนบริษัทที่เข้ามาแทนที่ คือ First Solar ของสหรัฐอเมริกา และ Suntech Power ของจีน ซึ่ง Sharp และ Kyocera ไม่สามารถที่จะพลิกสถานการณ์ให้เป็นประโยชน์กับตนได้

ทั้งนี้ การวิเคราะห์สินค้าที่กำลังเติบโตได้อย่างแม่นยำ และวางยุทธศาสตร์บุกตลาดเชิงรุก จะเป็นกุญแจเปิดให้บริษัทญี่ปุ่นกลับมาแย่งส่วนแบ่งตลาดได้อีกครั้งหนึ่ง

สิงหาคม 2553

Global Market Shares for Major Products, 2009

ตัวเลขในวงเล็บหมายถึง การเพิ่มลดส่วนแบ่งตลาดของบริษัทเดียวกัน เมื่อเทียบกับปีก่อนหน้า

ประเภทสินค้า	อันดับที่ 1	อันดับที่ 2	อันดับที่ 3
Automobiles	Toyota Motor 11.9% (-1.1)	General Motors (USA) 11.1% (-1.0)	Volkswagen (Germany) 10.0% (+1.1)
Industrial Vehicles	Toyota Industrial 18.8% (-2.0)	Kion (Germany) 16.0% (-1.0)	Jungheinrich (Germany) 8.5% (-0.2)
Articulated Robots	ABB (Switzerland) 30.0 (+4.7)	Fanuc 24.3% (+6.5)	Yaskawa Electric 19.0 (+0.0)
Bearings	SKF (Sweden) 21.7% (+4.7)	Schaeffler (Germany) 15.2% (+0.2)	NSK 12.7% (+0.8)
Crude Steel	Arcelor Mittal (Luxembourg) 6.0% (+1.8)	Hebei Iron and Steel (China) 3.3% (+0.8)	Bao Steel (China) 3.2 (+0.5)
Water Treatment Membrane (RO Membrane)	Dow Chemical (USA) 34.0% (-3.0)	Nitto Denko 31.0 (+1.0)	Toray Industries 21.0 (+1.0)
Wind Power Generators	Vestas Wind Systems (Denmark) 12.9% (-4.9)	GE Wind (USA) 12.8% (-3.9)	Sinovel Wind (China) 9.5% (+5.0)
Flat-screen TVs	Samsung Electronics (Korea) 23.4% (+0.3)	Sony 12.5% (-2.8)	LG Electronics (Korea) 12.4% (-2.0)
LCD Panels	Samsung Electronics (Korea) 24.4% (+3.0)	LG Display 20.2% (+3.7)	AU Optronics (Taiwan) (AU 14.1% (-1.0)
Plasma Panels	Panasonic 45.5% (+6.3)	Samsung Electronics (Korea) 30.7% (+1.2)	LG Electronics (Korea) 21.1% (-1.6)
Organic Electroluminescence Panels	Samsung Mobile Display (Korea) 68.4% (+19.9)	Rit Display 12.8% (-8.4)	Pioneer 7.2% (-4.3)
Video Cameras	Sony 40.0% (-0.1)	Victor Company of Japan 19.1% (-1.6)	Panasonic 17.1% (+3.0)
Digital Cameras	Canon 20.9 (-0.2)	Sony 18.7% (-0.4)	Nikon 14.0% (+2.3)
HDD	Seagate Technology (USA) 31.5% (-0.1)	Western Digital (USA) 29.7% (+2.8)	Hitachi Global Stor Technologies 16.3% (-0.6)

DRAM	Samsung Electronics (Korea) 33.6% (+3.4)	Hynix Semiconductor (Korea) 21.6% (+2.3)	Elpida Memory 17.4% (+2.2)
NAND typed Flash Memory	Samsung Electronics (Korea) 40.6% (-1.5)	Toshiba 31.9% (+2.5)	Hynix Semiconductor (Kore 9.9% (-2.4)
White LED Lights	Nichia 32.0% (-4.5)	Osram (Germany) 7.9% (-1.1)	Seoul Semiconductor (Korea 5.7% (+2.3)
Inkjet Printers	Hewlett-Packard (USA) 20.3% (+1.4)	Canon 22.7% (+2.3)	Seiko Epson 19.1% (+0.6)
Personal Computers	Hewlett-Packard (USA) 20.3 (+1.4)	Dell (USA) 13.0% (-1.8)	Acer (Taiwan) 13.0% (+2.1)
Servers	IBM (USA) 32.9% (+1.1)	Hewlett-Packard (USA) 29.9% (+0.3)	Dell (USA) 12.1% (+0.5)
Mobile Phones	Nokia (Finland) 38.3% (-1.1)	Samsung Electronics (Korea) 20.1% (+3.6)	LG Electronics (Korea) 10.5% (+2.0)
Solar Cells	First Solar (USA) 9.5% (+2.2)	Suntech Power (China) 6.6% (-0.6)	Sharp 5.6% (-1.2)
CT	General Electric (USA) 32.0% (-2.0)	Siemens (Germany) 26.0% (+1.0)	Toshiba Medical Systems 24.5% (0.0)
MRI	Siemens (Germany) 31.0% (+2.5)	General Electric (USA) 30.0% (-2.5)	Philips (Holland) 20.0% (0.0)
Beer	Anheuser-Busch InBev (Belgium) 22.0% (-3.1)	SAB Miller (England) 12.3% (-0.6)	Heinegen (Holland) 9.5% (+0.4)
Credit Card	Visa International (USA) 61.0% (+0.7)	Master Card Worldwide (USA) 28.0% (-0.3)	American Express (USA) 9.3% (-0.7)

Border Carbon Adjustments (BCA)

มาตรการใหม่ด้านสิ่งแวดล้อมที่อุตสาหกรรมไทยต้องเตรียมรับมือ

บุตรี เทียมเทียบรัตน์
สำนักเศรษฐกิจอุตสาหกรรมระหว่างประเทศ

การประชุม Cop 15[1] ณ กรุงโคเปนเฮเกน เมื่อปลายปี 2552 ได้จบลงอย่างเป็นที่น่าผิดหวังของประชาคมโลก เนื่องจากการประชุมครั้งนี้มีวัตถุประสงค์เพื่อให้นานาชาติร่วมมือกันแก้ไขปัญหาโลกร้อนให้ได้อย่างจริงจัง โดยตั้งเป้าหมายที่จะลดอุณหภูมิโลกให้ได้ 2 องศา แต่ดูเหมือนว่าผลจากการประชุมกลับไม่ได้นำไปสู่ความก้าวหน้าใดๆ เพื่อให้เกิดการแก้ไขปัญหาโลกร้อนอย่างเป็นรูปธรรม ทำให้นานาประเทศต่างวิตกกังวลว่าพันธกรณีที่กลุ่มประเทศในภาคผนวกที่ 1[2] ของพิธีสารเกียวโต ต้องลดการปล่อยก๊าซเรือนกระจก (GHG) จากปี 1990 ให้ได้ร้อยละ 5.2 ภายในปี 2012 ซึ่งก็เหลือเวลาอีกเพียงไม่ถึง 2 ปี ที่จะต้องดำเนินการให้บรรลุผล จึงเป็นที่คาดหมายว่า กลุ่มประเทศดังกล่าวจะต้องส่งสัญญาณบอกทิศทางของพันธกรณีภายหลังปี 2012 ของประเทศทั้งในและนอกภาคผนวกที่ 1 ซึ่งจะต้องดำเนินการต่อไป

ในเมื่อความตกลงพหุภาคีด้านสิ่งแวดล้อมส่วนใหญ่ไม่สามารถบังคับใช้ได้อย่างมีประสิทธิภาพ จึงทำให้มีความพยายามที่จะเชื่อมโยงเรื่องการค้าระหว่างประเทศกับการแก้ปัญหาการเปลี่ยนแปลงสภาพภูมิอากาศเข้าด้วยกัน เพื่อช่วยบังคับให้ความตกลงด้านสิ่งแวดล้อมมีประสิทธิภาพมากยิ่งขึ้น ดังนั้น โอกาสที่ประเทศพัฒนาแล้วจะนำมาใช้เป็นการกีดกันทางการค้าและสร้างเงื่อนไขที่จะทำให้ประเทศกำลังพัฒนาเสียเปรียบอาจเกิดขึ้นได้ จึงมีประเด็นพิจารณาด้านการแก้ปัญหาการเปลี่ยนแปลงสภาพภูมิอากาศที่เกี่ยวข้องกับการค้าและการลงทุนที่เชื่อมโยงกับความเป็นธรรม (ในแง่ที่ว่า ปัญหาโลกร้อนที่เกิดขึ้นในเวลานี้เป็นผลจากการปล่อยก๊าซในอดีตของกลุ่มประเทศอุตสาหกรรม ดังนั้น ผู้ที่รับภาระควรเป็นกลุ่มประเทศที่พัฒนาแล้ว การให้กลุ่มประเทศกำลังพัฒนาร่วมรับภาระจึงไม่เป็นธรรม และมีผลกระทบต่อสิทธิการพัฒนาทางเศรษฐกิจของประเทศ)

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1 การประชุมภาคีอนุสัญญาสหประชาชาติว่าด้วยการเปลี่ยนแปลงสภาพภูมิอากาศ สมัยที่ 15 (Conference of Parties 15)

2 ปัจจุบันมี 41 ประเทศ ซึ่งมีพันธกรณีที่จะต้องลดก๊าซเรือนกระจกลงให้ได้ภายในปี ค.ศ. 2012 โดยจะเริ่มตรวจวัดตั้งแต่ปี ค.ศ. 2008 เป็นต้นไป ได้แก่ Australia , Austria , Belarus , Belgium , Bulgaria , Canada , Croatia , Czech Republic , Denmark , European Union , Estonia , Finland , France , Germany , Greece , Hungary , Iceland , Ireland , Italy , Japan , Latvia , Liechtenstein , Lithuania , Luxembourg , Monaco , Netherlands , New Zealand , Norway , Poland , Portugal , Romania , Russian Federation , Slovakia , Slovenia , Spain , Switzerland , Turkey , Ukraine , United Kingdom of Great Britain and Northern Ireland , and United States of America

ประเด็นที่ประเทศต่างๆ ต้องจับตามองได้แก่ ความเป็นไปได้ที่กลุ่มประเทศพัฒนาแล้วอย่างสหรัฐอเมริกา สหภาพยุโรป และญี่ปุ่นจะนำเอาเรื่อง**มาตรการปรับคาร์บอนก่อนเข้าพรมแดน หรือ** Border Carbon Adjustments (BCA) มาใช้เป็นเครื่องมือในการตั้งกำแพงภาษีกับผลิตภัณฑ์ที่นำเข้าจากต่างประเทศ โดยเฉพาะจากประเทศกำลังพัฒนาที่มีมาตรการในการลดการปล่อยก๊าซในระดับต่ำ มาเป็นเครื่องมือเพื่อชดเชยความเสียเปรียบในการรั่วไหลของคาร์บอน จากประเทศที่มีความเข้มงวดมากในนโยบายการลดก๊าซเรือนกระจก ไปสู่ประเทศที่ไม่มีหรือมีนโยบายในส่วนนี้ระดับต่ำ จึงมีความจำเป็นที่ประเทศไทยจะต้องทำความรู้จักกับมาตรการนี้เพื่อเตรียมพร้อมในการรับมือกับผลกระทบที่จะเกิดขึ้นกับสินค้าอุตสาหกรรมของเรา

<u>หลักการของ BCA</u>

BCA เป็นมาตรการทางการค้าที่จะจัดเก็บภาษีนำเข้าพิเศษต่อสินค้าจากประเทศที่ไม่ได้มีการกำหนดโควตาการปล่อยก๊าซเรือนกระจก มีเป้าหมายคือ เพื่อชดเชยข้อได้เปรียบของบริษัทจากประเทศกำลังพัฒนาซึ่งมีมาตรการลดภาวะโลกร้อนที่เข้มงวดน้อย ด้วยการให้โอกาสทางการค้าที่เท่าเทียมกันแก่บริษัทในประเทศและอุตสาหกรรมจากประเทศที่อยู่ในกลุ่มได้รับผลกระทบสูงจากการรั่วไหลของคาร์บอน (Carbon Leakage) เนื่องจากกลุ่มอุตสาหกรรมในประเทศพัฒนาแล้วอย่างสหรัฐอเมริกาและยุโรป ซึ่งมีการปล่อยก๊าซเรือนกระจกในระดับสูง กลัวว่าจะสูญเสียขีดความสามารถในการแข่งขัน จึงมีการย้ายฐานการผลิตไปยังประเทศที่มีมาตรการที่ไม่เข้มงวด

โดยในแง่ของภาษี ประเทศที่ใช้ BCA จะเก็บภาษีสินค้านำเข้าในอัตราเทียบเท่ากับสินค้าชนิดเดียวกันที่ผลิตในประเทศ ในรูปแบบของการปรับภาษีที่พรมแดน หรือหากพิจารณาในระบบกำหนดเพดานและให้ค้าคาร์บอน (Cap-and-trade system) BCA จะบังคับผู้นำเข้าสินค้าในประเทศหรือผู้ส่งออกสินค้าจากต่างประเทศให้ซื้อใบอนุญาตปล่อยก๊าซในปริมาณที่เท่ากับคาร์บอนที่ปล่อยออกมาจากกระบวนการผลิต

<u>ผลกระทบต่ออุตสาหกรรมของไทย</u>

เมื่อหลักการของ BCA จะเก็บภาษีนำเข้าพิเศษโดยพิจารณาจากปริมาณคาร์บอนที่ปล่อยออกมาในกระบวนการผลิต ดังนั้น สินค้าที่จะได้รับผลกระทบมากที่สุดจึงเป็นสินค้าที่ใช้พลังงานเข้มข้น ได้แก่สินค้าอุตสาหกรรมในกลุ่ม กระดาษ ซีเมนต์ อาหารและเครื่องดื่ม ปิโตรเลียม เคมีภัณฑ์และพลาสติก รวมถึงเหล็ก ซึ่งทำให้ผู้ประกอบการของไทยที่ส่งสินค้าไปยังประเทศที่มีมาตรการนี้บังคับใช้จะได้รับผลกระทบที่เห็นได้ชัด คือ

1. มีต้นทุนในการผลิตที่สูงขึ้นทันที เนื่องจากจะต้องถูกเก็บภาษีพิเศษ หรือจากการถูกบังคับซื้อคาร์บอนเครดิต ซึ่งผู้ผลิตสามารถซื้อขายคาร์บอนเครดิตจากโครงการกลไกพัฒนาที่สะอาด (Clean Development Mechanism : CDM) หรือประเภทคาร์บอนเครดิตเพื่อชดเชย (Carbon offset) จากตลาดหรือ

กิจกรรมด้วยความสมัครใจ (Voluntary carbon market) เช่น การปลูกป่าโดยบริษัท ประชาชนในระดับท้องถิ่น หรือโครงการพลังงานหมุนเวียน เป็นต้น

2. จะถูกบังคับให้ติดฉลากคาร์บอนฟุตปรินท์

<u>ความท้าทายของ BCA ต่อองค์การการค้าโลก</u>

มาตรการ BCA ยังเป็นที่ถกเถียงกันในเวทีการค้าระหว่างประเทศว่าจะสอดคล้องกับข้อกำหนดขององค์การการค้าโลก (WTO) หรือไม่ โดยเฉพาะภายใต้บทบัญญัติของแกตต์ในมาตราที่เกี่ยวข้อง ได้แก่

<u>มาตรา 2 และ 3</u> ซึ่งว่าด้วยเรื่องการเก็บค่าธรรมเนียมสินค้านำเข้าในอัตราเทียบเท่าภาษีภายในประเทศและค่าธรรมเนียมภายในอื่นๆ

<u>มาตรา 20 (วรรค b)</u> เรื่องความจำเป็นในการปกป้องชีวิตและสุขภาพของคน พืชและสัตว์ (วรรค g) เกี่ยวข้องกับการสงวนรักษาทรัพยากรธรรมชาติที่อาจสูญสิ้นไปหากมีการบังคับใช้มาตรการดังกล่าวร่วมกับการจำกัดการผลิตหรือการบริโภคภายในประเทศ นอกจากนี้ยังต้องคำนึงถึง

<u>หลักปฏิบัติเยี่ยงชาติ (National Treatment Principle)</u> คือ การปฏิบัติต่อสินค้าของประเทศสมาชิกทุกประเทศอย่างเท่าเทียมกัน และ

<u>หลักปฏิบัติเยี่ยงชาติที่ได้รับความอนุเคราะห์ยิ่ง (Most Favored Nation)</u> ซึ่งต้องปฏิบัติต่อบริษัทของต่างชาติและบริษัทภายในประเทศที่ผลิต **"สินค้าที่มีความเหมือนกัน"** (like products) โดยเท่าเทียมกัน ซึ่งในประเด็นนี้เป็นที่ถกเถียงกันมากว่า จะสามารถแยกผลิตภัณฑ์ที่ “เหมือนกัน” ได้หรือไม่ กล่าวคือในกรณีที่เป็นสินค้าสำเร็จรูป ไม่ว่าจะผลิตสินค้าในประเทศหรือเป็นสินค้าที่นำเข้ามา โดยพื้นฐานตัวสินค้าจะมีลักษณะเหมือนกันมาก แต่กระบวนการผลิตสินค้าอาจก่อให้เกิดการปล่อยคาร์บอนในระดับที่ต่างกัน

ทั้งนี้เนื่องจากยังไม่มีข้อพิพาทที่เกิดขึ้นจากการใช้มาตรการ BCA จึงยังไม่มีกรณีศึกษาที่จะสามารถชี้ชัดได้ว่า BCA สอดคล้องกับข้อกำหนด WTO หรือไม่ ดังนั้น จึงเป็นเรื่องที่ต้องมีการติดตามต่อไป

<u>การรับมือของประเทศไทย</u>

ในส่วนของประเทศไทย ถึงแม้จะไม่ได้มีพันธกรณีในกรอบการลดปริมาณก๊าซเรือนกระจกแต่ก็ยังดำเนินมาตรการลดการเปลี่ยนแปลงสภาพภูมิอากาศอย่างต่อเนื่อง อย่างไรก็ตาม ประเทศไทยยังต้องดำเนินการในเรื่องต่างๆ อีกมาก เพื่อสร้างกลไกในการลดโลกร้อนและรับมือกับปัญหาที่จะเกิดขึ้น ทั้งนี้ กลุ่มจับตานโยบายรัฐบาล (Policy Watch) ได้ให้ข้อเสนอแนะที่น่าสนใจดังต่อไปนี้

1. รัฐต้องเร่งศึกษาและวิจัยเกี่ยวกับการแก้ไขและรับมือกับปัญหาโลกร้อน โดยเฉพาะอย่างยิ่งเกี่ยวกับ ต้นทุนและศักยภาพในการลดก๊าซเรือนกระจกของประเทศ
2. ภาครัฐควรเร่งรณรงค์ให้ความรู้แก่ประชาชนเกี่ยวกับปัญหาโลกร้อนทั้งสาเหตุ

ผลกระทบ และแนวทางการลดปัญหาโลกร้อน

3. ภาคธุรกิจและภาครัฐควรร่วมกันลดปัญหาโลกร้อน เช่น ใช้พลังงานหมุนเวียน ใช้พลังงานและเทคโนโลยีสะอาด ปลูกป่า เป็นต้น

4. มาตรการที่ไทยอาจนำมาใช้จัดการปัญหาข้างต้น ได้แก่ ภาษีคาร์บอนที่เก็บจากพลังงาน ซึ่งจะทำให้เกิดการปรับเปลี่ยนไปใช้พลังงานที่ปล่อยก๊าซเรือนกระจกต่ำแทน รวมทั้งรัฐยังมีรายได้นำไปแก้ปัญหาผลกระทบจากโลกร้อนได้

5. ประชาชนควรเปลี่ยนรูปแบบการบริโภคใหม่ โดยหันมาใช้สินค้าที่เป็นมิตรกับสิ่งแวดล้อมมากขึ้น เช่น ใช้สินค้าที่ติดฉลากคาร์บอน ใช้รถยนต์ Hybrid และจัดทำ Carbon Footprint ของผลิตภัณฑ์

<u>บทส่งท้าย</u>

ถึงแม้ว่ามาตรการ BCA อาจจะช่วยลดการปล่อยก๊าซเรือนกระจกจากการผลิตสินค้า โดยเป็นการลดแรงจูงในที่จะทำให้ผู้ผลิตสินค้าย้ายฐานการผลิต (carbon offshore) ไปสู่ประเทศที่ไม่มีนโยบายควบคุมการปล่อยก๊าซเรือนกระจก และทำให้สินค้าที่นำเข้าจากประเทศกำลังพัฒนาต้องลดระดับคาร์บอนแฝงลง แต่การใช้มาตรการ BCA ของประเทศพัฒนาแล้วก็เป็นการผลักภาระทางอ้อมไปให้ประเทศกำลังพัฒนาต้องมารับผิดชอบกับภาระการลดก๊าซเรือนกระจกโดยทันที ซึ่งดูจะไม่เป็นธรรมกับประเทศกำลังพัฒนานัก และอาจถือเป็นการกีดกันทางการค้าได้

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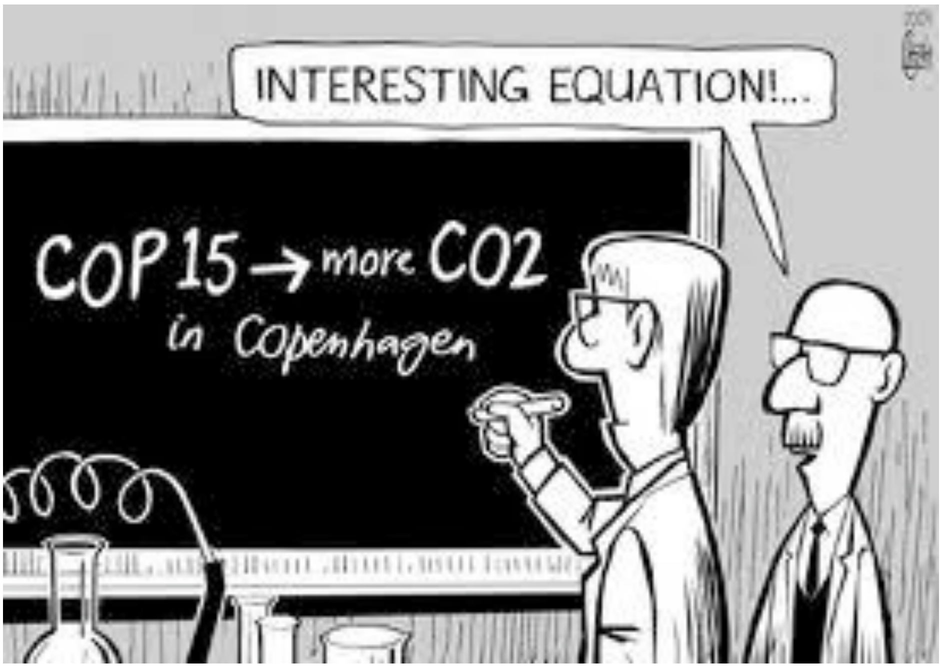

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APEC SAPPORO JUL2010-

Sources: Central Bank of Brazil; Ministry of Finance; and IMF staff estimates.

1/ Includes the central government, central bank, and social security system.
2/ Includes Fundo Soberano Brasileiro (FSB).
3/ End of period. Currency issued plus required and free reserves on demand deposits held at the central bank.
4/ End of period. Currency in circulation plus demand, time and savings deposits

[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board. At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm.

paper IMF PN110111
IMF Executive Board Concludes 2010 Article IV Consultation with Brazil Public Information Notice (PIN) No. 10/111
August 5, 2010

Japan’s National Quest for Energy Efficiency and New Challenges

The Asian Business and Management Conference

7-9 October 2010
The New Otani Hotel, Osaka, Japan

Tatsuo Masuda

Professor, The Graduate School, Nagoya University of Commerce and Business
Visiting Professor, University of Paris-Dauphine (CGEMP)
Member of the Board, SOC Corporation

Main Features

- After World War II, the Japanese economic recovery **started from scratch**.
- Domestic coal, "black diamond", was the major energy to fuel the economy.
- "Liquid energy revolution" gave oil the driver's seat from the mid 1950s.
- The Japanese economy grew **over 10% per year**, until hit by the oil shocks.
- The oil shocks forced Japan to "**cast off the skin**" facilitated by various energy policies and backed by technological innovations.
- **Energy efficiency** became the most remarkable feature of Japan.
- Recently, big challenges are posed by **climate change**.
- Sliming manufacturing bases, declining population and huge public debt make the situation even more challenging. **Could Japan cast off the skin again** ?

Energy Indicators of Japan

	Unit	1945	1955	1965	1975	1985	1995	2005
GDP/capita	1000 yen	268 (1946)	536	1,218	2,219	2,948	3,915	4,256
Energy/capita	1000 kcal	3,744 (1946)	7,183	17,187	32,716	33,484	43,315	44,036
Oil supply/year	100 billion kcal	254	11,271	100,678	268,624	228,041	303,582	280,727
Coal supply/ year	100 billion kcal	18,864	30,286	45,654	59,993	78,810	89,899	114,615
Natural gas supply/year	100 billion kcal	29	244	2,027	9,231	3,8213	58,927	78,806
Electricity generation/year	million kWh	47,354 (1951)	65,241	190,250	475,794	671,952	989,880	1,157,911
CO_2 Emissions/ year	million tons	13.2	39.4	107.0	236.2	247.6	311.3	330.2
Car ownership	1000 units	31	141	2,181	17,236	27,844	44,680	57,091

Source: The Energy Data and Modeling Center, IEEJ

Note: The years in the above are the Japanese Fiscal Years (April ~ March)

Total Primary Energy Supply of Japan

—Evolution from 1952 to 2008—

		1952	1962	1972	1985	1990	2000	2008
TPES	Million Ton of oil equivalent	52.6	125.3	387.4	405.3	486.3	558.7	550.5
Oil	%	11	46.9	75.5	56.3	58.3	51.8	47.0
Coal	%	49	37.2	17.0	19.4	16.6	17.9	22.0
Natural gas	%	8	3.7	1.0	9.4	10.1	13.1	16.8
Nuclear	%	-	-	0.6	8.9	9.4	12.4	9.9
Hydro	%	32	12.2	5.6	4.7	4.2	3.4	3.1
Others	%	-	-	0.3	1.3	1.4	1.3	1.3

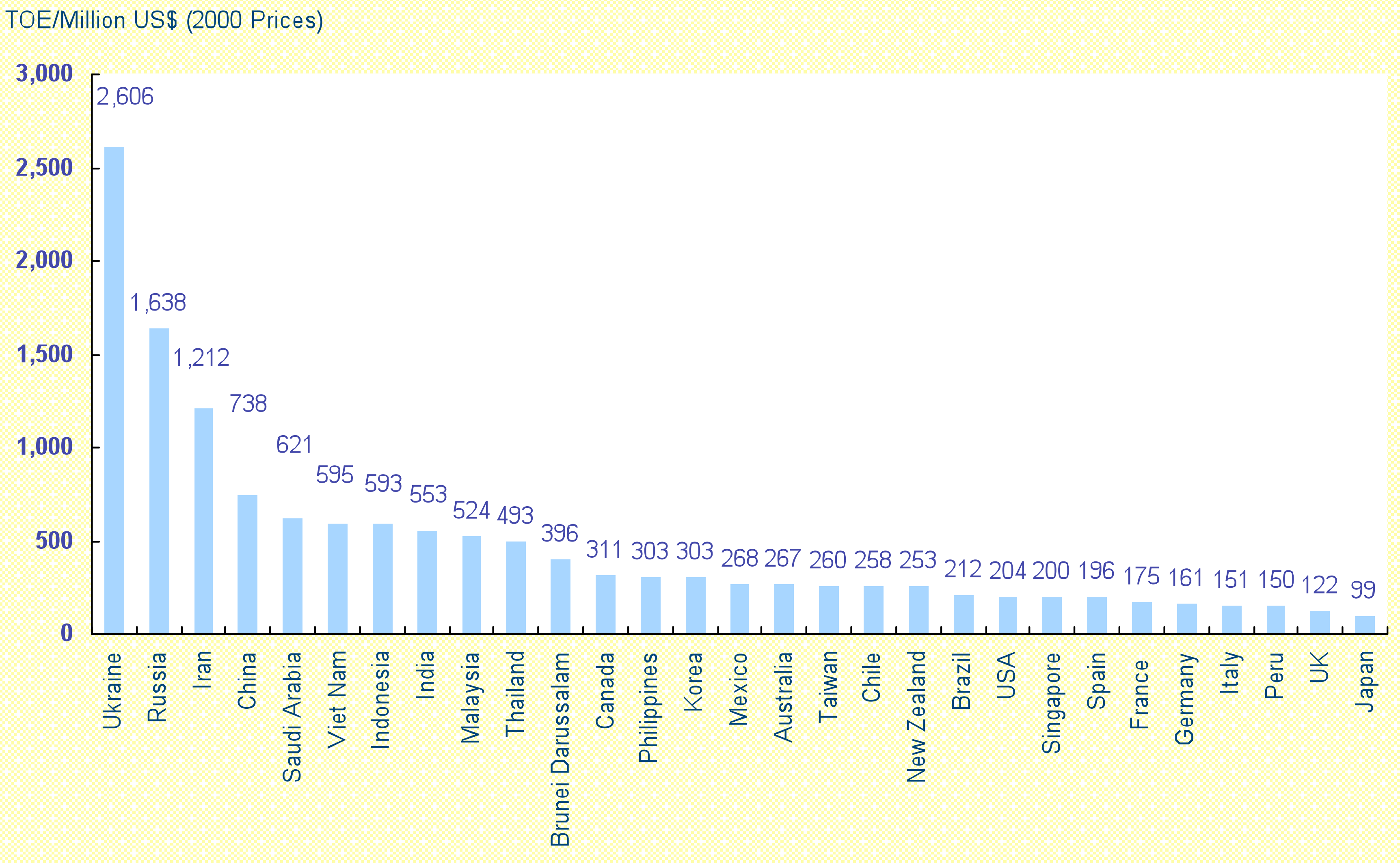
Source: Energy-Verification of 50 Years after WWII, 1995, Denryokushinnpousha,(1962-1985)
The Energy Data and Modeling Center, IEEJ (1990-2006)

Six Phases of Japanese Energy Policy

- **Phase 1** (1945 ~ 1951): Economic recovery and readjustment of energy policies
- **Phase 2** (1952 ~ 1961): Economic development and modernization of energy industry
- **Phase 3** (1962 ~ 1972): High economic growth and comprehensive energy policies
- **Phase 4** (1973 ~ 1985): Oil shocks and the shift to energy efficient economy
- **Phase 5** (1986 ~ 1996): Liberalization of energy market and an issue of climate change
- **Phase 6** (1997~ today): Globalization of energy market and the climate change initiative

Energy Consumption per GDP(2007)

-Japan by far leads the world in energy efficiency.



(Sources) GDP：World Bank (2009), World Development Indicators, and Total Primary Energy: IEA(2009), Energy Balances of OECD and Non-OECD Countries

Energy Efficiency Developments (1)

- Nov. 1973 A set of oil emergency measures (e.g. 10% conservation)
- April 1978 Moonlight Project for energy conservation technology
- April 1979 A set of oil emergency measures (e.g. 5% conservation)
- June 1979 Energy Conservation Law (e.g. Model Factory)
- Oct. 1980 New Energy Development Organization (NEDO - government body to promote technological development /innovation)
- Oct. 1990 Action Plan to Arrest Global Warming
- April 1993 New Sunshine Project for region-wide energy saving system
- Dec. 1997 Adoption of the Kyoto Protocol
- June 1998 Guideline of Measures to Prevent Global Warming

Energy Efficiency Developments(2)

- **April 1999 Amendment to Energy Conservation Law (e.g. Top Runner)**
- **March 2002 New Guideline of Measures to Prevent Global Warming**
- **June 2002 Basic Law on Energy Policy Making**
- **April 2003 Amendment to Energy Conservation Law**
- **Oct. 2003 Basic Plan on Energy**
- **Feb. 2005 Effectuation of the Kyoto Protocol**
- **April 2006 Amendment to Energy Conservation Law**
- **May 2006 New National Energy Strategy (30% efficiency gain by 2030)**
- **May 2007 Cool Earth 50 Initiative (Energy efficiency and low carbonization)**
- **Sept.2009 Commitment to a 25% reduction of GHG emissions by 2020**

Energy Conservation Law

	Main Tools	Background
June 1979	・Model Factories for Energy Management for <u>Category 1</u> : over 3000 kl/ year of oil or 12m KWh/year of electricity users (limited to 5 industrial sectors) ・Compulsory manifestation of energy consumption data by automobile or air-conditioner manufactures etc.,	Oil shocks of the 1970s
April 1999 Amendment	・Introduction of Top Runner Program ・Introduction of <u>Category 2</u>: over 1500kl/year of oil or 6m KWh/year of electricity users	Adoption of the Kyoto Protocol
April 2003 Amendment	・Expansion of <u>Category 1</u> to all sectors ・Reporting to the Minister by the owners of buildings over 2000 ㎡ on energy conservation measures	Inefficiency in commercial/ residential sector
April 2006 Amendment	・Amendment to <u>Category 1</u>: over 3000kl/year of oil/electricity ・Amendment to <u>Category 2</u>: Over 1500kl/year of oil/electricity ・Reporting to the Minister by -Cargo transporters over 30m t/year -Transporters with over 200 tracks, 200 buses, 350 taxies etc.,	Effectuation of the Kyoto Protocol

Model Factory

- Introduced by 1979 Energy Conservation Law
- Designation of "Model factory for Energy Management" from large energy users (Category 1 & 2)
- Mechanism:
  -Nomination of Heat Manager or Electricity manager (state examination)
  -Preparation of an energy use plan (compulsory)
  -Reporting of the plan and performance to the Minister (compulsory)

	June 1979	April 1999	April 2003	April 2006
Category 1	･Over 3000kl/year(oil) or 12m KWh/year (electricity) ･5 sectors: manufacturing, mining, electricity, gas & heat		Expansion to all sectors (department store, hotel & etc.,)	Over 3000kl/year (oil and electricity combined)
Category 2		Over 1500kl/year (oil) or 6m KWh/year (electricity)		Over 1500kl/year (oil and electricity combined)

Tax Incentives (examples)

- Tax incentives played an important role to facilitate energy conserving investment.
- The menu has been renewed or modified as the following reflecting the needs of the time.

Fiscal Year	Main Contents
1975	Accelerated depreciation of energy efficient machines/facilities: 1/3 in 1st year
1978	Accelerated depreciation of energy conserving machines/facilities:1/4 in 1st year
1979	Reduction of the fixed property tax on energy conserving machines/facilities
1981	Taxation system to facilitate energy conservation (a comprehensive package)
1983	Taxation system to increase energy efficiency
1986	Taxation system to upgrade energy use basis
1988	Taxation system to strengthen energy use basis
1990	Taxation system to adjust to changing energy environment
1992	Taxation system to facilitate the improvement of energy supply/demand structure

Life Style

- Special and sustained efforts, including education, were made to raise the public awareness of energy conservation.
- The government took the lead, however, there were nation-wide movement towards a new life style.
- Examples:

  -Guideline for air-conditioning:
  20→19℃ (winter) and 26→28℃ (summer)

  -Recommendation of slow driving:
  40km/h for normal roads and 80 km/h for motor ways

  -Energy conserving fashion:
  Shoh-Ene-Look (energy conservation fashion) in the 1970s and CoolBiz (cool business wear) & WarmBiz (warm business wear) in the 2000s

  -Optimization of the operation of elevators

  -Energy Conservation Month (February and August):
  campaign, symposium, essay contest, posters, etc.,

[Footnote] Technological innovation facilitated the process.

CoolBiz and WarmBiz

-A new fashion or life-style has been advocated in collaboration between the Government and the private sector since the mid 2000s.

CoolBiz ⇒
(cool business wear)

WarmBiz ⇒
(warm business wear)

Top Runner Program

- Introduced as part of the amendment to Energy Conservation Law (enacted in April 1999).

- Mechanism:
  ①Target year for selected products to achieve the goal
  ②Energy efficiency gain (%) as the goal by the target year
  ③The most advanced apparatus as the standard for others
  ④Compulsory goals for manufacturers (subject to the recommendations and orders by the Minister).
  ⑤"Energy Conservation Label" to offer information to consumers and to promote energy conserving products.

- Product category (examples):
  Original: TVs, air-conditioners, refrigerators, freezers, gasoline passenger cars, computers, fluorescent lights, and etc.,
  Addition (in 2007): liquid crystal display (LCD) and plasma display panel PDP) TVs, rice cookers with thermos functions, DVD recorders, large trucks and buses, and etc.,

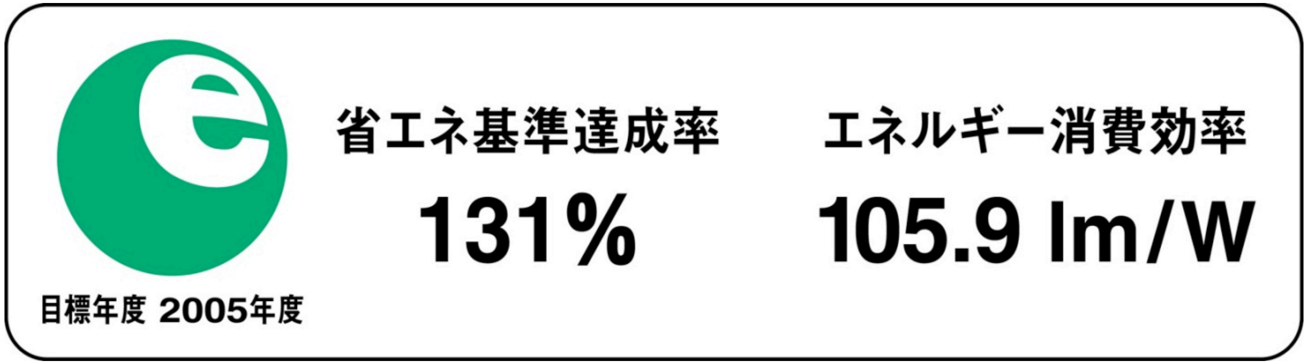
Labeling System

- Products above the Top Runner standard carry a “**green e**” mark, while those below the standard carry an “**orange e**” mark.
- As of July 2008, the labeling is applied to 16 categories of product:

air conditioner, refrigerator, freezer, fluorescent light, electric toilet seat, TV, computer, magnetic disk unit, space heater, gas cooking appliance, gas water heater, oil water heater, transformer, electric rice cooker, microwave oven & DVD recorder.

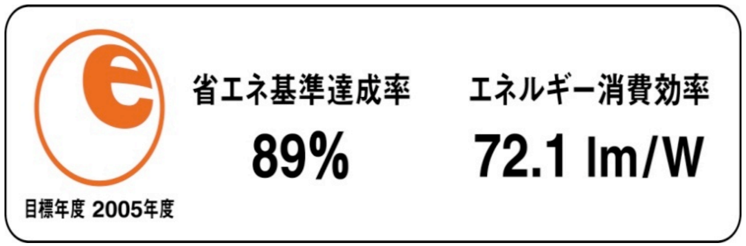
Energy Conservation Mark →

Target Fiscal Year →



↑ Achievement of Energy Conservation Standard

↑ Electricity Consumption



Source: The Energy Conservation Center, Japan

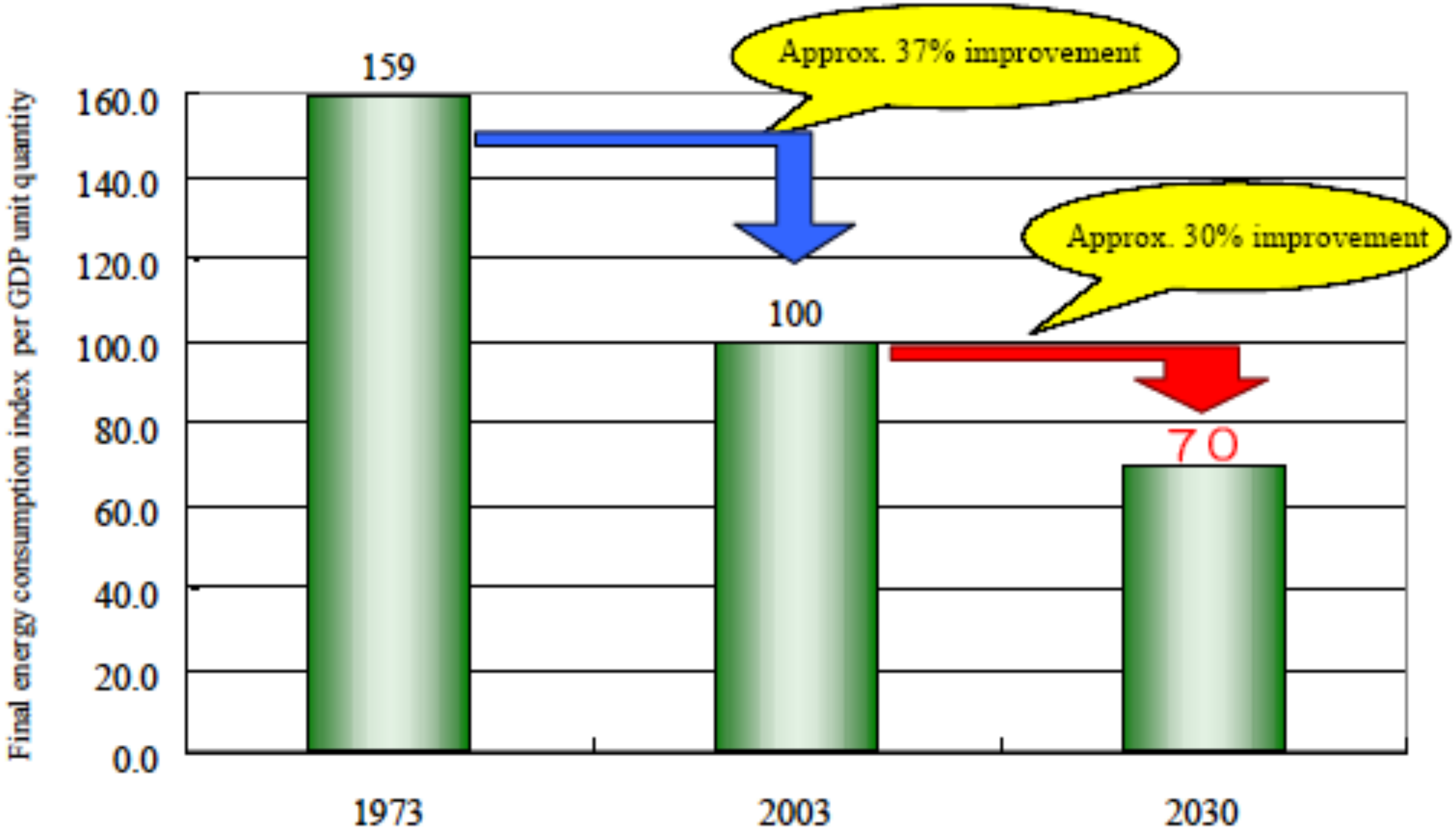
Efficiency Improvement Targets

Product Category	Improvement Period	Target(%)	Result(%)
Televisions	1997-2003	16.4	25.7
Air-conditioners	1997-2004	66.1	67.8
Refrigerators	1998-2004	30.5	55.2
Freezers	1998-2004	22.9	29.6
Gasoline passenger cars	1995-2005	22.8	22.8
Vending machines	2000-2005	33.9	37.3
Computers	1997-2005	83.0	99.1
Fluorescent lights	1997-2005	16.6	35.6
Air-conditioners	2004-2010	22.4	
Refrigerators & freezers	2005-2010	21.0	
LCD & plasma televisions	2005-2010	15.0	
DVD recorders	2006-2010	20.5	
Vending machines	2006-2012	33.9	

Source: Energy Policy of IEA Countries, Japan 2008 Review, IEA

National Target for Energy Efficiency

-An additional 30% improvement by 2030 was stipulated in the New National Energy Strategy of May 2006.



Source: New National Energy Strategy, May 2006, METI

Evolution of Energy Efficiency Policy

-Energy efficiency policy reflected the needs of the time.

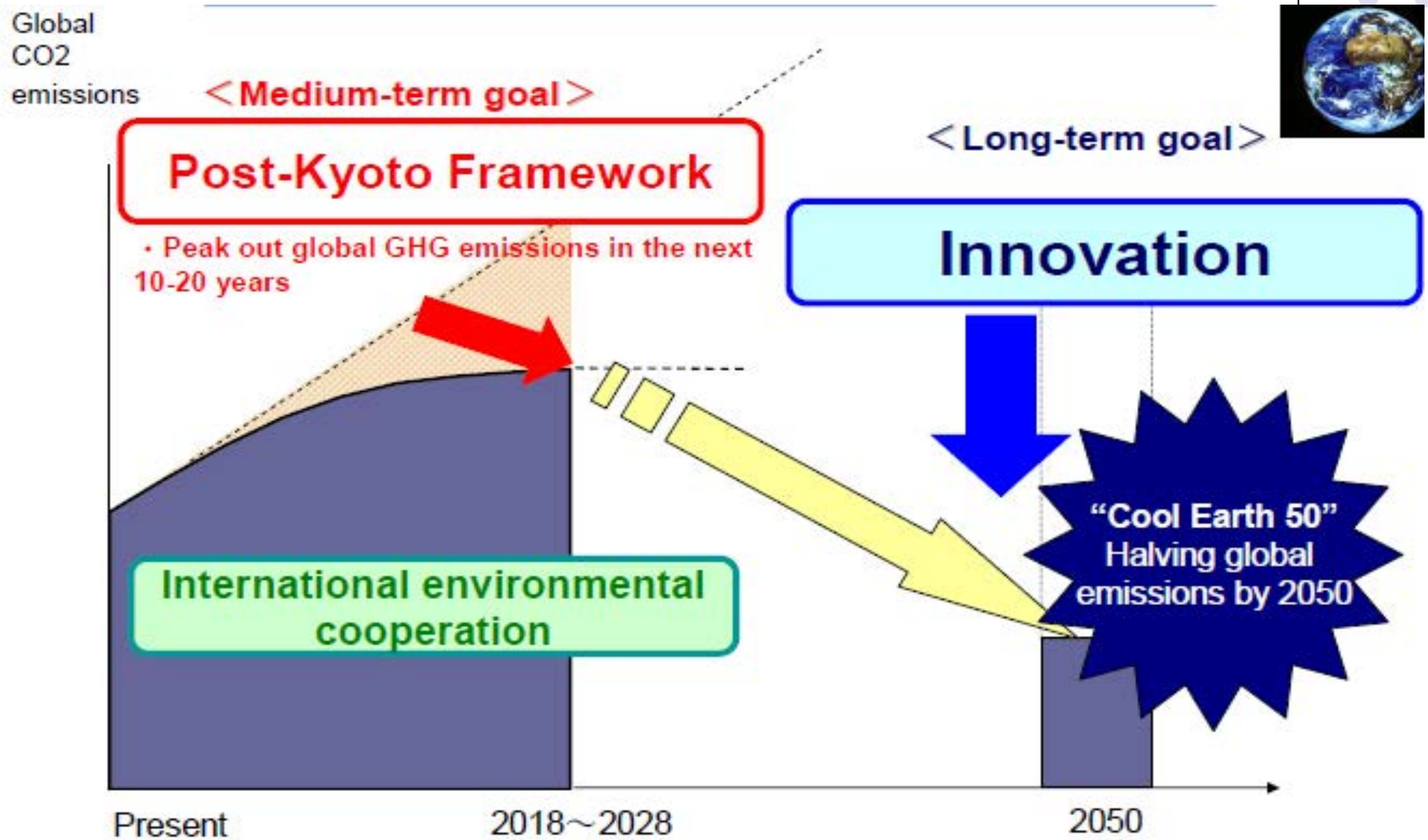
~ 1960s	1970s	1980s	1990s	2000s
・Swimming in cheap oil	・Unprecedented impact of the oil shocks	・More comprehensive measures	・Complacency after the Gulf War of 1991	・Unprecedented challenges of climate change
・Economic growth first	・Heavy-handed measures	・Use of various incentives	・Wake-up call by the Kyoto Protocol	・Casting off the skin again?
・Too busy & poor to conserve energy	・Heavy persuasion	・Sophisticated approach	・New concept (e.g. Top runner)	・International cooperation as national priority

Cool Earth Initiative (May 2007)

-A set of comprehensive measures to halve global CO_2 emissions by 2050
-A big role to be played by technological innovation

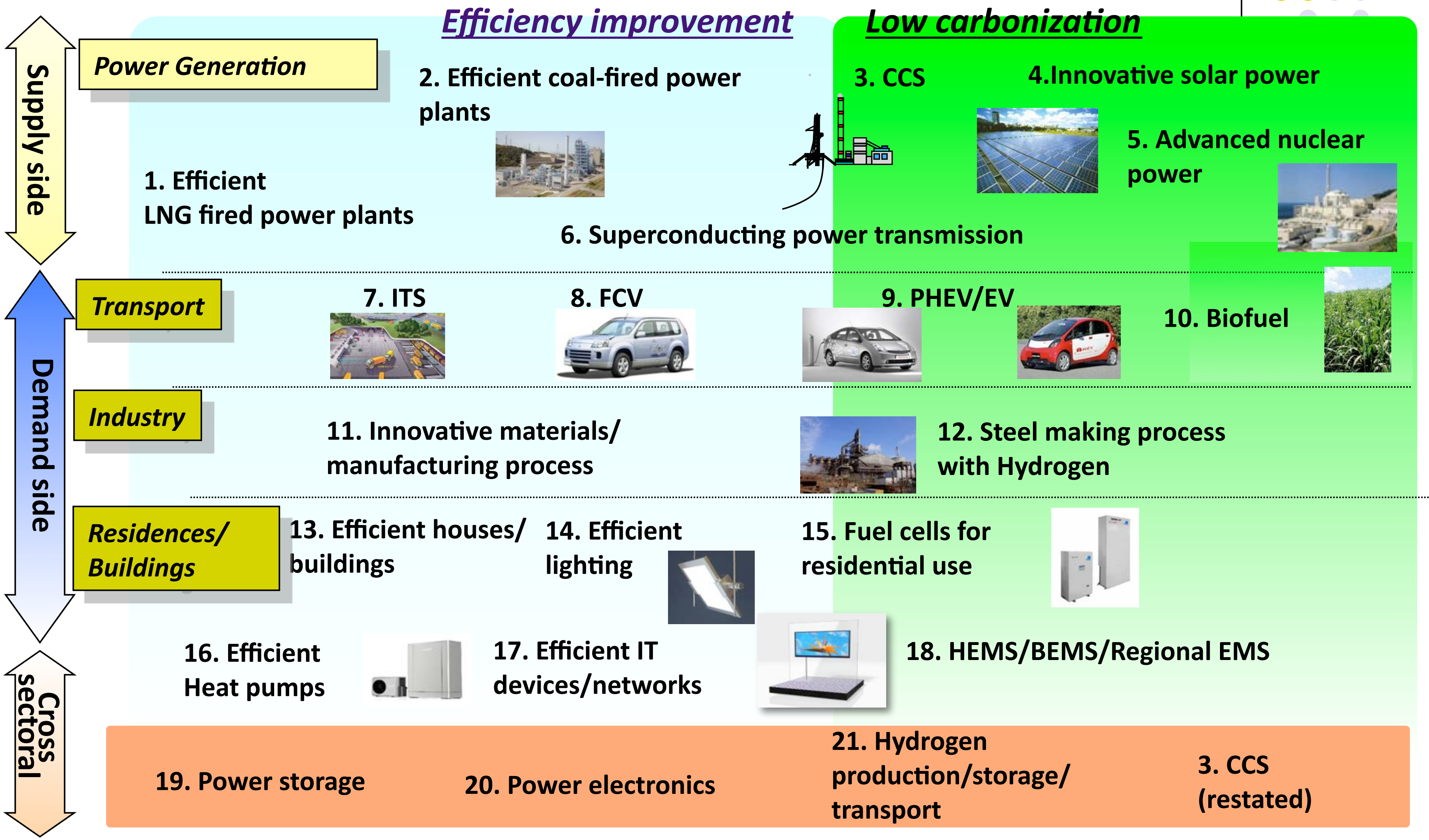
Long-term strategy for halving CO_2 emissions by 2050	• Technological innovation through international cooperation: Zero-emissions CO_2 coal-fired power plants, advanced nuclear power plants, etc., • Building low-carbon society: new lifestyle, efficient public transport, compact urban development, etc.,
Mid-term strategy in designing a concrete framework beyond 2013	• Participation of all major emitters in the world • Flexibility and diversity of framework to accommodate with differences among countries • Compatibility between environment and economy
National campaign for achieving Japan's Kyoto Protocol target	• Motto of "Reduction of 1 kg of CO_2 emissions per person per day" • Calling upon the people for efforts and creative ideas

Cool Earth Promotion Program



Source: Japanese Government

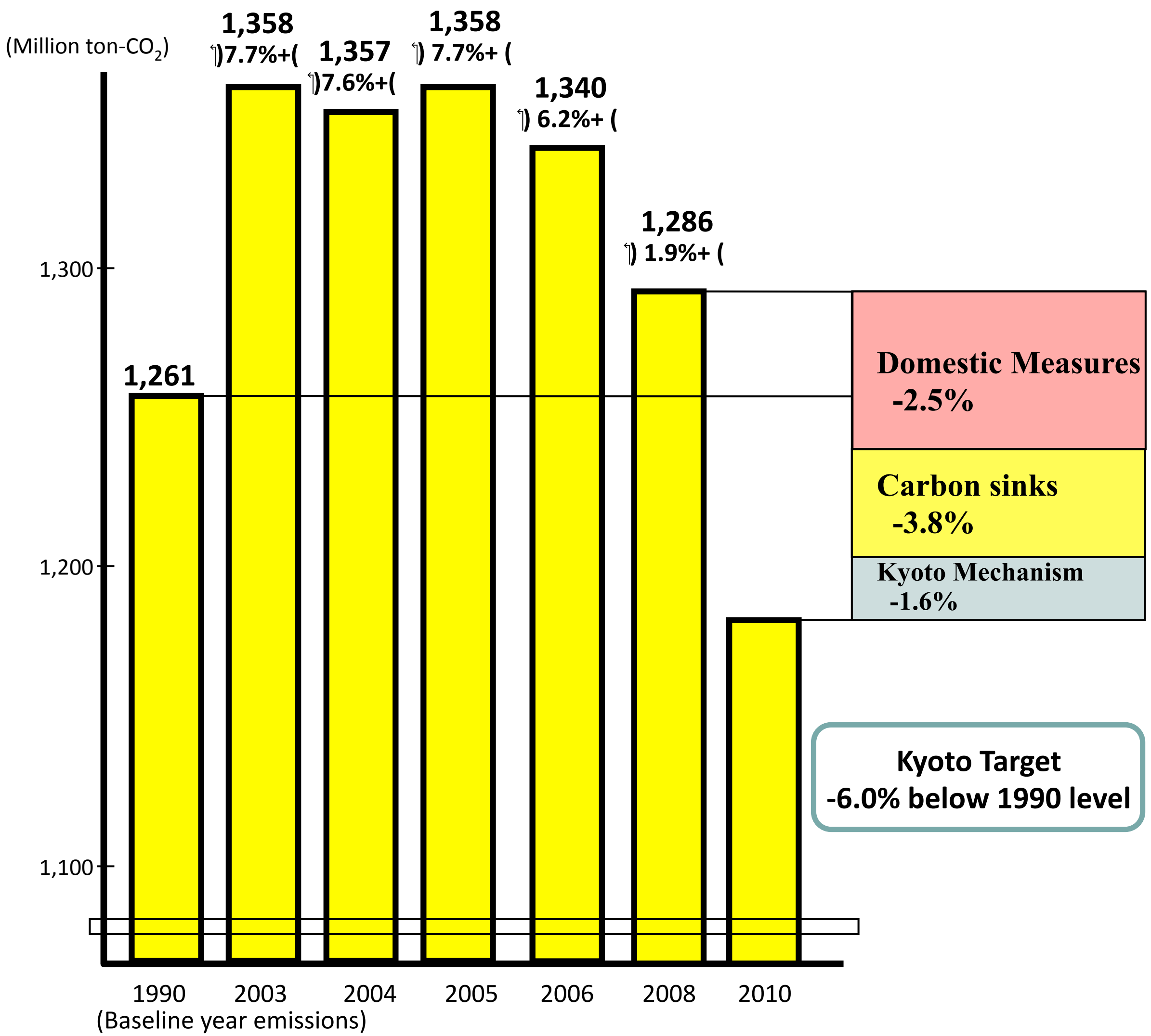
Cool Earth: 21 Key Innovative Technologies



Source: METI

The Kyoto Target and Japan

- The current recession made Japan's Kyoto target less difficult to achieve.



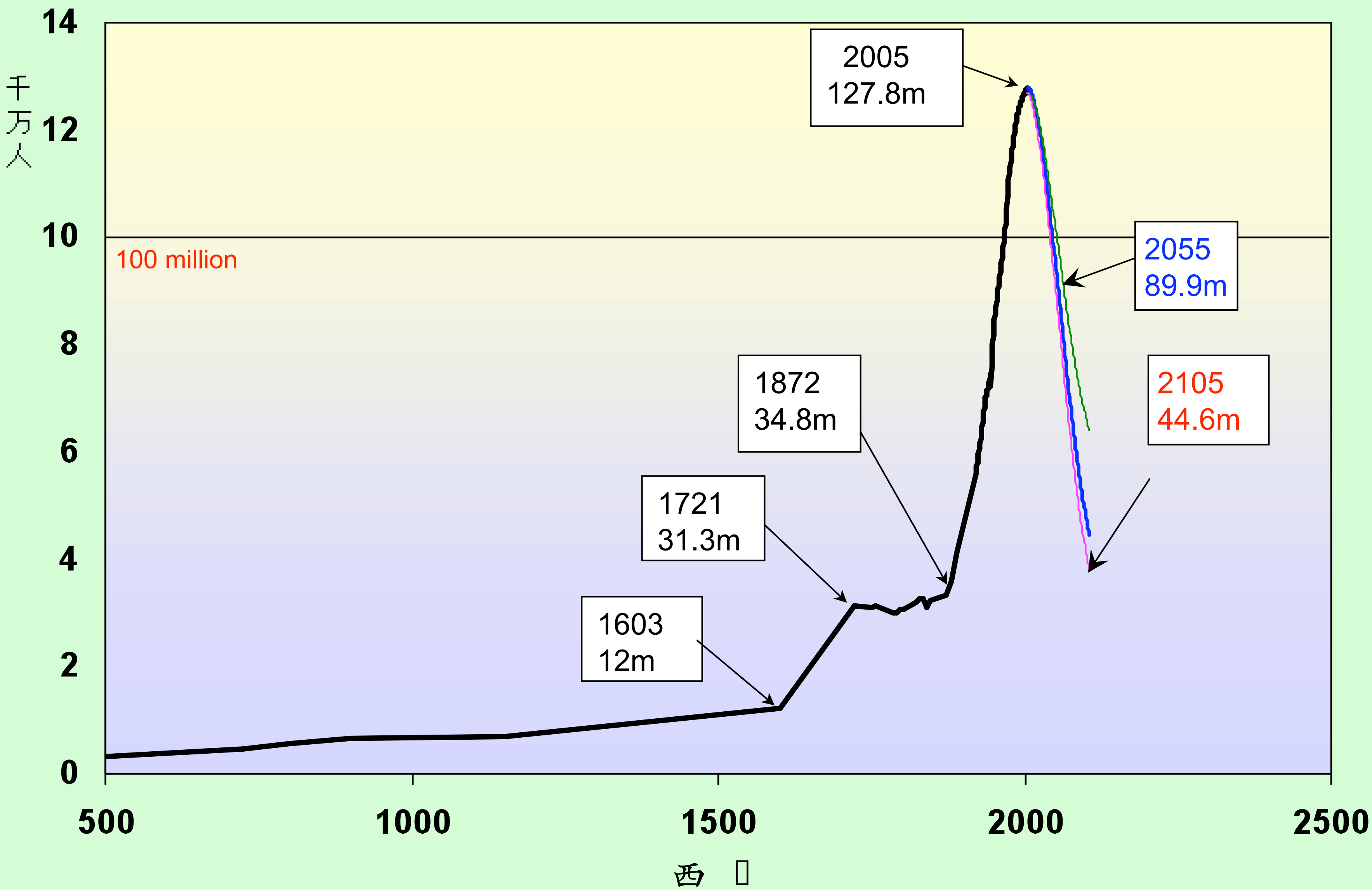
- GHG emissions are 1.9% above the 1990 level in 2008.
- A 2.5% cut is still needed for Domestic Measures to achieve the Kyoto target.
- If nuclear power plants operated normally or credits purchased by the private sector were counted, Japan could have achieved the Kyoto target in 2008.

Source: METI

Trend of Japanese Population

-On top of **sharp decline**, an unprecedented **aging pace** in human history

-The proportion of population over 65 years old: **20%** (2005) →**41%** (2055)



Source: Dr. Ryuichi Kaneko, National Institute of Population and Social Security Research, JAPAN

Sustainability of Political Will?

- The 1992 UNFCC Summit in Rio de Janeiro decided to cut GHG emissions to the 1990 level by the end of the 1990s, which no country achieved including Japan.

- Japan hosted the COP 3 in 1997, however, the Kyoto target has been almost impossible for Japan to achieve without the ongoing economic resession (note: The USA even failed to ratify the protocol itself).

- In Japan, there have been five Prime Ministers in the last five years with different packages on climate initiative:

  PM Abe (Sept. 2006-Sept. 2007: the Cool Earth Initiative),
  PM Fukuda (Sept. 2007-Sept.2008: an 80% GHG cut by 2050 from the 1990 level),
  PM Aso (Sept. 2008-Sept.2009: a15% cut by 2020 from the 2005 level),
  PM Hatoyama (Sept.2009~June 2010: a 25% cut by 2020 from the 1990 level) and
  PM Kan (June 2010~: same policy with Hatoyama?).

- There is doubt about sustainability of the political will on climate initiative, which could even collapse if overwhelmed by other pressing priorities.

Observation

- Japan has an unique and successful history of overcoming energy resource handicaps.

- In addition to energy efficiency improvement and the Kyoto/Post-Kyoto mechanisms, nuclear and CCS will be critical to cope with climate change.

- Japan reached a turning point around 2005 due to declining population while aging fast.

- While the economy remains sluggish, the public debt is mounting alarmingly high.

↓ ↓ ↓

- Three risks in achieving the targets of energy efficiency and climate initiative:

①Sustainability of political will,

②Availability of government revenues,

③Affordability of corporate investments,

↓ ↓ ↓

- Those risks cast shadow over the current set of policies and strategies.

- Technological innovations beyond our imagination will hold the key among others.

[Appendix] Overall Assessment of Japanese Energy Policy

Area	Achievement	Observation
Security	･Leading role in the International Energy Agency ･Emergency measures in place	･Major task to improve energy security in Asia
Diversification	･Constant diversification of the energy mix ･The largest LNG importer in the world	･High oil dependency on Mideast ･More contribution from nuclear
Efficiency	･World' highest energy efficiency ･Role model for the world	･Great success so far but new and greater challenges due to climate change
Liberalization	･Oil sector liberalization (completed in 2002) ･Electricity and gas sector liberalization ongoing	･Steady progress but slower than the West
Technology	･Driver of efficiency gain and renewal energy ･Policy tools (Sunshine Project in 1974, Moonlight Project in 1978, New Energy Development Organization in 1980)	･Substantial contribution in efficiency and diversification ･Need for revolutionary innovations due to climate change
International Cooperation	･Bilateral cooperation in securing energy supply ･Multilateral cooperation in sharing energy policy experience	･Major role to engage Asian neighbors with energy security and climate initiative
Climate Change	･Acceleration of policy responses after the adoption of the Kyoto Protocol in 1997 ･Climate change initiative as national agenda	･Sustainability of political will ･Availability of public/private funds to implement climate initiative