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A Comprehensive Literature Review on the Strategy Planning, and Implementation in Large Service Industry and Cultural Effects on Strategy Implementation in Middle East Region

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Abstract
The pedantic strategy is one of the key elements of any cooperation's success. However, the implementation of the strategy is very important; as often strategy fails during the implementation stage. The implementation of the strategy is a daunting task as it faces many challenges in today's organizations, which endeavor to achieve improved performance. Literature suggests that there are more contributions on strategy formulation comparatively on strategy implementation. Strategy formulation and implementation have become more important than ever. However, strategy formulation in organizations is the devising of a unique and valuable locus connecting a variable set of actions. Meanwhile, strategy execution is the interpretation of selecting a strategy for organizational action to accomplish strategic goals and objectives. Literature supports the view that strategy formulation and strategy implementation cannot be achieved by senior management alone. It requires both internal employees and external suppliers of the firm to cooperate. The culture, beliefs values and behaviors are also other key factors which need to be considered while making and executing the strategy, especially in the middle east region. This paper will discuss the key factors of the implementation of the strategy and adequate organizational culture, along with the literature review on the strategy implementation by using a systematic search process.

Keywords: Strategy, Strategy Implementation, Strategy Execution, Strategy implementation failure/success rates, and Key factors.

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Introduction

Formulation and implementation of a strategy
Organisational competition has increased immensely since the advancement in technology of communication (i.e. the internet, and other telecommunications). Previously, the organisation could gain a competitive advantage because of geographical location or other physical factors. Nowadays most organisations face competition because of advanced technology, necessitating a better delivery system for global comparison on quality and price. Nowadays a customer has a choice of many global organisations that drive local businesses to either remain competitive or potentially go out of the business. Therefore, to stay competitive in this harsh global market an organisation has to plan well into the future and form a strategy which will determine the future of the organisation [1]. However, to form a strategy and implement it is a challenging task. The focus of this paper is to consider a literature review related to the strategy implementation and execution. Furthermore, this paper will also review the factors that influence the strategy formulation and execution in the Middle East region. The term "execution" and "implementation" are interchangeably in this paper.

There are many factors which have to be considered when formulation and implementing the strategy. In recent years Management Science (MS) has produced much research on the design/formulation of strategy. Literature reviews show that the implementation of strategy has been overlooked, and most of the research has been carried out in the formulation of strategy. In reality, most of the strategies fail during the implementation phase, see Figure 1.

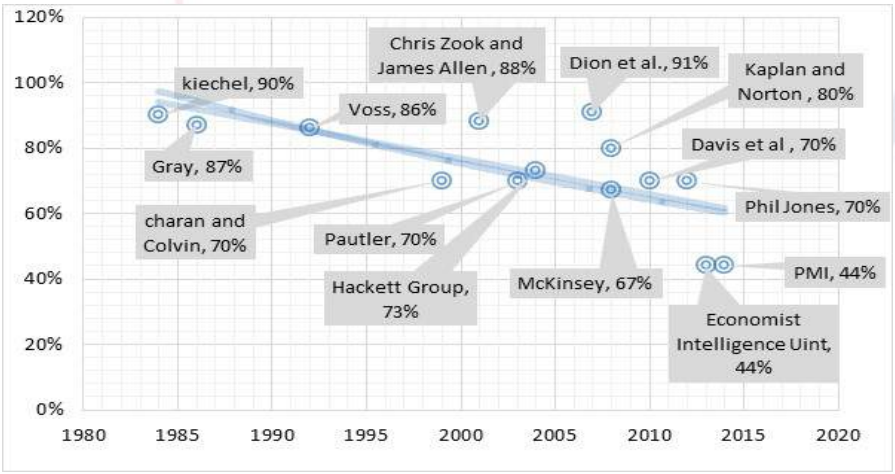

Figure 1 The failure rate of strategy implementation [2]

Strategic management comprises design and implementation of the major aims and initiatives taken by a company's top management, which is based on the availability of resources and an assessment of the internal and external environments on which the organisation competes in the market [2].

Furthermore, the top management, which has the strategy, should be able to answer these key questions (see Figure 2) and by considering only these questions & answer there could be very visible that which aspect cooperate is competing against in the market [3]. In other words, where the cooperation is gaining the edge on other competitors in the market.

Figure 2 Strategic management processes

It would be safe to say, even great strategy worth nothing if it cannot be implemented [4]. A better implementation of a second-grade strategy is more beneficial comparatively to first class strategy by an ineffective implementation. A detailed literature review shows that less than 50% of formulated strategies get implemented successfully [2] [5] [6]. Every failure of implementation is a failure of the formulation.

Strategy Implementation in Middle East

It is worthwhile understanding the concept of strategy implementation and execution before conducting the details analysis on this subject. There are many different views on the definition of the "strategy" which makes cumbersome to provide the one single definition (see table 1 as examples).

Table 1 Definitions of Strategy

Definition
"*Strategy is the determination of the basic long-term goals of an enterprise, and the adoption of courses of actions and the allocation of resources necessary to carry out these goals*" [7]
"*Strategy is the pattern of major objectives, purposes of goals […] stated in such a way as to define what the business the company is in or is to be in and the kind of company it is or is to be*" [8]
"*Strategy is the basic goals and objectives of the organization, the major programs of action chosen to reach these goals and objectives, and the major pattern of resource allocation used to relate the organization to its environment*" [9]
"*… strategy is the pattern of decisions in a company that determines and reveals its objectives, purposes or goals,[which] produces the principal policies and plans for achieving those goals, and defines the range of business the company is to pursue, the kind of economic and human organization it is or intends to be and the nature of the economic and non-economic contribution it intends to make to its shareholders, employees, customers and communities*" [10]
"*Strategy is the act of aligning a company and its environment. That environment, as well as the firm's own capabilities are subject to change. Thus the task of strategy is to maintain a dynamic, not a static balance*" [11]
"*Strategy is the pattern or plan that integrates an organization's major goals, policies, and action sequences into a chosen whole*" [12]
"*…a strategy is used to allocate factors based in the organization's needs and should manage: 1) core competencies and shortcomings, 2) unanticipated changes in the environment, and 3) contingent moves by competitors or agents*" [13]

Furthermore, there is a difference consensus on the distinction between strategy execution and strategy implementation, since the two terms are used [14]. In this paper these both terms are interchangeable. There are also some conflicts in the terms of strategy execution and strategy formulation.

Li, Guohui and Eppler [15] indicate three unique originations of the term when they collected all the different definitions they could find in relevant papers and books: "*The first approach concentrates on a process perspective and takes strategy implementation as a sequence of carefully planned consecutive steps. The second approach treats strategy implementation as a series of more or less concerted (but often parallel) actions and examines these actions from a behaviour perspective. Some authors combine the process perspective and behaviour or action perspective and form a third approach, which we label as a hybrid perspective*" [15]. They ultimately state strategy execution as a *"dynamic, iterative and complex process, which is comprised of a series of decisions and activities by managers and employees – affected by a number of interrelated internal and external factors – to turn strategic plans into reality in order to achieve strategic objectives*" [15].

Literature review on strategy implementation

The importance of strategy implementation and the daunting challenges it faces in today's organisations have been shown but the literature suggests that there are more contributions on strategy formulation than on strategy implementation. Therefore, the aim of this study is to pay attention to strategy implementation.

Figure 3 shows the systematic review which was conducted to analyse literature on strategy formulation and strategy execution/implementation. An analysis of current research on the factors that influence strategy execution led to an examination of studies in order to distinguish key factors influencing the strategy formulation through to implementation. A systematic search process was carried out using the following keywords: (Strateg*, implement* and failure*), (Strateg*, execution* and failure*), (Strateg*, implement* and success*) and (Strateg*, execution* and success*). The search covered relevant scholarly databases such as Business Source Complete (EBSCO), Scopus and ABI Inform Complete (ProQuest).

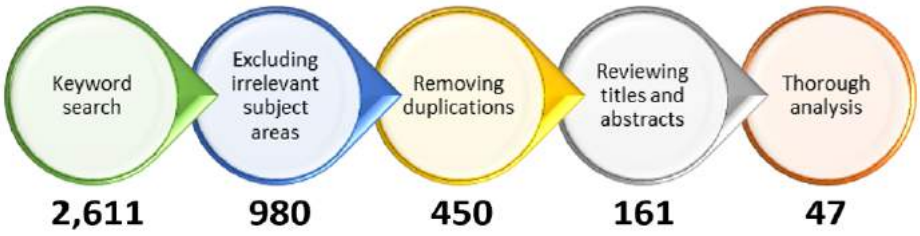

Figure 3: Systematic Review Methodology

The scholarly databases total 2,611.
Irrelevant subject areas such as medicine, social sciences and arts and humanities were excluded. The main relevant subject area is 980 in business management.
After removing duplicate records, the search resulted in 450.
Resulting literature was screened first through titles and abstracts to remove irrelevant documents and the search resulted in 161
A further comprehensive screening was conducted through the documents, which yielded 47 documents.

Figure 4 shows the majority of research conducted in this strategy field implementation was conducted in the US (30%), followed by the UK (28%) and other European countries (10%). The USA, the UK and Europe grouped together constitute around 70% of the papers. The remaining statistics of approximately 30% indicate similar percentages among different regions such as Australia, India, Brazil and Latin America. In particular, the research conducted in the Middle East about strategy implementation field was 6%.

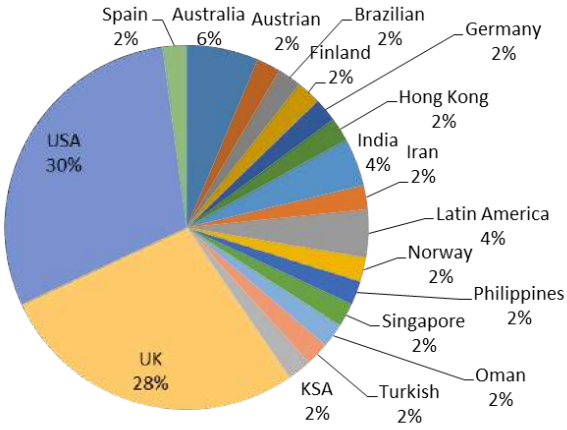

Figure 4: Research on Strategy topic from Geographical point of view

In strategy implementation research USA and the UK have dominated comparatively to rest of the world. Advance research facilities could be one of the major reasons for this dominance. Also, the majority of industries in terms of services or products, like automotive and aerospace, are situated in these countries. Furthermore, these countries also been dominating as they provide strategy solution around the globe which provides on hand experience.
Perspectives on strategy implementation

3.1 Strategy formulation versus strategy implementation

Strategy implementation literature has widely explored the question of whether strategy formulation and strategy implementation can be treated as synonymous, or are separate entities. The majority of research has first considered strategy formulation, and then treated strategy implementation as a new stage in the research (i.e. [14] [15] [16].

Guth and MacMillan [11] highlight that the vast majority of credible research has elected to view strategy formulation and strategy implementation as two separate processes. General management within an organisation is responsible for developing a strategy that is both rational and logical. Following this, an organisation structure is developed. Specific organisational behaviour is subsequently required in order to implement the organisation structure and strategy, which is elicited by specific management processes [17] [18] [19] [20] [21]

To treat formulation and implementation as two separate processes has also received criticism. More specifically, it is believed that a number of failed strategies have occurred due to this separation of formulation and implementation [2] [22] [23] [24]. Some arguments state that if the two stages are separated, then the thinking process is also detached, which means thinking and doing are no longer in unison, therefore learning is inhibited [25]. A second criticism of separating the two stages is that there is a contrast between formulation and implementation and this can cause management to become elitist and reduce natural competition. Most employees are not interested in the corporate goals of an organisation. They will therefore be less likely to engage with the work required to increase competition [14] [26].

Normally, an unsuccessful strategy implementation is often attributed to the failure of middle and operating level managers. If these managers do not support the direction of the strategy, or are have insufficient knowledge of it, then it is unlikely to be successful [11]. When middle managers are invited to participate in strategy formulation, they are more invested in the strategy and its subsequent implementation [27]. The inverse is true when middle managers are not involved in formulation, they will have little commitment to the implementation and therefore negatively influence it. Also, it is important to involve middle managers and lower-level employees in formulation as they will observe flaws at early stages in the strategy that higher managers may not [18].

A third criticism is that generally, strategy formulation affects implementation, and implementation subsequently affects formulation [23]. The various components of a strategy will affect how it is subsequently implemented, and strategy is well formulated, it should be easy to implement [5]. If a strategy is poorly formulated, then there is almost impossible that its implementation can be a success [18] [16]. Therefore, it is important during the formulation stage to consider the implementation process carefully, rather than to trying to intervene at failure or close to failure stages. The formulation process can also affect implementation performance, therefore requiring implementation to be considered carefully when generating policies, rather than separated [27].

A further criticism is that the execution of strategic change within an organisation should not be stilted or segmented; rather it should be completed as a continuous process [28]. Pettigrew and Whipp [28], argue that it is inaccurate to perceive strategy formulation as a linear movement. It does not have discrete stages; rather it is an experimental, iterative process. There is no certainty of the outcome at any stage. In some cases, it may be more appropriate to commence the implementation of certain aspects of the strategy before formulation has completely finished [18]. Thus, this initial stage of implementation may affect the final stages of formulation [20].

It is clear that there are a number of criticisms towards separating formulation and implementation into two separate stages. A number of researchers have argued therefore that they should be viewed as one streamlined approach (e.g. Mintzberg, [25]). Therefore, Noble [29] perceives formulation and implementation to be interrelated processes and must be addressed at the same time in order to ensure that a firm performs well when seeking to change their strategies [30] [31]. In this paper we analyse criticism towards both analogies. The best approach would be to treat the strategy formulation and strategy implementation as two separate task but interconnected this shall avoid the cons and add benefit of both analogies in most of the cases.

3.2 Top-down and bottom-up strategy implementation

Top down approach has been proposed for strategy implementation, whereby a number of control mechanisms are used to aid the implementation (see e.g. [18] [20] [27] [32] [33]). Top down approach to implementation would entail top management formulating the strategy and then delegating specific aspects of the implementation process for this strategy to individuals in the organisation [34]. The implementation of a strategy is often perceived as centralised, with the CEO or highest managers being in charge of developing new strategies and enforcing these on the remaining members of the organisation [35]. There are number of frameworks available to aid strategy implementations, which present a range of helpful methods (see e.g. [7] [18] [19] [23] [36]).

These methods are referred to as levers and include, for example, organisation structure, the use of reward systems, effective use of staff in implementation, developing a culture in the organisation that accepts change and the use of in formulation and control systems. These can all be used to assist in the implementation of new strategies.

Despite this advantage of the top down approach, there are still limitations. For example, organisational members should still be involved in formulation and implementation and this approach could result in poor engagement from employees. In order for a strategy implementation to be successful it requires the support of many employees and different levels of employees within an organisation [15]. Therefore, it is important to gain the approval and engagement of employees when formulating a new strategy [35] [37] [38] [39]. When employees object to a strategy implementation they create obstacles and delays that management must then negotiate in order for the new strategy to be successful [11] [40] [41]. Delays in a strategy becoming effective can reduce the competitive advantage an organisation has or upset the general functioning [42]. This criticism has resulted in a number of researchers electing to promote the use of bottom up approaches to implementation, which encourage greater participation. This approach can be more useful as organisation members will have greater commitment to it and therefore motivation for it to be successful [43]. As previously mentioned, failure of a strategy implementation is often due to a lack of commitment of involvement during the initial formulation process [18]. Manager will be more successful in implementing a strategy or decision if their employees are cooperated and supportive. If employees are not involved in the development of a strategy, then they are less likely to support its implementation. Moreover, when employees and middle managers are involved in formulation it becomes easier for a top manager to align both the goals of employees and the goals of the organisation, as they are these goals that motivate both parties [11]. If the employee's goals do not align with the strategy, they will be less likely to support it and therefore the success level at implementation would be low.

Alternatively, Kralewski [44], presents a bottom up approach to strategy formulation, which does not require the involvement of the top level managers. Strategies are often developed in response to knowledge from operation and middle level individuals within an organisation. As previously mentioned, it is these members of the organisation that will detect flaws in a strategy designed by higher management, consequently their involvement is often crucial [17] [22] [27] [45] [46] [47] [48]. Bottom up approach also highlight and recognises the importance of lower and mid-level staff in formulating strategies [14] [15].

There are also likely to be a larger number of flaws in a formulated strategy if employees that have knowledge in the target area have not been involved in its development [18]. The area that the strategy is designed for should be carefully considered in the formulation stage and their expertise utilised [43]. Without their expertise, the implementation will likely be unsuccessful [18]. The earlier these individuals are involved during the formulation stage, the more appropriate the formulated strategy is likely to be [5]. Therefore, those that will be affected by the strategy being formulated should be invited to participate in the formulation [49]. This participation should be encouraged throughout the entire process, with all individuals being aware that their contribution is valid and welcome [43].

3.3 Continuous improvement of strategy implementation

Third approach to strategy implementation that emerges from the literature is to follow the instructions outlined for strategy implementation as though they were a holy book. In order to maintain a competitive advantage a company must look to improve their strategies, products and services on a continuous basis [50]. Despite awareness that continuous improvement is required, but in fact it is an area that causes difficulties to many companies. A continuous improvement model can help to alleviate these difficulties; however, this still requires perseverance and persistence. Improving an organisation will not occur quickly, therefore time is required to see the progression. Continuous improvement can be beneficial as it helps to develop a harmonious relationship between the objectives and goals of the company, often referred to as the strategy, the plans of the middle managers, often referred to as tactics, and the subsequent work that employees execute, often referred to as operations. If the strategy, tactics and operations are in line then the organisation will see a range of benefits. Continuous improvement requires regular implementations and reviews using a systems approach perspective [33].

Figure 5: Three dimensions of a successful continuous improvement implementation [32]

Continuous improvement also seeks to develop two-way communication. Within this communication style, managers set strategic goals in a top down approach, whilst these goals are adapted to use a bottom up approach involving all employees [39]. Therefore, regular reviews are required by higher management when using continuous improvement processes to determine the effectiveness of strategies. As it is an ongoing process, adaptations can be required at any stage if a strategy is deemed ineffective or a new more useful strategy is identified. The continuous improvement process can be useful as each organisation is unique and therefore it allows a flexible use of multiple models. The models are however all useful in determining how a policy or operating procedure has been influential in the production or profitability an organisation experiences. An organisation will be in a better place to achieve their goals if they are able to continuously improve [5].

External versus Internal Factors Control

In this paper we would like to define the factor/environment as two major types 1) Internal factors and 2) External factors [15]. In this paper where the terms factor or environment are used both are used as interchangeable. An organization should have the ability to examine and make changes based on internal and external factors that affect performance to implement its strategy [51]. Internal factors are events that occur within an organization. Generally, the internal factors of an organization refer to events, people, systems, structures, and conditions inside the organisation that are generally under the control direct control of the organisation, for example, staff is internal factor or environment where the suppliers, legal and climate change are the external environment or factors [52].

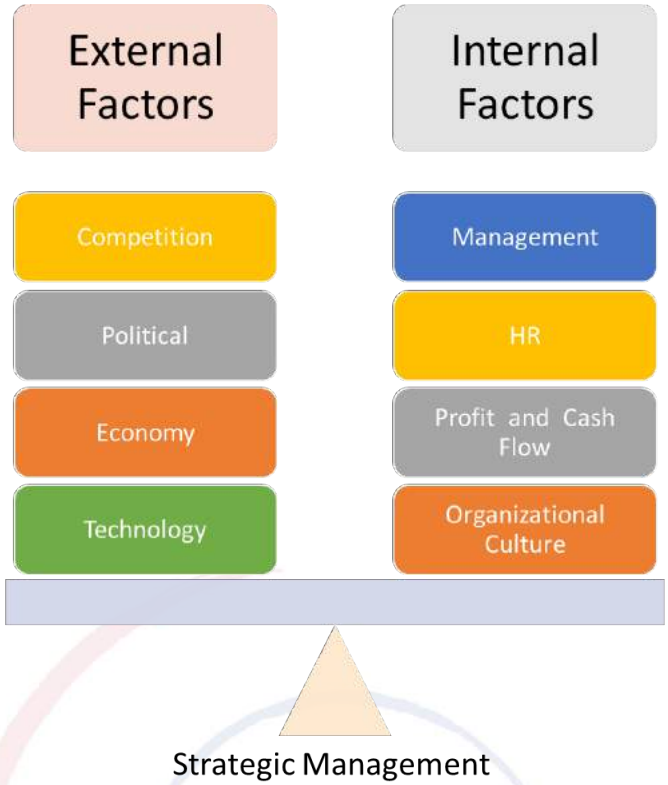

Figure 6: External versus Internal Factors Control

Figure 6 demonstrates the internal and external environment/factors and their control in the view of the strategic management point. The external factors are those that are not under the direct control or directly inside the organisation, however, they make effect inside the organisation operations. Customers, competition, the economy, technology, political, government regulations and social conditions, and resources are common external factors that influence the organisation [49]. Even though the external environment occurs outside of an organization, it can have a significant influence on its current operations, growth, and long-term sustainability. Ignoring external forces can be a detrimental mistake. It is imperative that managers continually monitor and adapt to the external environment, working in a proactive manner to changes earlier rather than having to take a reactive approach, which can lead to a devastating outcome [29].

Moreover, the implementation of strategy also gets affected by the country's culture, religion and other factors which will be discussed in the next section.

Strategy Implementation and their Influencing Factors in Middle East Region

Strategy Implementation is the stage where most of the strategies fail this has been discussed previously in this paper. However, what are the reasons for the strategies to fail? This section identifies that there are many factors which make the strategy to success or fail. If these factors are ignored, then it could have a devastating effect on the strategy. There are numerous examples in the middle east which show that many strategy and project either was delayed or cost far more or even entire project has been failed. Saudi Arabia is the prime example from the middle eastern countries where the Kingdom has spent a huge amount of budget for the welfare of the public but many projects have not been as success as the kingdom anticipated.

Previously we have discussed the two major kinds of the factors which influence the organisation. The factors can be categorised into two major branches 1) Internal factors and 2) External factors. However, the internal factors and external factors are difficult to comprehend as a different industry has defined internal and external differently. In this paper where internal factors are referring means the factors which are managed internally and vice versa for external factors. The strategy implementation research suggests that there has been a focus on certain factors that influence strategy implementation. For instance, some researchers mention factors that influence the success of strategy implementation, ranging from the management and staff who communicate or implement the strategy to the mechanisms in place for coordination and control.

However, successful implementation requires a better understanding of these factors but, unfortunately, the existing literature does not provide a rigorous and structured conceptualization of these factors which influence strategy implementation, the underlying dimensions of these factors, and nor is their influence on strategy implementation precisely explored. As a result, the literature does not offer a comprehensive framework of these factors. There are many factors that influence in strategy implementation but it varies from country to country. For instance, one of the major factors in Middle Eastern countries is weather, culture values and religion. In the construction, the business weather is one of the major factors as the weather is very extreme. Similarly, Cultures values and religion is one of the major factors, there are many factors which cooperation requires to consider when they are forming and implementing the strategy. In Middle East country the religion has one of the most sensitive factors and most influential. If the organisation were to produce a product it has to be approved by the religion perspective otherwise, the organisation not just will make the loss of the product but it will gain a bad reputation as well. This should not be seen as a disadvantage as many organisations make profiles by providing markets that take care of their cultural and religious values. Most of the countries in middles have made the laws and regulations according to their religion. Weather is also one of the most influential factors, as most of the middle east is extremely hot weather therefore when the projects of construction have been planned and their strategy has made this factor also should be considered. Consequently, there is a close and solid relationship between religion, culture and weather as well as the nature of the Middle East, which will affect the implementation of the strategy. Many western organisations have failed their strategies initially in the middle east market as they didn't consider important factors like religion, culture weather etc.

Conclusion

This paper reviews several aspects of the strategy implementation and formulation, it was also demonstrated that the formulation of strategy is far mature research topic comparatively to strategy implementation, however, it also has shown that most of the strategy fails at the execution/implementation process rather than at the formulation stage.

A literature review of strategy execution also demonstrates that there are various viewpoints on the strategy formulation and implementation. It can be recognised that the perspective on strategy execution is a separate stage after strategy formulation and rather rigid in nature. Nevertheless, strategy formulating is regularly a top-down approach. However, implementing it requires synchronous top-down, bottom-up, and across the firm activity. In this paper, it is also presented that the emphasis is placed on the top-down way with the use of a diverse set of external control mechanisms. Lately, this strategy has gone under expanded critique.

Strategy execution is a progressive process which is entwined and connected with strategy planning along with human behavioural side and etc. Additionally, the ability to execute strategy and continuously improve enables an organisation to achieve its strategy aims to stay competitive.

This paper also highlights that less attention has been paid to the Middle East, Asia and Africa and discuss the important factors which are specific to Middle Eastern countries. The factors like religion, weather and culture influence almost every part of the strategy. In management sciences, it's known the concept that it's better to identify the problem earlier than later. Identifying the major the factor if not all which could make the difference would be essential. Many of the projects in Saudi Arabia has failed or uncompleted or run out of funding mainly because they have ignored major factors or not all the risk has been analysed during the strategy phase.

Furthermore, it was also demonstrated that there are two major types of factors which affect the strategy formulation and implementation 1) internal factors and 2) external factors. Most of the time many organisation focus mainly on the internal factors and ignores the external factors which could affect the time, budget and effect on the efficiency if not an entire failure of strategy.

References

M. E. Porter, "The five competitive forces that shape strategy," *Harvard Business Review: Leadership & Strategy,* January 2008.

C. Candido and S. Santos, "Strategy Implementation: What is the failure rate?," *Journal of Management & Organization,* vol. 21, no. 02, pp. 237-62, 2015.

R. S. Kaplan and D. P. Norton, The executive premium: Linking strategy to operations for competitive advantage, Harvard Business Press, 2008.

L. G. Hrebiniak, "Obstacles to effective strategy implementation," *Organizational Dynamics,* vol. 35, no. 1, pp. 12-31, 2006.

L. G. Hrebiniak, Making strategy work: Leading effective execution and change, FT Press, 2013.

R. M. Mbaka and F. Mugambi, "Factors affecting successful strategy implementationin the Water Sector in Kenya," *Journal of Business and Management ,* vol. 16, no. 7, pp. 61-68, 2014.

A. D. Chandler, Strategy and structure: Chapters in the history of the American enterprise, Massachusetts Institute of Technology Cambridge, 1962.

T. Grundy, "Strategy implementation and project management," *Internation Journal of Prject Management,* vol. 16, no. 1, pp. 43-50, 1998.

D. E. Schendel and K. J. Hatten, "BUSINESS POLICY OR STRATEGIC MANAGEMENT: A Broader View for an Emerging Discipline," in *Academy of Management Proceedings*, 1972.

W. D. Guba and Y. S. Lincoln, "Competing paradigms in qualitative research," in *Handbook of qualitative research*, 1994, pp. 163-194.

W. D. Guth and I. C. MacMillan, "Strategic implementation versus middle management self-interst," *Strategic Management Journal,* vol. 7, no. 4, pp. 313-327, 1986.

E. Gummesson, "All research is interpretive!," *Journal of business and industrial marketing,* vol. 18, no. 6/7, pp. 482-492, 2003.

E. Gubrium and M. Koro-Ljungberg, "Contending with border making in the social constructionist interview," *Qualitative Inquiry,* vol. 11, no. 5, pp. 689-715, 2005.

S. Guohui and M. J. Eppler, *Making Strategy Work: A Literature Review on the Factors Influencing Strategy Implementation.*

Y. Li, S. Guohui and M. J. Eppler, *Making stategy work,* 2008.

V. Ivančić, "The biggest failures in managing strategy implementation," *Interdisciplinary Management Research,* vol. 9, pp. 197-208, 2013.

P. Aaltonen and H. Ikävalko, "Implementing strategies successfully," *Integrated Management Systems,* vol. 13, no. 6, pp. 415-418, 2002.

L. D. Alexander, "Successfully implementingstrategic decisions," in *Readings in strategic management*, Springer, 1989, pp. 388-396.

M. Ali and A. Hadi, "Surveying and identifying the factors affecting successful implementation of business strategies in companies of Fars province industrial towns (case study: companies of food industries).," *International Journal of Business and Social Science,* vol. 3, no. 1, pp. 265-272, 2012.

A. M. Al-Khouri, "Strategy and Execution: Lessons Learned from the Public Sector," *International Business Research,* vol. 7, no. 10, p. 61, 2014.

G. Cocks, "Emerging concepts for implementing strategy," *The TQM Journal,* vol. 22, no. 3, pp. 260-266, 2010.

M. Beer and R. A. Eisenstat, "The silent killers of strategy implementation and learning," *Sloan Management Review,* vol. 41, no. 4, pp. 29-40, 2000.

M. Blahová and A. Knápková , "Effective strategic action: from formulation to implementation," in *International Conference on Economics, Business and Management*, Manila, 2010.

S. Finkelstein, "When bad things happen to good companies: Strategy failure and flawed executives," *Journal of Business Strategy,* vol. 26, no. 2, pp. 19-28, 2005.

H. Mintzberg, "Strategy formation: schools of thought.," in *Perspectives on strategic management*, 1990, pp. 105-235.

J. Chimhanzi, "The impact of marketing/HR interactions on marketing strategy implementation," *European Journal of Marketing,* vol. 38, no. 1/2, pp. 73-98, 2004.

I. Al-Kandi, M. Asutay and R. Dixon, "Factors influencing the strategy

implementation process and its outcomes: evidence from Saudi Arabian Banks," *Journal of Global Strategic Management,* vol. 14, pp. 1-15, 2013.

A. Pettigrew and R. Whipp, Managing change for competitive success, Wiley Blackwell, 1993.

C. H. Noble and M. P. Mokwa, "Implementing marketing strategies: Developing and testing a managerial theory," *The Journal of Marketing,* pp. 57-73, 1999.

A. Ahmad and M. R. Rajuddin, "Barriers to translate strategy into action: balanced scorecard approach," in *International Conference on Technology management* , 2006.

H. Atkinson, "Strategy implementation: a role for the balanced scorecard? Management Decision," *Journal of Management History,* vol. 44, no. 10, pp. 1441-1460, 2006.

M. K. Allio, "A short, practical guide to implementing strategy," *Journal of Business Strategy,* vol. 26, no. 4, pp. 12-21, 2005.

D. R. Delisle, Executing Lean Improvements: A Practical Guide with Real-World Healthcare Case Studies, ASQ Quality Press, 2015.

P. C. Nutt, "Tactics of implementation," *Academy of Management Journal,* vol. 29, no. 2, pp. 230-261, 1986.

R. Speculand, "Bridging the strategy implementation skills gap.," *Strategic direction,* vol. 30, no. 1, pp. 29-30, 2014.

S. Miller, "Implementing strategic decisions: Four key success factors," *Organization Studies,* vol. 18, no. 2, pp. 577-602, 1997.

R. Young, M. Young, E. Jordan and P. O'Connor, "Is strategy being implemented through projects? Contrary evidence from a leader in New Public Management," *International Journal of Project Management,* vol. 30, no. 8, pp. 887-900, 2012.

R. Wery and M. Waco, "Why good strategies fail," *Handbook of business strategy,* vol. 5, no. 1, pp. 153-157, 2004.

G. H. Watson, "Strategy Realization through Collaborative Action," in *White paper, Business Systems Asia Pacific*, 2000.

M. Pallarés Blasco, *The role of the culture in the implementation of the strategy,* 2014.

J. Rajasekar, "Factors affecting Effective Strategy Implementation in a Service Industry: A Study of Electricity Distribution Companies in the Sultanate of Oman," *International Journal of Business and Social Science,* vol. 5, no. 9, 2014.

A. Van Der Maas, "Strategy Implementation in a Small Island Community. Erasmus Research Institute of Management," ERIM, 2008.

D. M. Reid, "Operationalizing strategic planning," *Strategic Management Journal,* vol. 10, no. 6, pp. 553-567, 1989.

D. Kralewski, *Bottom-up, Decentralized Approach to Innovation Strategy,* NGEBIS, 2012.

S. M. Al-Ghamdi, "Obstacles to successful implementation of strategic decisions: the British experience.," *European Business Review,* vol. 98, no. 6, pp. 322-327, 1989.

E. R. Brenes, M. Mena and G. E. Molina, "Key success factors for strategy implementation in Latin America," *Journal of Business Research,* vol. 61, no. 6, pp. 590-598, 2008.

V. L. Crittenden and W. F. Crittenden, "Building a capable organization: The eight levers of strategy implementation," *Business Horizons,* vol. 51, no. 4, pp. 301-309, 2008.

J. A. De Feo and A. Janssen, " Implementing a strategy successfully.," *Measuring Business Excellence,* vol. 5, no. 4, pp. 4-6, 2001.

L. G. Hrebiniak and W. F. Joyce, *Implementing strategy,* Macmillan New York, NY, 1984.

T. Juergensen, *Continuous improvement: Mindsets, capability, process, tools and results,* Unpublished manuscript, 2000.

A. Langley, "Process thinking in strategic organization.," *Strategic Organization,* vol. 5, no. 3, pp. 271-282, 2007.

G. E. Evans and C. A. Alire, Management basics for information professionals, American Library Association, 2013.

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Balancing the Hybridization of Public Libraries and Private Companies

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Abstract
This article explores how the government balances hybridization of public libraries and private companies based on a study in Japan. This research makes three important contributions to the research arena of hybridization by conducting in-depth case study and ethnography. First, through research into the management model of hybridization, we shed a light on public governance. Second, since the Japanese government fosters cooperation between private companies and public institutions by conducting social trials in hybridization, we can use the lessons learned from these trials and offer them not just to Japanese society but to the entire world. Finally, this research also contributes to creating new research methods in the area of public governance by utilizing in-depth case studies and ethnography developed by researchers in the field of anthropology. In conclusion, we describe a model of the hybridization of public libraries and private companies. It is important for public libraries and private companies that 1) public libraries should create the mission, philosophy and strategies, 2) both parties should adhere to their detailed contracts which clearly define their distinct roles, and 3) ensure that the detailed plans and descriptions for private companies can be executed successfully within the private company's limited engagement.

Keywords:Hybridization; Public Governance; Organization Structure and Design; Public Libraries; Qualitative Research; Ethnography

Introduction

In the early 1970s, Etzioni (1973) had already displayed the existence of hybrid organizations created by governments. The hybridity is comprised of various combinations of public, private and third-party sectors. Over the last fifty years, politicians, employees of public institutions, and researchers in the public sector have steadily taken their own management techniques and the management of both public institutions and private organizations into consideration in order to pursue a more efficient style of operation and management (Hodge & Greve, 2007; Hodge, 1999; D. Osborne & Gaebler, 1992; Perry & Rainey, 1988). This transformation has led to a shift from New Public Management (NPM) to New Public Governance (NPG) which implies a fundamental change all over the world (Gulbrandsen, Thune, Borlaug, & Hanson, 2015; S. P. Osborne, 2006; Wiesel & Modell, 2014).

After the 2000s, this trend has become broader and has led to various concerns with managing societies associated with wider and more complex local communities (Lindqvist, 2013). Hybridity does not imply randomly mixing features from different sectors (Karré, 2011). According to this view, there are fundamentally and distinctly different governance and operational principles in each sector, merged together in a way that allows for more effective management of an organization (Billis, 2010). According to Collins (2005), the public and social sector is divided into four quadrants, each possessing unique properties and techniques of management. Especially within the research field related to public governance, there is a wide range of research basically consisting of three methods: 1) describing theoretical frameworks, 2) policies and documents analysis, 3) interviews with employees and directors in empirical case studies. Some of the represented research in this field illustrate the general characteristics of hybrid organizations, and previous researchers in the public governance field conducted research based on these research methodologies (Conaty, 2012; Stone & Francie, 2007).

However, while this research into public governance is ongoing, some researchers in the field of public governance are specializing and moving into more narrow and specific fields of focus. This is due to the unique traits and unique types of hybridity within each quadrant as described by Collins (2005). For example, in order to reflect the differences in characteristics of hybrid organizations, Kurunmäki (2004) investigated the hybridity of medical professionals. He also expanded his research area to include more of the public sector as well as professional areas of the private sector (Kurunmäki & Miller, 2011). Mcdermott, Hamel, Steel, Flood, and Mckee (2015) analyzed regulations of health care governance based on four hospitals in Scotland and Ireland in order to improve the management system, and developed a goal-oriented governance framework which outlined the following four goals: (1) ensuring the adoption and implementation of best practices, (2) enabling staff, (3) empowering staff to adapt and add to national mandates, (4) embedding a culture of improvement. There has been much research done on hybridization in health care (D'Aunno, Sutton, & Price, 2015).
In the realm of universities, Mouwen (2000) described the effects of hybridization in public universities, and Jongbloed (2015) analyzed public universities which collaborated with private sectors. Reihlen, Wezlaff and Smets (2015) conducted an in-depth case study on a German university, and developed a new model of hybridity

and transformation. They successfully demonstrate the new model based on the analysis of internal documents.

In this manner, research on hybridization came to be segmentalized into research on specialized organizations, such as hospitals and universities. However, hybrid organizations which are the results of the integration between public institutions and private companies, have been struggling for over fifty years, since the purposes and motives behind the creation of public institutions and private companies differ, as do their individual cultures. For instance, Collins (2005) plotted types of organizations based on the ratio of profitability and donations in a two axis figure, and one can see the variations of their profitability in each organization. Due to the specialties of workers in organizations in each field, management characteristics are very unique to each quadrant. We modified his model and added a public library case (Figure 1). Quadrant □ represents the heavily government-funded arena, where it is difficult for directors to manage the organizations while keeping them sustainable. If we view Quadrant □ in this research, the hybridization model is very applicable. Public libraries are located in less monetized areas, even in Quadrant □, since public libraries are generally non-profit entities who exist for the local society and have been accumulating books and documents for a very long time.

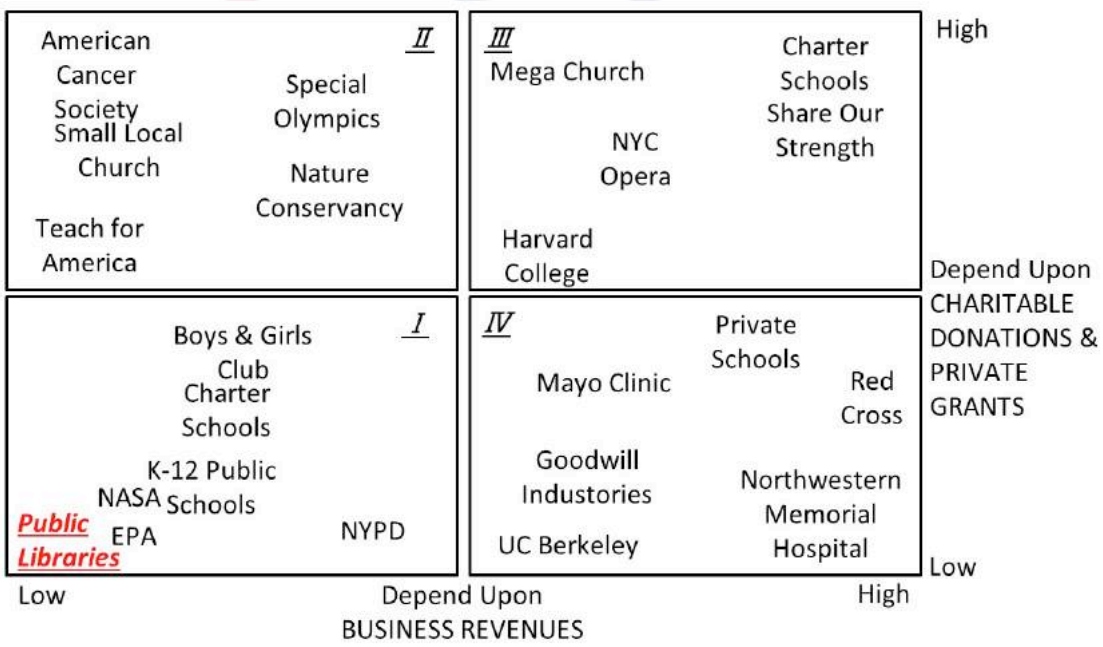

Figure 1: Economic Engine in the Social Sectors -4 Quadrants*

* We modified the Collins's Model of 2005, "Good to Great and the Social Sectors."

Hybridization for Public Libraries

Hybridization is one of the organizational solutions used when public institutions face some special difficulties and contradictions within their organization. Hybridization is defined as the process through which elements of diverse governance logics are integrated into context-specific configurations of governance practices (Haveman & Rao, 2006). However, there are other types of organizational solutions that can be used when organizations are facing challenges. Reihlen (Reihlen et al., 2015) explained four basic solutions for organizational contradictions; Marginalization,

Separation (Kraatz & Block, 2008; Pratt & Foreman, 2000, (Hargrave & Van de Ven, 2009; Werner & Baxter, 1994), Hybridization (Julie Battilana & Lee, 2014; Julie; Battilana, Lee, Walker, & Dorsey, 2012; Pratt & Foreman, 2000; Reihlen et al., 2015), and Transformation (Reihlen et al., 2015) (Figure 2).

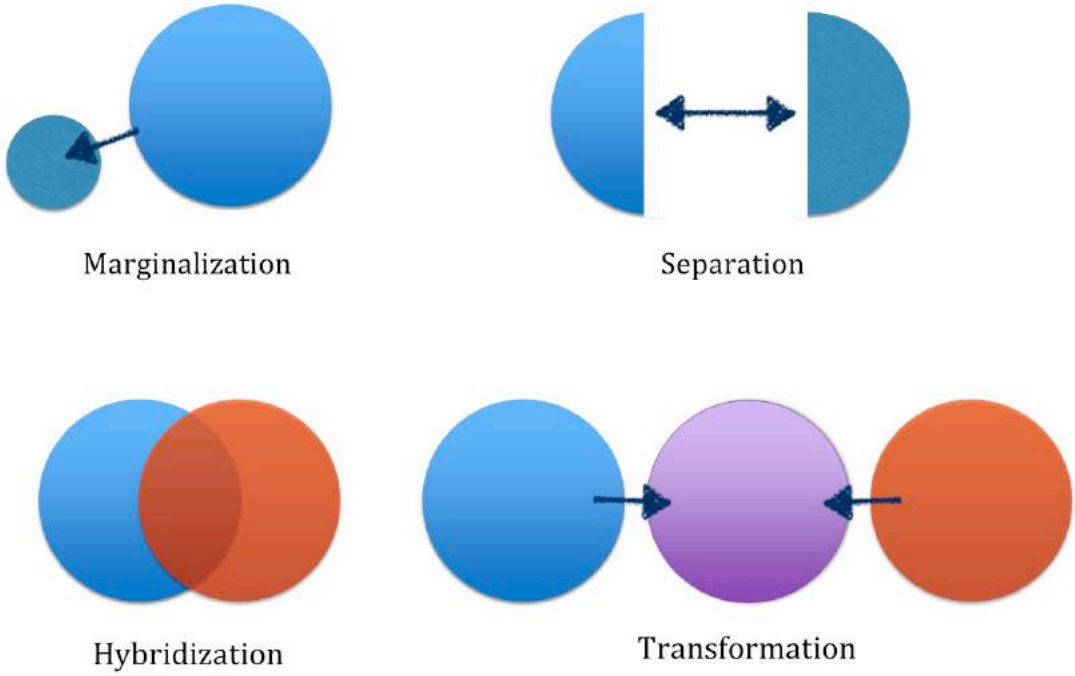

Figure 2: Solutions of Organizational Contradiction for Public Libraries

Reihlen et al (2015) explained the possibilities and conditions of the transformation approach by using a public university case in Germany. However, these do not match with cases of public libraries because transformation requires organizations to undergo a fundamental change. In fact, traits and characteristics of public libraries are 1) accumulation of knowledge, books and documents, and 2) open to the public as a whole, and due to these characteristics public librarians need to follow traditional processes in most parts of their organizations.
In addition, public librarians are also unable to handle marginalization and separation, since public libraries need to focus more on helping all citizens in the communities where they are located and as such, the needs of the government and the needs of the citizens never allow for public libraries to engage in marginalization and separation. Due to these conditions, the public library instead engaged in hybridization.

Hybridization of Public Libraries in Japan

In Japan, we have well-developed hybrid organizations especially among social institutions, such as public libraries, museums, and archives. In the U.K., the government cut budgets on public libraries and many libraries needed to be closed. On the other hand, the Japanese government found a way for public libraries to survive by using private companies' resources. This policy sometimes caused problems in public institution management and problems still remain. The organizational and cultural conflicts between government and the market are big challenges (Glynn & Lounsbury, 2005; Glynn, 2000, 2002). However, some hybrid

library organizations found ways to manage their hybridity and have had great outcomes. Private companies did not have experience in library management and library operations, but they have been steadily gaining experience. Japanese government has been struggling to deal with public institutions, especially social service organizations, for a decade, but we can see signs that their management will have success under certain conditions. In this paper, we will explain how library directors should balance the hybridization of organizations based on Japanese cases.

Research Objectives

The purpose of this research is to conduct an in-depth study of a hybrid public library organization in the largest city in Japan and examine their superior management practices. Our research provides three contributions to the research arena of hybridization. First, through research into the management model of hybridization, we shed a light on public governance, and tried to expand upon Collins' explanation of the uniqueness of public and social sectors, describing it in more detail and offering a more unique model of public institutions.

Second, within Japan there have been many cases where fully outsourced organizations caused failures. It is through these failures that we have to review the balance between public institutions and private companies. Japan hybrid organizations provide a perfect opportunity for this research as they are considered very advanced in the world. Since the Japanese government fosters cooperation between private companies and public institutions by conducting social trials in hybridization, we can use the lessons learned from these trials and offer them not just to Japanese society but to the entire world.

Finally, this research also contributes to creating new research methods in the area of public governance by utilizing ethnography, a research method developed by researchers in anthropology. Since this is a new trial, ethnography can describe in more detail the results provided by the research than traditional case studies. Therefore, in this research, we utilized two methodologies, an in-depth case study, and ethnography.

Research Methods – In-Depth Case Study and Ethnography

In-Depth Case Studies in Management Field

Researchers in the management research field developed the case study as a qualitative research method (Easton, 2010; Eisenhardt, 1989; Jaspers, 2007; Nazari, 2010; Ravenswood, 2011; Yin, 2009). In order to better understand management fields, researchers in business developed in-depth case study method, and described the actual activities, organizational structures, and cultures. Researchers solidified the case methods in the long research history. Reihlen (2015) successfully applied the in-depth case methods to a hybrid organization in Germany, which implies the in-depth case studies are meaningful in order to analyze hybrid organizations as well as activities. Furthermore, it is necessary to see both the management side perspective and the community side perspective, since if we fail to consider the community side where public libraries provide their services, we will not be able to determine whether or not public library services are effective. The end result is that there are still some improvements around in-depth case studies, and we believe that ethnography could be used to overcome the limitations of in-depth case studies.

The Meaning of Team Ethnography in Management Field

There is a research method that is created in the discipline of cultural anthropology known as team ethnography that is able to solve this type of situation. By having more than one researcher enter the same field at the same time, this technique enables us to analyze the field through multiple perspectives.

Ethnographic methods in cultural anthropology ushered in a large shift in the 1980's (Clifford & Marcus, 1986). Up to the1980s, investigators focused on a single truth of the field by conducting participant observation from an objective standpoint. However, during this time, post-modernism and cultural studies had a major impact on ethnographic practices, raising questions about positionality, reflexivity and the "cultural baggage" of the researcher. For instance, there are different information resources available depending on the differences of gender, and there are different results depending on the degree of the researcher's membership and personal involvement in the field (Narayan, 1993). As a result, it was indicated that there is no single truth in the field, instead there are as many stories as there are researchers. This view was coined as the Rashomon Effect (Heider, 1988). The benefit of team ethnography, based on this premise, is in that it can bring together different kinds of data collected by researchers of different expertise, training and cultural background, thereby broadening the purview of the research. Researchers will bring different interpretations and questions to the table, which would lead to fruitful discussions and exchange, providing a more comprehensive understanding of what is going on in the field.

Research Processes and Data Analysis

As we previously explained, we developed our research method based on Reihlen, Markus R Wenzlaff, & Ferdinand Smets, Michael's research (Reihlen et al., 2015). In addition to following their research methods, we also augmented our research using team ethnography since we wished to describe very precise details of qualitative data in order to determine the managerial and community activities that were actually going on in the community.

We chose the Shinjuku ward, a ward within Tokyo, which is a central commercial area equivalent to the Manhattan area in New York. Shinjuku is comprised of many ethnic minority communities within their population of roughly 330,000. Public institutions, such as public library systems in the metropolitan district, are rated by the local government and local communities. Public libraries within the ward consist of hybrid organizations of both the local government and private companies, where the main library and the children's library are managed by the local government and eight branch libraries are managed by four private companies. This system has been successfully implemented by the government for several years (Yorozuya, 2014).

First, in Phase 1, we collected strategic proposals, yearly plans, formal documents, and internal documents that the public library archived in their office rooms. Next, we analyzed them in order to understand their entire organizational structure as well as the roles of public librarians and employees of the private companies (Figure 3).

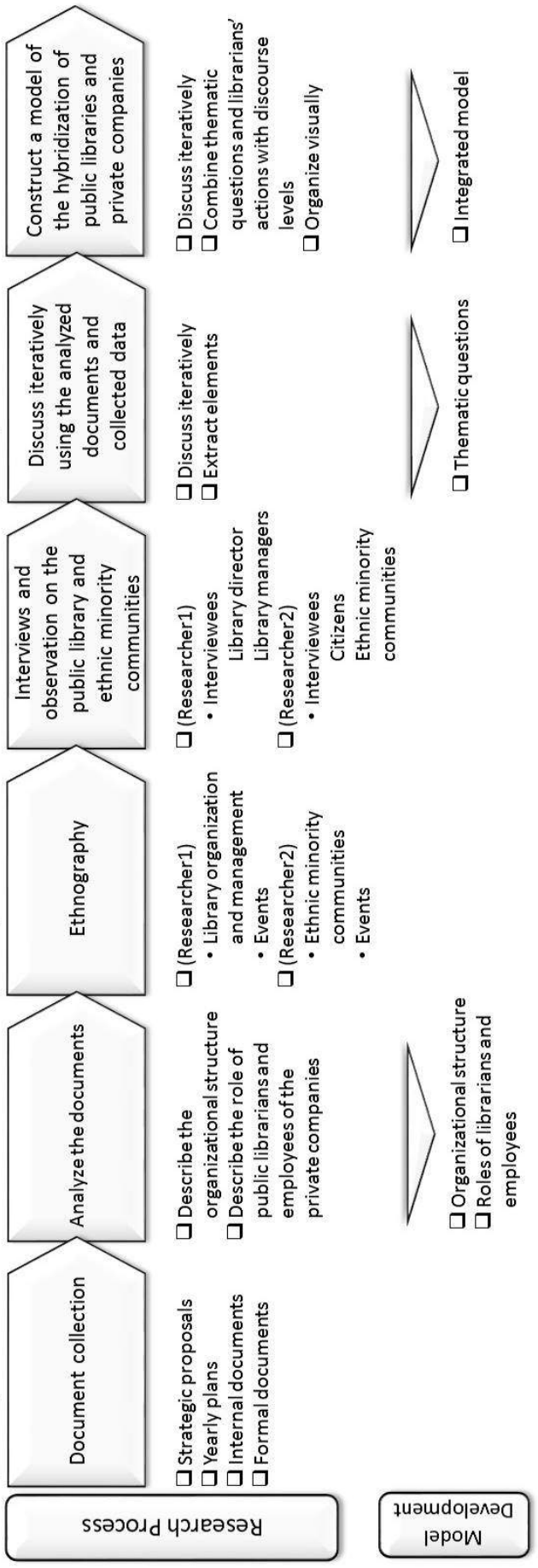

Figure 3: Planning Process of Shinjuku Government and Shinjuku Public Library

Second, in Phase 2, we applied team ethnography to this in-depth case analysis in order to better understand the challenges of the hybrid management style and how to balance the involvement of public institution and private companies. Within this research, a library management specialist along with a minority community specialist conducted interviews and participant observation. Dr. Masanori Koizumi, a public library management specialist, investigated public library management and Dr. Junko Teruyama, a minority community specialist, investigated local community members in the ward in order to understand the needs and impressions of public library services. We spent approximately 5 months starting in May 2015 doing fieldwork among public librarians, employees of private companies, and citizens in the local communities. The following is a list of interviewees (Table 1). It must be noted, however, that due to the nature of anthropological ethnography, our research involved spending long hours (up to a total of 190 hours) with our informants conducting participant observation, and the data collected is not limited to personal interviews towards these interviewees.

Table 1: Interviewees

Shinjuku Public Library	**Local Community**
Director, main library	Representative, commercial district association
Manager, main library	Schoolteacher
Leader of coordination group	Leader, non-profit organization
Branch library manager	K-9 students with ethnic minority background (4)
Librarians (5)	Students of Japanese language schools (5)
Employees of private companies (4)	Organizer of local festival
Library management board members (2)	Ethnic minority families (2)

In Phase 3, we extracted elements of management within the public libraries and private companies through analysis of the management plans, internal documents, as well as the data we collected through team ethnography. Finally, we engaged in numerous discussions in order to develop the hybridization model and resolved discrepancies of the model through extensive discussion. When developing a theory or a model, researchers need to engage in deep discussions (Suddaby & Greenwood, 2005). Our research methodology emphasized illustrating the hybridization model through open-ended discussion.

Results

Managerial Processes within Their Contract and in a Fiscal Year

Regulations within the Japanese governmental system state that when a public institution selects a private company as a partner, the public institution must submit an announcement outlining their requirements to which private companies submit a proposal, which allows the private companies to compete with each other based on the demands of the public institution, indicating how they would be able to satisfy those demands. Once a private company is selected, usually based on the best possible price along with meeting the public institution's conditions, both organizations enter into a contract with terms lasting five years.

For example, in the Shinjuku public library case, in 2009 the government decided to use private companies to manage three branch libraries in each unique area in the ward, and gradually they expanded to use private companies for managing the branch libraries, with the total number of branch libraries managed by private companies reaching eight. However, the director made a decision to keep the main library under the management of the government, believing it important that public officers should create public library mission, philosophy and strategy. Upon selecting the private companies that would manage the branch libraries, he tasked them with creating yearly plans for each fiscal year. In this case, the process of choosing private companies was very well documented and regulated and clearly based on the public libraries' mission.

After the selection of private companies and the start of the new fiscal year, public librarians regularly monitor the activities of the private companies regularly, either weekly or monthly. If these companies fall behind in the schedules they have outlined, public libraries can advise them about ways they can get their schedules back on track or modify their plans to align with their current timelines.

Tasks in the hybrid management model in Japan are clearly separated by descriptions that are to be performed by private companies. Employees in private companies do not have access to the details, but employees in public libraries have detailed information on citizens as well as the contact information of local government officers. If the employees in private companies cannot determine a method to solve some particular problem in society due to the limitations of their role or unavailable information, employees in the public institutions have meetings and guide the private company employees to help solve their issues. They intentionally manage outcomes and results from private companies, and that is why the main library is managed by the public institution and the employees in public institutions pay special consideration to long range planning. After planning, public librarians in the main library task the managers of each branch library to create their own detailed plans. See below for the detailed flow of this procedure (Figure 4).

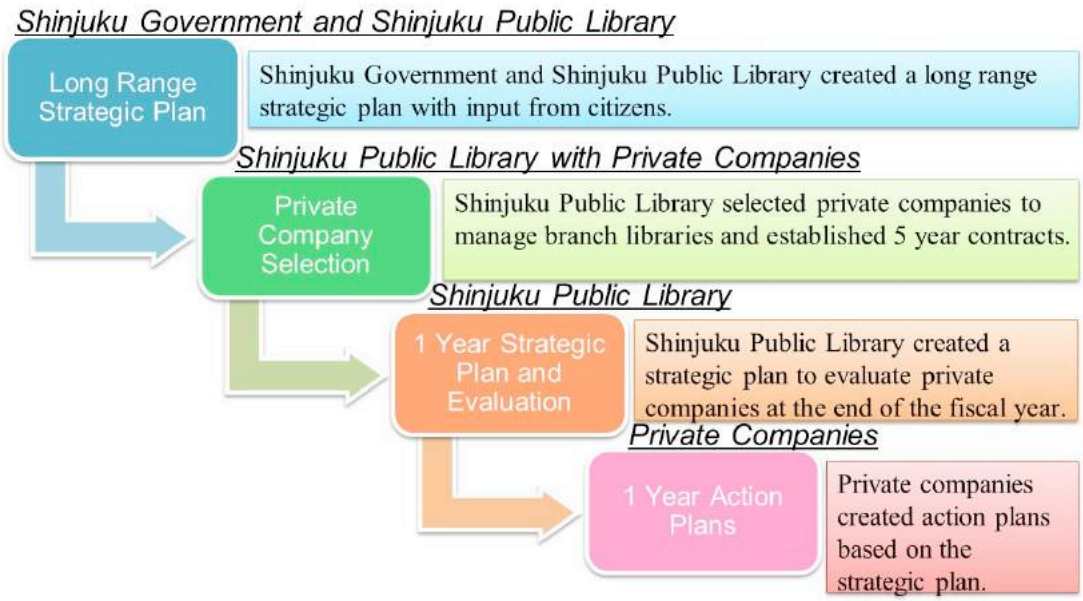

Figure 4: Managerial Process of the Shinjuku Public Library

Organizational Structure

We identified a good balance of hybrid organizations made up of public libraries and private companies, such as when the main library is managed by public officers, and branch libraries are managed by private companies' employees. Figure 5 explains this balance: the center circle is the main library and the main library has a strategic/coordination group in order to maintain tight connections with private companies. In this case, there are private companies outside of the circle such as the main library and a strategic/coordination group. The reasons why this particular balance is reached is due to the fact that librarians who work in a main library need to focus more on strategic management and the creation of innovative services based on library priority/core philosophy as well as social needs. For instance, public librarians have strong connections with public officers in other public institutions as well as citizens in their local community, since, as a public library manager explained, "we maintain precise and detailed information about citizens within our community through governmental and ward registration practices."

Thus, they can easily connect with and contact them more readily than private companies' employees can. However, private company workers would face challenges reaching out to public officers and citizens due to the numerous restrictions that are written into their contracts that were agreed upon when the private company and public institution formed their partnership. At times they struggle with problems when private companies try to reach out to their communities, but the public library and private companies continue to improve their working processes.

On the other hand, librarians and staff who belong to private companies are more skilled at executing their work efficiently. Once the main library's public librarians create the library vision and strategic plan, the private companies are able to maximize their productivity and efficiency to execute on the plan, something that is at times challenging for a public institution. Additionally, in this specific case, the

library director selected these private companies as partners based on their strength in the market in order to maximize the branch libraries' value in response to each local community. For example, a public library manager explained "It is so much easier for private companies to hire foreign people who speak foreign language in order to provide library services to ethnic minority communities in this ward." Due to this, private companies can easily augment their skill set in each local community in order to maximize their value.

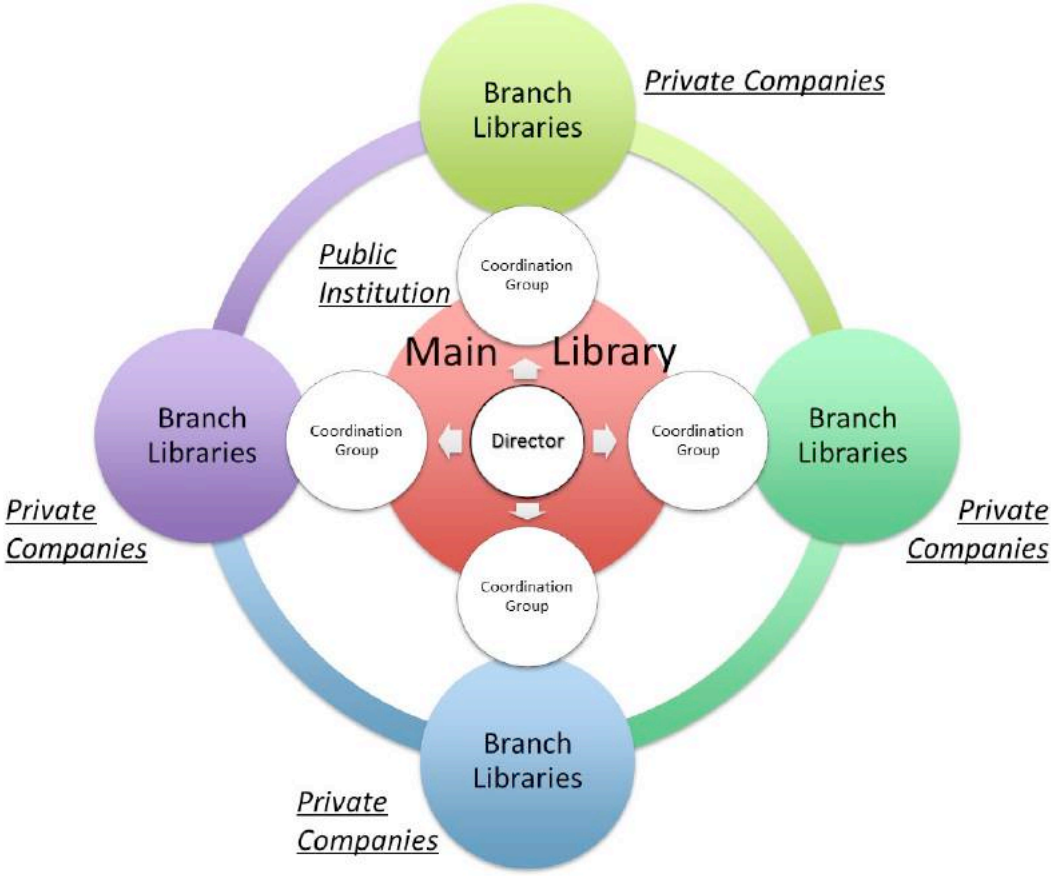

Figure 5: Organizational Structure of the Shinjuku Public Library

In addition, we uncover a solution to overcome the cultural borders between public institutions and private companies. In the Shinjuku public library case, the solution was to create strong strategic coordination groups and meetings, such as those implemented by the director between the main library and the private companies in 2009. The group consisted of public institution employees and employees of private companies, and a public library manager in the main library was named the leader of the group. The meetings were regularly held once or twice a month and all branch managers openly discussed and shared almost everything that happened in each branch every month and, at the same time, the leader conveyed important information from the director or the Shinjuku government to the branch managers.

The Hybridization of Personnel within Public Libraries

The library director did not start out with a background in library and information science, but instead was a generalist hired by the local government. However, his study of library and information science began after moving into the library division within the Shinjuku ward. The result is that he has strong connections with other public institutions in the ward, making him much better suited to communicate and negotiate with directors and managers in other public institutions instead of other librarians. Moreover, he is able to communicate effectively with public librarians since he studied library and information science. A public library manager who works at the main library said "We need a director who can negotiate with the other directors in public institutions in the Shinjuku ward and hopefully can bring more money to the library." It is very difficult for employees of private companies to negotiate with directors in public libraries and other public institutions, since they are hired by the local government and bound by specific contractual obligations and duties that are fixed. This further illustrates the necessity of having the director of the public library be a public officer and not an employee of the private company.

However, employees of private companies are valuable assets to the library even though some of them do not have a strong background in library and information science. Relying instead on their managerial and economic efficiency, once the contract is fixed and their duties and objectives are assigned for the fiscal year, they are very effective at completing their duties. For example, in the analysis case, the number of cultural events in branch libraries increased once branch libraries came under the management of private companies. The contracts indicated specific verbiage around cultural events and as such, when they create their plans for the fiscal year they must include new events within them. The branch manager, who was previously a stage actor and studied library and information science after he was hired by the company, increased the number of events in the branch library, successfully executing several of them.

There are several other cases where people of diverse backgrounds have made an impact on the library. For example, one employee of the branch library was Korean-Chinese who was also fluent in Japanese. Her job was not limited to that of the other librarians, but also involved holding storytelling events in Korean and helping Chinese visitors. A librarian like her is an invaluable asset for a library located in a multicultural and multinational district. However, if the library were run entirely by the public sector, it would be restrained by the regulation to employ non-Japanese citizens as public servants. In other words, the flexibility in human resource management is made possible only through hybridization.

Instability within the Library Culture - "Regularizing Instability"

Branch libraries that are managed by employees of private companies contribute to a particularly unstable culture within the library. This instability arises from the competing notions of managing operational and economic efficiency, which are key tenets of private company management, as well as recognizing the importance of the role of the library for the general user within society and not alienating those users while pursuing efficiency.

Within the case analysis interviews, it became clear that while the typical pursuit of operational efficiency and economic feasibility by employees of private companies would mean the elimination of certain services that do not constitute a significant market, private companies were contractually obligated to retain all ethnic minority services. For example, in our field, Koreans are the most visible ethnic minority community, and they are known to place strong emphasis in their children's educational opportunities, aspiring to move up the social ladder. Therefore, it is relatively easy to target the Korean community as prime users of the local public library. However, there are also other, less visible ethnic minorities living in the area, including Filipino and Burmese communities, that are less likely to make use of the library (due to various reasons, including the weaker presence of public libraries in their original countries and cultural expectations regarding social mobility), but are also lacking in various educational resources and opportunities that the library could potentially provide. Library management driven by rules of efficient marketing strategies would overlook these small and seemingly insignificant communities. However, contractually the branch library management, being run by the private company, is obligated to find a way to maintain high levels of operating and economic efficiency while maintaining all minority services. These competing goals, balancing the operation and economic efficiency of the library while at the same time providing a high level of service and support to the community is a source of much instability within the library culture. This instability is actually a key factor in the success of the management of the library.

In other words, the fact that librarians are to work under competing expectations – one focusing on efficiency and cost-effectiveness and the other focusing on understanding and fulfilling the intellectual needs of the local community, has a net result of boosting their productivity and operational skills. The director's multi-faceted background as well as his implementation of specific management methodologies (e.g. precise contracts, strategic coordination groups, meetings) balanced and regularized the instability of competing goals between the public libraries and the private companies, leading to a successful hybridization (Figure 6).

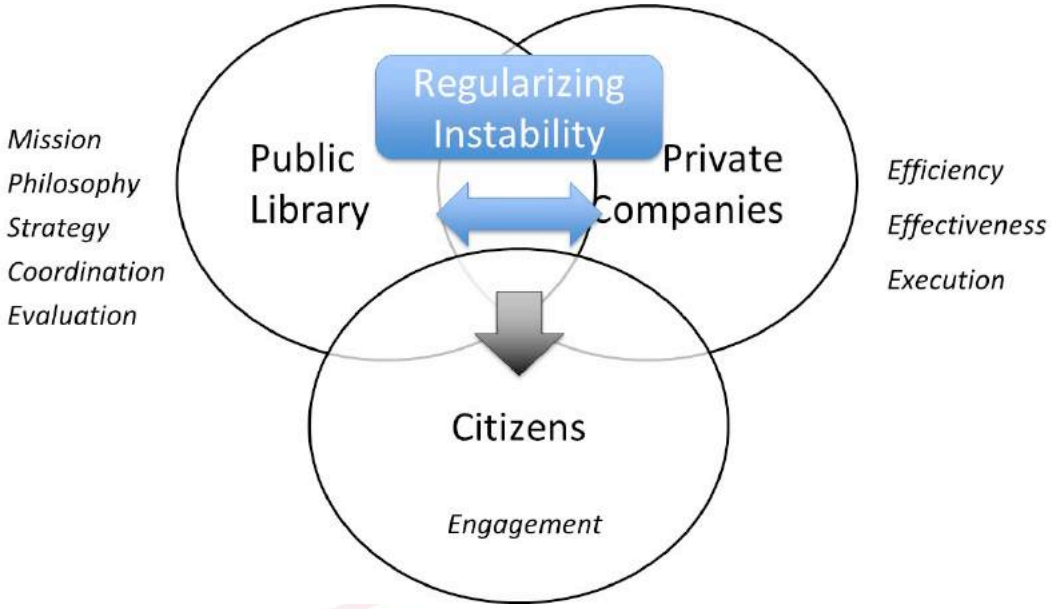

Figure 6: Regularizing Instability in the Hybridization between Public and Private Organizations*

* We modified our 2015 model (Teruyama & Koizumi, 2015).

To take an example, the branch library where we conducted research held a Japanese reading event. The event was implemented as part of the annual action plan that the branch manager drafted, highlighting the library's strength in multicultural outreach programs from a new and fresh perspective only possible with the creativity and flexibility of a private company. The branch manager strived to establish a network with various public, private and non-profit organizations involved in multicultural awareness and advocacy, and this reading event was a product of such effort, held in partnership with a non-profit organization developing reading materials for non-native Japanese speakers. The branch manager was anxious about the attendance of the event, since he was in the position to report back to the director of the main library, and the possible failure of such programs could entail the termination of the contract between the ward and the company.

Fortunately, the event was highly successful, attracting a broad range of participants including students from local Japanese language schools, non-Japanese families from the vicinity, language teachers from other wards and international doctoral students in related fields. The participants were grouped by language level and read together, discussing the materials and providing mutual support. At the end of the event, the branch manager took the stage and explained how to fill out the form to make a users' card of the library, encouraging the participants to return and make use of the multicultural/multi-linguistic resources that the library has to offer. In this way, the branch manager actively cultivated a strong user base among the non-Japanese community in the local area, marketing the library's strength in ways that public management would not have done. This example speaks for the importance of regularizing instability in a hybrid organization; the branch manager is made to work under the pressure to explore and experiment in an unprecedented field, but at the same time, there is a clear direction and mission of the public library which provides order and consistency to his challenges.

Citizens' Viewpoint

Most citizens that we interviewed were not aware that the management of this library is conducted through the hybrid model. In some instances, we pointed this out the interviewee, and were met with a surprised response. In this sense, it could be concluded that the library is successfully meeting their expectation as a public institution and serving the local community as such. Indeed, many pointed out that the library has a strong connection with the local school, providing books for student research projects and organizing opportunities for students to learn how to use library resources. Located in a ward with a large ethnic minority population, the library also reaches out to local language schools and holds cultural and educational events geared towards non-Japanese citizens. Such projects are generally well-received, underpinning the local citizens' understanding that the library is fulfilling its role as a public institution open to all.

Conclusion

The important thing to keep in mind when achieving balance within the hybrid model is to adhere to the contract and ensure that the detailed plans and descriptions for private companies are able to be executed successfully within the private company's limited engagement. On a final note, this research proved that team ethnography is effective in uncovering the realities of hybrid organization management in ways that would not have been possible through structured interviews or quantitative research methods.

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References

Battilana, J., & Lee, M. (2014). Advancing Research on Hybrid Organizing – Insights from the Study of Social Enterprises. *Academy of Management Annals*, *8*(1), 397–441. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=96654193&site=ehost-live

Battilana, J., Lee, M., Walker, J., & Dorsey, C. (2012). In Search of the Hybrid Ideal. *Stanford Social Innovation Review*, *10*(3), 51–55. Retrieved from http://search.proquest.com.ezproxy.tulips.tsukuba.ac.jp/docview/1018738257?accountid=25225

Billis, D. (2010). *Hybrid Organizations and the Third Sector*. Hampshire: Macmillan Publishers Limited.

Clifford, J., & Marcus, G. E. (1986). *Writing Culture: The Poetics and Politics of Ethnography*. University of California Press.

Collins, J. (2005). *Good to Great and the Social Sectors*. New York: HarperCollins Publishers Inc.

Conaty, F. J. (2012). Performance management challenges in hybrid NPO/public sector settings: an Irish case. *International Journal of Productivity and Performance Management*, *61*(3), 290–309. http://doi.org/10.1108/17410401211205650

D'Aunno, T., Sutton, R. I., & Price, R. H. (2015). Isomorphism and External Support In Conflicting Institutional Environments: A Study of Drug Abuse Treatment Units. *Academy of Management Journal*, *34*(3), 636–661.

Easton, G. (2010). Critical realism in case study research. *Industrial Marketing Management*, *39*(1), 118–128. http://doi.org/10.1016/j.indmarman.2008.06.004

Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *Academy of Management Review*.

Etzioni, A. (1973). The Third Sector and Domestic Missions. *Public Administration Review*, *33*(4), 314 – 323. http://doi.org/Article

Glynn, M. A. (2000). When Cymbals Become Symbols: Conflict Over Organizational Identity Within a Symphony Orchestra. *Organization Science*, *11*(3), 285–298. http://doi.org/10.1287/orsc.11.3.285.12496

Glynn, M. A. (2002). Chord and Discord: Organizational Crisis, Institutional Shifts, and the Musical Canon of the Symphony. *Poetics*, *30*(1-2), 63–85. http://doi.org/10.1016/S0304-422X(02)00004-9

Glynn, M. A., & Lounsbury, M. (2005). From the critics corner: Logic blending, discursive change and authenticity in a cultural production system. *Journal of*

Management Studies, *42*(5), 1031–1055. http://doi.org/10.1111/j.1467-6486.2005.00531.x

Gulbrandsen, M., Thune, T., Borlaug, S. B., & Hanson, J. (2015). Emerging Hybrid Practices in Public-Private Research Centres. *Public Administration*, *93*(2), 363–379. http://doi.org/10.1111/padm.12140

Hargrave, T. J., & Van de Ven, A. H. (2009). Institutional work as the creative embrace of contradiction. In T. B. Lawrence, R. Suddaby, & B. Leca (Eds.), *Institutional Work: Actors and Agency in Institutional Studies of Organizations*. Cambridge: Cambridge University Press.

Haveman, H. A., & Rao, H. (2006). Hybrid Forms and the Evolution of Thrifts. *American Behavioral Scientist*, *49*(7), 974–986.

Heider, K. G. (1988). The Rashomon Effect: When Ethnographers Disagree. *American Anthropologist*, *90*(1), 73–81. http://doi.org/10.1525/aa.1988.90.1.02a00050

Hodge, G. A. (1999). *Privatization: An International Review of Performance*. Boulder, CO: Westview Press.

Hodge, G. A., & Greve, C. (2007). Public-Private Partnerships: An International Performance Review. *Public Administration Review*, *67*(3), 545–558.

Jaspers, F. (2007). Case study research: Some other applications besides theory building. *Journal of Purchasing and Supply Management*, *13*(3), 210–212. http://doi.org/10.1016/j.pursup.2007.09.012

Jongbloed, B. (2015). Universities as Hybrid Organizations. *International Studies of Management & Organization*, *45*(3), 207–225. http://doi.org/10.1080/00208825.2015.1006027

Karré, P. M. (2011). *Heads and Tails: Both Sides of the Coin: An Analysis of Hybrid Organizations in the Dutch Waste Management Sector*. Hague: Eleven International Publishers.

Kurunmäki, L. (2004). A hybrid profession—the acquisition of management accounting expertise by medical professionals. *Accounting, Organizations and Society*, *29*(3-4), 327–347. http://doi.org/10.1016/S0361-3682(02)00069-7

Kurunmäki, L., & Miller, P. (2011). Regulatory hybrids: Partnerships, budgeting and modernising government. *Management Accounting Research*, *22*(4), 220–241. http://doi.org/10.1016/j.mar.2010.08.004

Lindqvist, K. (2013). Hybrid Governance: The Case of Household Solid Waste Management in Sweden. *Public Organization Review*, *13*(2), 143–154. http://doi.org/10.1007/s11115-013-0229-8

Mcdermott, A. M., Hamel, L. M., Steel, D., Flood, P. C., & Mckee, L. (2015). Hybrid Healthcare Governance for Improvement? Combining Top-Down and Bottom-Up Approaches to Public Sector Regulation. *Public Administration*, *93*(2), 324–344. http://doi.org/10.1111/padm.12118

Mouwen, K. (2000). Strategy, structure and culture of the hybrid university: Towards the university of the 21st century. *Tertiary Education and Management*, *6*(1), 47–56. http://doi.org/10.1080/13583883.2000.9967010

Narayan, K. (1993). How Native is a "Native" Anthropologist. *American Anthropologist*, *95*(3), 671–686. http://doi.org/10.1525/aa.1993.95.3.02a00070

Nazari, M. (2010). Design and process of a contextual study of information literacy: An Eisenhardt approach. *Library & Information Science Research*, *32*(3), 179–191. http://doi.org/10.1016/j.lisr.2010.02.003

Osborne, D., & Gaebler, T. (1992). *Reinventing Government : How the Entrepreneurial Spirit is Transforming the Public Sector*. New York, N.Y: Plume.

Osborne, S. P. (2006). The New Public Governance? *Public Management Review*, *8*(3), 377–387. http://doi.org/10.1080/14719030600853022

Perry, J. L., & Rainey, H. G. (1988). The Public-Private Distinction in Organization Theory: A Critique and Research Strategy. *Academy of Management Review*, *13*(2), 182–201. http://doi.org/10.5465/AMR.1988.4306858

Pratt, M. G., & Foreman, P. O. (2000). Classifying Managerial Responses to Multiple Organizational Identities. *Academy of Management Review*, *25*(1), 18–42. http://doi.org/10.5465/AMR.2000.2791601

Ravenswood, K. (2011). Eisenhardt's impact on theory in case study research. *Journal of Business Research*, *64*(7), 680–686. http://doi.org/10.1016/j.jbusres.2010.08.014

Reihlen, M. R., Wenzlaff, F., & Smets, M. (2015). From Institutional Contradictions to Organizational Transformation. In *Academy of Management Proceedings*. Vancouver.

Stone, M. M., & Francie, O. (2007). Acting in the Public Interest? Another Look at Research on Nonprofit Governance. *Nonprofit and Voluntary Sector Quarterly*, (3), 416–438. http://doi.org/http://dx.doi.org/10.1177/0899764006296049

Suddaby, R., & Greenwood, R. (2005). Rhetorical Strategies of Legitimacy. *Administrative Science Quarterly*, *50*(1), 35–67.
Teruyama, J., & Koizumi, M. (2015). Revitalization of local communities through multicultural services of public libraries. In *Proceedings of the 2015 Annual Meeting of the Mita Society for Library and Information Science* (pp. 49–52). Tokyo.

Werner, C., & Baxter, L. A. (1994). Temporal qualities of relationships: Organismic, transactional, and dialectical views. In Mark L. Knapp & G. R. Miller (Eds.),

Handbook of interpersonal communication (2nd ed., pp. 323–379). Thousand Oaks: SAGE Publications Ltd.
Wiesel, F., & Modell, S. (2014). From New Public Management to New Public Governance? Hybridization and Implications for Public Sector Consumerism. *Financial Accountability & Management*, *30*(2), 175–205. http://doi.org/10.1111/faam.12033

Yin, R. K. (2009). *Case Study Research: Design and Methods*. (L. Bickman & D. J. Rog, Eds.), *Essential guide to qualitative methods in organizational research* (Vol. 5). Sage Publications. http://doi.org/10.1097/FCH.0b013e31822dda9e

Yorozuya, H. (2014). Working With Designated Administrators. *Minnano Toshokan*, (441), 45–19.

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Organisational Culture that Inhibit the Lean Implementation

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Abstract
Lack of research regarding the critical factor of organisational culture related to lean implementation and Culture is the key factor to making the changes for lean implementation (Pakdil and Leonard, 2015a). Implementing lean into industrial SMEs faces difficulties, whereas it is more likely to be implemented successfully in larger companies, which then gain the advantages of lean systems(Karim *et al.*, 2011). Moreover, the culture of an organisation plays a vital role, especially for managers facing the challenge to change that culture(Graham-jones and Muhareb, 2015)**.**
According to the European Commission (2003) the purpose of this paper SMEs refer to organisations with fewer than 250 employees. The aim is to develop an Organisational Culture to improve Lean Implementation into Manufacturing Organisation SMEs by analyses the organisational culture aspects that enable and inhibit lean implementation, through a literature review. Finally the question will be what are the organisational culture enablers for lean implementation in manufacturing SMEs. Systematic review methodology applied to this research. The main aim of this research is to develop an organisational culture to facilitate lean implementation before adopting the lean system. It has been observed that the appropriate lean culture enhances the pace of the growth and keeps the firm competitive (Pooyan et al, 2014). These inhibiting factors, and indeed those factors that encourage this behaviour can be graphically displayed and tabulated, allowing deeper analysis of each, to find its roots and, where necessary, remove it from the company culture (Hietschold et al, 2014)

Keywords: Organisational Culture, Lean, Small to Medium Sized (SME).

Introduction

Organisational culture is one of the most important factors in small and medium sized to focus on to facilitate the implementation of lean within manufacturing Organisation (Karim and Arif-Uz-Zaman, 2013). The main aim of this research is to develop an organisational culture framework for small and medium sized manufacturing organisation in Saudi Arabia to facilitate lean implementation before adopting the lean system. According to Karim et al., (2011), the most important factor that affects the implementation of lean is the organisation's culture. It has been observed that the appropriate lean culture enhances the pace of the growth and keeps the firm competitive, (Pooyan, et al.,2014).

Lean

The aim of lean production is that company resources should all be channeled in ways that ultimately create value for the end user,(Schouteten and Benders, 2004). In essence it works towards the goal of maintaining value while doing less work and at the heart is achieving greater efficiency,(Schouteten and Benders, 2004). The definition of lean provided by (Corbett, 2007)emphasises on lean as an integral part of the entire organisation, essentially pointing to lean as being considered more of a philosophy than just a tool or process. This is further supported by Womack and Jones, (2003) who suggest that lean is becoming understood as more than just production, but an all-encompassing business ideology which incorporates all aspects of value streams as opposed to individual production processes. According to Bhamu and Singh Sangwan, (2014) lean provides a methodology by which organisations can significantly improve their responsiveness to customers while decreasing and managing costs and waste in supply and operational procedures. When Womack, Jones and Roos, released their book in 1991 '*The Machine That Changed the World',* the main message was when the concept of lean became popularised among mainstream business and expanded further into manufacturing beyond the automobile sector,(Corbett, 2007).In its inception, lean was predominantly a tool focused on manufacturing processes, (Wang and Huzzard, 2011)The evolution of lean has since transcended further into operational and strategic levels of organisations, Hines et al.(2004).Initial themes advocated by Womack, Jones and Roos, (1991)is organisational learning.

Twenty years on since Womack, Jones and Roos's book release the success rate of lean is still rather low, (Pay, 2008; Yamamoto and Bellgran, 2010; Bhasin, 2012). (Chay *et al.*, 2015) suggests it is complicated to implement lean by merely focusing on the hard aspect (tools) without also including the soft aspects. (Chase, 1999) emphasises the need to view lean as a long term strategy. Lewis (2000) and Lin and Hui (1999) are more skeptical of lean while, Oliver and Hunter, (1998) found no correlation between high and low users of lean and organisational performance. Shah and Ward, (2007) suggest there is a lack of a common definition for lean. The absence of clarity can be seen from the vast amount of term used regarding lean production, (Shah and Ward, 2007). The ambivalence is in part due to lean having evolved over a long time period,(Shah and Ward, 2007; Womack, et al., 1991). Stone (2012) suggest the confusion surrounding what exactly lean means is partly what has led to misguided efforts in its implementation without encompassing its philosophy.

The challenges of lean manufacturing implementation in SME

Lean is defined and interpreted in different ways, and according to Shah and Ward (2007) lean has been identified as having four approaches; 1. As an operational philosophy 'leanness' 2. A strategic philosophy, 'lean thinking' 3. An operational practice 'tool box lean' and a strategic practice 'becoming lean', (Shah and Ward, 2007). However, the extent of lean mostly attempted to be adopted by SMEs has been in internal operations. It is more unlikely for SMEs to adopt a strategic lean focus, (Wanitwattanakosol and Sopadang, 2012). Therefore, the scope of literature discovered that it is very rare for lean implementation to be applied past the level of the factory floor, (Stuart and Boyle, 2007). In contrast large enterprises are more likely to adopt lean at a strategic level and they have been shown to be more successful in reaping its benefits, (Stuart and Boyle, 2007). Hines (2010) thus points out that while SMEs tend to be merely selecting a combination of the tools and techniques from lean operation rather than adopting it as a holistic approach, which is considered important for its successful implementation, that it leads to perhaps an important factor in the downfall of the success of lean in SMEs, (Bessant and Caffyn, 1997).

Rymaszewska ,(2014) conducts a study regarding lean implementation for SMEs which is however, focussed on SMEs in Europe. Its main basis utilises the benchmarking approach which is however rather valuable because it helped to uncover the challenges Toyota faced implementing lean and highlighting that it is part of the journey, (Rymaszewska, 2014) Therefore, an important point reinforced by Flinchbaugh, (2004) is that a lean organisation is also a learning organisation which therefore also corporates certain trials in the transition process. While Toyota encourages sharing knowledge, they also emphasise the concept of 'learning by doing' which helps to promote greater reflection on processes, (Flinchbaugh, 2004). Furmans, (2005)suggests there is also the challenge of having a continuous work flow. Liker, (2004)suggests that unevenness comes from inconsistencies in scheduling and production volumes which are symptomatic of parts which have not been delivered or faulty supplies. Liker and Rother, (2013) claims that the best way to deal with this is to deal with the total volume of orders within a certain time period this enables a pattern of volume and production schedule to be arranged. Furthermore, just in time inventories is a major premise behind lean implementation however, Cooney (2002) points out some weaknesses associated with it which include its limitations in dealing with labour and product market forces impacting on JIT. SMEs may have some difficulties in setting up long standing relationships with suppliers, (Cooney, 2002). Morrissey, (2006). often emphasise short term benefits when it comes to buyer and supplier relationships. Another challenge is the step towards implementing employee autonomy and increased standardisation. Research studies in the furniture and boating manufacturing industries have uncovered that the line worker mentality with strictly assigned job tasks is still more widely adopted, resulting in the inability of workers to change between various production tasks, (Rymaszewska, 2014). Some lean management failures have also been attributed to negative synergies between JIT and operations management practices, (Matsui, 2007).

Culture

National culture and corporate or organisational culture share some overlaps due to the behaviour commonly held by the members of the company are also members of the same national culture, (Schein, 1984). Goldstein (1957) says that neither the nominal definition of Culture nor the synoptically definition is much help when trying to grasp the meaning of a term with so many variables:

"Definitions…are usually intended to serve one or another of three distinct aims. Of these, the first [nominal definition] may be useful, the second [synoptical definition] is rather futile, and the third [essential definition] entirely pernicious" (Goldstein, 1957, p. 1075).
Philosophers have suggested that culture is primarily defined by language (Lazăr, 2010), but corporations do not have a 'language' – although efforts to create one have been made (Fredriksson,et al. 2006). Although we live in an increasingly globalised world(Held and McGrew, 2000), national and local culture still has a large influence on the way that businesses are run and operate.

Organisational culture

In the same way that national culture distinguishes characteristics between different countries, organisational culture also distinguishes one company from the other, (Vijay, 1985). Kotter and Heskett, (1992) suggest that organisational culture impacts on organisational performance. According to Siehl and Martin, (1989) culture has an influence on the attitudes of individuals and employees in a company and in return impact on organisational effectiveness. There is a great number of studies which demonstrate the positive correlation between culture and organisational effectiveness(Quinn and Spreitzer, 1991; Gregory *et al.*, 2009). Studies have shown a relationship between organisational culture as an asset which positively promotes company performance, (Prajogo and McDermott, 2011).

Various definitions of organisational culture exist yet there are a number of similarities which include the frame work established by Schein (1984) the existence of "artefacts, values and beliefs and the behaviours which are commonly shared and accepted by members in the organisation", (Detert *et al.*, 2000, p. 851). One of the most well-known definitions of organisational culture is, "The way we do things around here," (Sun, 2009, p. 137). According to Brown (1998) organisational culture can be defined as, "…the pattern of beliefs, values, and learned ways of coping with experience that have developed during the course of an organisations history, and which tend to be manifested in its material arrangements and in the behaviours of its members, (Sun, 2009, p. 137). The research available on organisational culture tends to deal with two main factors, the values and behaviours existing in the company and also how strongly these are exhibited throughout the organisation, (Detert et al,.2000). According to Sørensen and Sorensen, (2002) both types of values and beliefs in conjunction with how strongly they are abided by within the organisation are important determinants of competitive performance. Four themes have been identified in organisational culture by Maull, et al,.(2001). The first one being, culture is a

learned entity, (Sun, 2008). This refers to culture being utilised as the right way for new members to behave thus, propelling development and ensuring survival of the organisation, (Sun, 2008), Secondly, culture is seen as a belief system.

According to Davis (1985)culture is defined as, The pattern of shared beliefs and values that give members of an institution meaning, and provide with the rules for behaviour in their organisation," (Sun, 2008, p 138). Under this theme organisational culture is divided into beliefs and daily beliefs. Guiding beliefs provide the context in which the practical beliefs of daily life occur, (Sun, 2008). Thirdly, culture is viewed as a strategy. Although Bate (1995) does not agree with a distinction drawn between culture and strategy. He suggests, strategy in itself is in fact a cultural phenomenon, (Bate, 1995). This would lead to two inferences; firstly that any sort of strategy formulation is a cultural activity and secondly all cultural changes would therefore be considered strategic changes, (Sun, 2008). Although according to Sun, (2012) "Any cultural programme in an organisation is not separate because any change to the cultural program occurs during formal and informal strategic planning processes," (Sun, 2012, p 138). The fourth theme sees culture as mental programming. This can be seen through Hofstede's definition of culture as, "collective programming of the mind, which distinguishes the members of one category of people from another," (Hofstede, 1991, pg 5). Interestingly the understanding of organisational culture and its impact on company performance has been adapting over the decades, (Sørensen and Sorensen, 2002). Peters and Waterman (1982) having identified a correlation between a solid organisational culture and successful company and financial results. However, later on Kotter and Heskett (1992) further added to this by discovering that not only was a strong organisational culture important for company performance but that it should also be adaptive in order to achieve "superior performance." An important aspect to consider when discussing organisational culture is the multidimensional relationship which connects organisational culture and the performance of the company, (Kotter and Heskett, 1992). Its impact is far reaching as it involves a number of areas which relate to the organisation's competitive performance, (Kotter and Heskett, 1992). Porter (1985) reinforces the notion of achieving the right fit between organisational culture and a specific type of organisational performance. Prior research which embodies the role of organisational cultural influence on performance has been highlighted in numerous research, (Dale and Cooper, 1992; Oackland, 1995; Thomas, 1995; Wilkinson *et al.*, 1998; Stock, et al., 2007). According to Ouchi (1981) significant contrasts can be identified between corporate structures of America and Japan. Japanese companies tend to be characterised with great labor force stability and utilising democratic decision making processes, (Mehri, 2006). Furthermore, respect for people is at the cornerstone of their organisational culture and successful lean implementation, (Mehri, 2006).

Lean culture

Pakdil and Leonard, (2015) suggest a number of organisational factors which create the cultural infrastructure of a company impacting on the success of lean management. These factors include; "employee involvement, creativity, problem-solving processes, decentralisation, control and standardisation, efficiency, productivity and continuous improvement," (Pakdil and Leonard, 2015b, p. 726). (Liker, 2004) suggests that two key elements present in lean cultures are, continuous improvement and care for employees and relationships. Naor *et al.*, (2008) suggests

that lean culture needs well trained human resources to foster improvement and knowledge sharing in order to leverage lean as a competitive advantage. With regards to understanding more about lean culture at higher levels in the organisation, Saha *et al.*, (2014) identify the importance of establishing lean transformation initiatives to create a 'lean culture' within the organisation to support the lean processes on the factory floor. They identify the following 'social areas' which need adjustment in order to take on a lean philosophy and transition to a lean culture, (Flinchbaugh, 2004). Leadership behaviour and style is of particular importance in conjunction with strategies which are geared towards encouraging lean culture. Saha *et al.*,(2014) identify an important aspect, which compliments the work of Angelis et al. (2010) in terms of the discussion of employee commitment. Saha *et al.*, (2014) who researched lean in server manufacturing, suggest that the altering of employees' mindsets and the worker's train of thought and the company's willingness to embrace lean transformation contributes for 80% of lean's success in the company.

The soft lean aspects of the are considered critical factors for the success of lean, Saha *et al.*, (2014). While lean has been recognised as providing improvements in production, its failure has often been due to not enough emphasis being placed on soft lean aspects, (Al-Najem, et al,. 2012). The role of senior management is critical in initiating and sustaining lean within the organisation, (Swank, 2003). Their role encompasses the following areas; firstly, the development and implementation of a framework and process which can pre-empt and deal with issues of lean transformation across departments, (Swank, 2003). The aim is to improve the chances for the success of sustainable improvements to processes lasting beyond just the duration of a project but for the long term, (Swank, 2003). Research conducted by Singh and Singh, (2012) highlights how lean culture and continuous improvement is manifested at a task level within the organisation. As identified in lean philosophy continuous improvement also tends to advocate team work, (Detert, et al., 2000). However, in addition to this each individual worker is also encouraged to show areas for improvement in their day to day tasks and to communicate and provide suggestions on how things can be made better, , (Detert, et al., 2000). Furthermore, these regular team discussions are held in order to identify areas of weakness within the processes and brainstorm on solutions. Furthermore, central to the continuous improvement is the principal of a customer driven outlook for improvement. This is complimentary to the customer added value principle in lean culture, Singh and Singh, (2012). Within this continuous improvement the success of the company depends highly upon the customer, (Prajogo and McDermott, 2011)Therefore, the aim is to go beyond customer expectations. Continuous improvement is founded upon the active participation of people, (Fullerton and McWatters, 2001). This means knowledge sharing, training, and growth are all given high priority, (Fullerton and McWatters, 2001). Continuous improvement emphasises the consideration of the entire process and the end result rather than too much internal focus within isolated departments, (Prajogo and McDermott, 2011). It advocates the co-operation of horizontal processes similarly to the customer value added principle encouraging horizontal communication, (Fullerton and McWatters, 2001).

Design improvements are not only considered at a product level but also encompassing a service level and identifying areas for improvement sooner as opposed to later which incurs greater costs, (Prajogo and McDermott, 2011). Factual decision making which requires thorough investigation at all levels is central to

continual improvement, thus strong participation of feedback from task level staff is often necessary, (Imai, 1997).
Partnership developments are also an important factor in continuous improvement as relationship building both internally and with external suppliers and contractors are often essential to ensuring the smooth running of projects, (Imai, 1997). Matsui, (2007)suggests that the effectiveness of hard lean practices are significantly increased when teamed equally with the soft practices which include HRM, customer feedback, supplier, management and leadership support. However, studies suggest that no single organisational profile guarantees success, (Denison and Mishra, 1995; Prajogo and McDermott, 2011; Bortolotti et al,. 2015). Rather, what is suggested is the establishment of diverse and varied organisational cultural profiles which leverage a particular management process or improvement program, (Detert et al,. 2000). There are a number of situations which exemplify how specific organisational culture dimensions are linked to different and at times opposing performance outcomes, (Fey and Denison, 2003). Furthermore, it has been noted that a high power distance has an adverse effect on employee empowerment and autonomy, (Prajogo and McDermott, 2011). While higher levels of uncertainty avoidance and organisational collectivism have a positive correlation with improvement projects, (Prajogo and McDermott, 2011). Furthermore, higher levels of group collectivism and long term orientation are considered to significantly and positively impact on operational performance, (Lozeau et al,. 2002). According to Lozeau et al., (2002), if a misfit between organisational culture and organisational practices happens this leads to a reduction in performance improvements. Liker (2004) has discussed Toyota's example of organisational culture according to 14 principles, while Rother (2009) has discussed Toyota's organisational culture in terms of continuous improvement. While they did not utilise an extensive organisational culture model it did highlight certain attributes which are consistent with organisational culture such as fairness and values encouraging co-operation and closer ties between the company and its suppliers in addition to a strong focus on continuous improvement, (Bessant and Caffyn, 1997). According Wincel and Kull, (2013) lean culture will probably be ever evolving as organisations gradually master its implementation.

The study conducted by Bortolotti, Boscari and Danese, (2015) discovered that organisational cultures which experienced more successful results from lean possessed the following characteristics; high organisational collectivism, long term orientation and humane orientation. combined with lower levels of assertiveness (Bortolotti, et al,. 2015) Their research suggests that it is not the hard practices that differentiate successful lean implementation but the soft practices, (Bortolotti, et al,. 2015) They discovered that increased levels of humane orientation and lower assertiveness were essential for maximising results from employees in order for process improvements, (Rother, 2009). However, (Bortolotti, et al,. 2015) suggest that future research is needed the specific role that each organisational cultural factor has in implementing lean management. This is particularly because many of the same organisational culture characteristics were discovered in high performing non lean plants in their study. Thus they could not attribute these as being exclusively important to lean management, (Bhasin and Burcher, 2006). However, they believe these findings can significantly add to the discussion on if there is an organisational cultural profile which best facilitates the success of lean, (Bortolotti, et al,. 2013). It was however discovered and confirmed by (Naor *et al.*, 2008), that assertiveness was apparently the only characteristic which specifically distinguished successful lean

plants. This can be attributed to the fact that low assertiveness allows better co-operation between departments reducing obstacles inhibiting cross functional collaboration and integration, (Shah and Ward, 2007).

Organisational culture enablers and inhibits in Lean implementation

The tables below show the enablers and inhibitors of organisational culture aspects in lean implementing.

Lean Enablers	Reference	Lean Inhibitors	Reference
1. Support of senior management	(Achanga *et al.*, 2006; Panizzolo *et al.*, 2012)	1. Lack of management support / commitment	(Al-Najem, et al, 2012)
2. Training for senior management	(Achanga *et al.*, 2006; Panizzolo *et al.*, 2012)	2. Role ambiguity	(Angelis *et al.*, 2011)
3. Positive / Strong relationships between workers.	(Hu *et al.*, 2015)	3. Lack of realisation that lean philosophy is a high maintenance system, cannot be just implemented and left to own devices	(Bhasin and Burcher, 2006; Bhasin, 2012)
4. Employee commitment	(Angelis *et al.*, 2011)	4. Too much emphasis on one factor over another, for example speed over quality or vice versa	(Bessant and Caffyn, 1997)
5. Implementing lean as a philosophical function	(Hines, Holweg and Rich, 2004b; Bhasin and Burcher, 2006; Shah and Ward, 2007)	5. Overtime pressure falling on only a few workers due to skill set	(Shah, 2003; Shah and Ward, 2007)
6. Lean in social aspects (soft lean practices) are important for success	(MacDuffie and Helper, 1997; Brown, et al., 2000; Schonberger, 2007; Olivella, et al., 2008)	6. General feeling of unfair practices and policies existing throughout the organisation.	(Angelis *et al.*, 2011)

7. Employee productiveness is especially good for improvement projects	(Fullerton and McWatters, 2001; Bhasin and Burcher, 2006; Schonberger, 2007)	7. Reluctance to stop a production set to deal with a fault in a product.	(Crofton and Dale, 1996)
8. Employee participation and knowledge sharing.	(Angelis *et al.*, 2011)	8. The development of a 'blame' culture.	(Angelis *et al.*, 2011)
9. Developing employees as an integral part of organisation leading to a sense of job security enhancing employee commitment.	(Womack et al.,1990)	9. Lack of appropriate / necessary equipment to perform the job task well leads to a reduction in employee commitment.	(Shah, 2003; Shah and Ward, 2007)
10. Environment which enhances employee commitment is imperative.	(Munene, 1995; Dixon, 1999)	10. Disruptions to work flow leads to frustration in workers and reduces employee morale.	(Swank, 2003)
11. Support of senior management and middle management	(Womack and Jones, 1996)	11. Employees' unwillingness to socialise with other colleagues also reflects inability to work in teams and reluctance to participate in improvement projects.	(Angelis *et al.*, 2011)
12. Clear demonstrations of organisational support for workers	(Angelis *et al.*, 2011)	12. Poor planning.	(Womack and Jones, 1996; Womack, J., & Jones, 2003)
13. Provision of appropriate tools, processes etc to support employees implement lean	(Womack and Jones, 1996; Womack, J., & Jones, 2003)	13. General low employee morale.	(Angelis *et al.*, 2011)

14. Knowledge sharing systems	(Womack and Jones, 1996; Shah, 2003; Womack, J., & Jones, 2003; Shah and Ward, 2007; Angelis *et al.*, 2011)	14. Lack of appropriate key performance indicators.	(Yan-jiang, Lang and Xiao-na, 2006)
15. Job rotation to help increase skill base and mitigate pressure of overtime on a small pool of employees	(Shah, 2003; Shah and Ward, 2007)	15. Adoption of a 'one size fits all' approach to lean implementation.	(Womack and Jones, 1996; Shah, 2003; Womack, J., & Jones, 2003; Shah and Ward, 2007)
16. Fairness in the workplace	(Angelis *et al.*, 2011)	16. Inappropriate reward system.	(Alsyouf *et al.*, 2011)
17. Preparation of employees into transition of lean systems and philosophy to reduce anxiety and stress from fear of change	(Allen and Meyer, 1997)	17. Too much emphasis on internal departmental boundaries and objectives.	(Mann, 2014)
18. Provide sufficient support and training for employees	(Allen and Meyer, 1997)	18. Incorrect lean assessment of the source of waste.	(Achanga *et al.*, 2006; Ihezie D, 2009)
19. Horizontal communication and co-operation between departments and department objectives	(Mann, 2009)	19. lean consultants, providing financial assistance for training	(R. Jadhav et al,. 2014)
20. Vertical two way communication between upper management and task level employees	(Mann, 2009)	20 Job security	(Marodin and Saurin, 2013)
21 Lean culture reinforced by management attitudes and behaviors	(Mann, 2009)		

22	Emphasis on continuous improvement	(Imai, 1997; Naor *et al.*, 2008)		
23	Strong emphasis on customer added value as ultimate goal	(Prajogo and McDermott, 2005)		
24	Collective organisational culture	(Bortolotti, Boscari and Danese, 2015)		

Conclusion

Studies have shown that many researchers are in agreement that an organisational culture which does not support lean is a large reason for the failure of successful lean implementation, (Munene, 1995; MacDuffie and Helper, 1997; Dixon, 1999; Brown, Willis and Prussia, 2000; Womack, J., & Jones, 2003; Schonberger, 2007). Studies conducted on lean among SMEs have tended to be concentrated in the EU, Asia, USA and Canada, Australia and New Zealand and. The gap highlighted in the research is the role of organisational culture in facilitating the benefits to be derived from lean. With regards to organisational culture very little is discussed about how some national cultures can either help to enable or impede the facilitation of a lean culture with and organisation and SMEs, (Bhasin and Burcher, 2006; Zhou, 2012; Brannen, 2015). Culture can influence how an organisation is defined, either as a group of people who have social interactions with each other or as a system where each party has a role to play to achieve organisational goals, (Trompenaars and Hampden-Turner, 1997). The way a culture defines and views an organisation will impact the organisational culture. This aspect highlights the gap this research will aim to uncover; how organisational culture can be used to leverage lean in SMEs. This is necessary to keep in mind when transforming into lean culture. It has also been identified that the failure rate of lean in SMEs tends to be higher compared with large organisations, (Prajogo and McDermott, 2011). This has also been attributed to the tendency of SMEs to only implement lean tools as apposed an entire lean philosophy. A lack of knowledge regarding how lean should be implemented when not at a 'task level' permeates the literature, (Cameron, 1994). Furthermore, with regards to lean numerous social aspects have been identified with the success of implementing lean in organisations. These social factors permeate from the upper levels of the organisation to the task levels, (Pakdil and Leonard, 2015b).

Factors such as fairness, leadership commitment to implementing lean, employee commitment, knowledge sharing and continuous improvement have all been identified as enablers of lean in organisations (Angeleis et al, 2010). The research revealed some disagreement as to the ease and ability for SMEs to successfully implement a lean philosophy. This is further reinforced by the continuous improvement philosophy which demonstrates numerous overlaps with lean concepts and has been the key strategy in Japanese manufacturing due to its high effectiveness and lower cost implementation which is highly suitable for SMEs, (Yan-jiang, et al., 2006). Finally, with regards to lean culture, there is a general understanding of factors which should exist in a lean culture. These include the adoption of communication

horizontally and vertically throughout the organisation, an environment which encourages a high level of employee involvement in decision making and improvement projects, attitudes among all staff which are open and always proactive to find better ways of doing things and a leadership style which encourages and supports such behaviours, (Shingo, 1988; Mann, 2009). Key to the lean culture is having an attitude which emphasises a customer driven value system (Womack, J., & Jones, 2003; Yasin, Small and Wafa, 2003; Al-najem, 2014). This does not prioritise any individual department but emphasises the end result and how departments can put aside their own internal boundaries to co-operate better achieving greater customer value, (Al-Najem et al., 2012).

References

Achanga, P., Shehab, E., Roy, R. and Nelder, G. (2006) 'Critical success factors for lean implementation within SMEs', *Journal of Manufacturing Technology Management*, 17(4), pp. 460–471.

Al-Najem, M., Dhakal, H. and Bennett, N. (2012) 'The role of culture and leadership in lean transformation: a review and assessment mode', *International Journal of Lean Thinking*, 3(1), pp. 119–138.

Allen, N. and Meyer, J. (1997) 'Commitment in the workplace: Theory, research and application', *Thousand Oaks*.
Alsyouf, I., Aomar, R. Al, Hamed, H. Al and Qiu, X. (2011) 'A framework for assessing the cost effectiveness of lean tools', *European J. of Industrial Engineering*, 5(2), p. 170. doi: 10.1504/EJIE.2011.039871.

Angelis, J., Conti, R., Cooper, C. and Gill, C. (2011) 'Building a high-commitment lean culture', *Journal of Manufacturing Technology Management*, 22(5), pp. 569–586. doi: 10.1108/17410381111134446.

Bate, P. (1995) *Strategies for Cultural Change*, *The Service Industries Journal*. Oxford: Butterworth-Heinemann.

Bessant, J. and Caffyn, S. (1997) 'High-involvement innovation through continuous improvement', *International Journal of Technology Management*, 14(1), p. 7.

Bhamu, J. and Singh Sangwan, K. (2014) 'Lean manufacturing: literature review and research issues', *International Journal of Operations & Production Management*, 34(7), pp. 876–940.

Bhasin, S. (2012) 'Prominent obstacles to lean', *International Journal of Productivity and Performance Management*. Emerald Group Publishing Limited, 61(4), pp. 403–425.

Bhasin, S. and Burcher, P. (2006) 'Lean viewed as a philosophy', *Journal of Manufacturing Technology Management*, 17(1), pp. 56–72. doi: 10.1108/17410380610639506.

Bortolotti, T., Boscari, S. and Danese, P. (2015) 'Successful lean implementation: Organizational culture and soft lean practices', *International Journal of Production Economics*. Elsevier, 160, pp. 182–201. doi: 10.1016/j.ijpe.2014.10.013.

Bortolotti, T., Danese, P. and Romano, P. (2013) 'Assessing the impact of just-in-time on operational performance at varying degrees of repetitiveness', *International Journal of Production Research*, 51(4), pp. 1117–1130. doi: 10.1080/00207543.2012.678403.

Brannen, M. Y. (2015) *The Routledge Companion to Cross-Cultural Management*. Edited by & S. T. Holden, S. Michailova. Routledge.

Brown, A. (1998) *Organisational culture*. 2nd ed. Financial Times.

Brown, K. A., Willis, P. G. and Prussia, G. E. (2000) 'Predicting safe employee behavior in the steel industry: Development and test of a sociotechnical model', *Journal of Operations Management*, 18(4), pp. 445–465. doi: 10.1016/S0272-6963(00)00033-4.

Cameron, K. S. (1994) 'Strategies for successful organizational downsizing', *Human Resource Management*, 33(2), pp. 189–211. doi: 10.1002/hrm.3930330204.

Chase, N. (1999) 'Lose the waste: Get lean!', *Quality*, 38(3), pp. 34–39.

Chay, T., Xu, Y., Tiwari, A. and Chay, F. (2015) 'Towards lean transformation: the analysis of lean implementation frameworks', *Journal of Manufacturing Technology Management*, 26(7), pp. 1031–1052. doi: 10.1108/JMTM-10-2013-0143.

Cooney, R. (2002) 'Is "lean" a universal production system?', *International Journal of Operations & Production Management*. MCB UP Ltd, 22(10), pp. 1130–1147. doi: 10.1108/01443570210446342.

Corbett, S. (2007) 'Beyond manufacturing: The evolution of lean production', *McKinsey Quarterly*, (3), pp. 94–96.

Crofton, C. G. and Dale, B. G. (1996) 'The Difficulties Encountered in the Introduction of Total Quality Management: A Case Study Examination', *Quality Engineering*. Taylor & Francis Group, 8(3), pp. 433–439. doi: 10.1080/08982119608904645.

Dale, B. and Cooper, C. (1992) 'Total quality and human resources: an executive guide', *Blackwell.*

Davis, T. (1985) 'Managing culture at the bottom', *Gaining control of the corporate culture*, pp. 163–183.

Denison, D. R. and Mishra, A. K. (1995) 'Toward a Theory of Organizational Culture and Effectiveness', *Organization Science*. INFORMS, 6(2), pp. 204–223. doi: 10.1287/orsc.6.2.204.

Detert, J. R., Schroeder, R. G. and Mauriel, J. J. (2000) 'A FRAMEWORK FOR LINKING CULTURE AND IMPROVEMENT INITIATIVES IN ORGANIZATIONS.', *Academy of Management Review*, 25(4), pp. 850–863. doi: 10.5465/AMR.2000.3707740.

Dixon, N. M. (1999) *The Organizational Learning Cycle: How We Can Learn Collectively*. London: Gower Publishing, Ltd.

Dorota Rymaszewska, A. (2014) 'The challenges of lean manufacturing implementation in SMEs', *Benchmarking: An International Journal*, 21(6), pp. 987–1002. doi: 10.1108/BIJ-10-2012-0065.

Fey, C. and Denison, D. (2003) 'Organizational culture and effectiveness: can American theory be applied in Russia?', *Organization science*, 14(6), pp. 686–706.

Flinchbaugh, J. (2004) 'Beyond lean: building sustainable business and people success through new ways of thinking', *Lean Learning Center*.

Fredriksson, R., Barner-Rasmussen, W. and Piekkari, R. (2006) 'The multinational corporation as a multilingual organization', *Corporate Communications: An International Journal*. Emerald Group Publishing Limited, 11(4), pp. 406–423. doi: 10.1108/13563280610713879.

Fullerton, R. R. and McWatters, C. S. (2001) 'The production performance benefits from JIT implementation', *Journal of Operations Management*, 19(1), pp. 81–96. doi: 10.1016/S0272-6963(00)00051-6.

Furmans, K. (2005) 'Models of heijunka-levelled kanban-systems', *5th International Conference on Analysis*

Goldstein, L. J. (1957) 'On Defining Culture', *American Anthropologist*, 59(6), pp. 1075–1081. doi: 10.1525/aa.1957.59.6.02a00110.

Graham-jones, J. and Muhareb, T. M. Al (2015) 'Using Lean Six-Sigma in the Improvement of Service Quality at Aviation Industry : Case Study at the Departure Area in KKIA Using Lean Six-Sigma in the Improvement of Service Quality at Aviation Industry : Case Study at the Departure Area in KKIA', (MARCH 2014).

Gregory, B. T., Harris, S. G., Armenakis, A. A. and Shook, C. L. (2009) 'Organizational culture and effectiveness: A study of values, attitudes, and organizational outcomes', *Journal of Business Research*. Elsevier Inc., 62(7), pp. 673–679. doi: 10.1016/j.jbusres.2008.05.021.

Held, D. and McGrew, A. (2000) *The global transformations reader*.

Hietschold, N., Reinhardt, R. and Gurtner, S. (2014) 'Measuring critical success factors of TQM implementation successfully – a systematic literature review', *International Journal of Production Research*. Taylor & Francis, 52(21), pp. 6254–6272. doi: 10.1080/00207543.2014.918288.

Hines, P., Holweg, M. and Rich, N. (2004a) 'Learning to evolve', *International Journal of Operations & Production Management*, 24(10), pp. 994–1011. doi: 10.1108/01443570410558049.

Hines, P., Holweg, M. and Rich, N. (2004b) 'Learning to evolve', *International Journal of Operations & Production Management*. Emerald Group Publishing Limited, 24(10), pp. 994–1011. doi: 10.1108/01443570410558049.

Hu, Q., Mason, R., Williams, S. J. and Found, P. (2015) 'Lean implementation within SMEs: a literature review', *Journal of Manufacturing Technology Management*, 26(7), pp. 980–1012. doi: 10.1108/JMTM-02-2014-0013.

Ihezie D, H. S. (2009) *Applying Lean Assessment Tools at a Maryland Manufacturing Company*, *American Society for Engineering Education (ASEE)*. Available at: https://www.asee.org/documents/sections/northeast/2009/Applying-Lean-Assessment-Tools-at-a-Maryland-Manufacturing-Company.pdf (Accessed: 20 November 2015).

Imai, M. (1997) 'Gemba kaizen: a commonsense, low-cost approach to management', *McGraw Hill Professional*.

Karim, M. A., Aljuhani, M., Duplock, R. and Yarlagadda, P. (2011) 'Implementation of Lean Manufacturing in Saudi Manufacturing Organisations: An Empirical Study', *Advanced Materials Research*, 339, pp. 250–253. doi: 10.4028/www.scientific.net/AMR.339.250.
Kotter, J. P. and Heskett, J. . (1992) *Corporate Culture and Performance*. New York: THE FREE PRESS.

Lazăr, L. (2010) 'Communication as defining dimension of culture', *Acta Universitatis Danubius. Communicatio*, 2(1), pp. 43–47.

Lewis, M. A. (2000) 'Lean production and sustainable competitive advantage', *International Journal of Operations & Production Management*, 20(8), pp. 959–978. doi: 10.1108/01443570010332971.

Liker, J. (2004) *The Toyota way: 14 management principles from the world's greatest manufacturer.*, *McGraw-Hill. Retrieved November*. McGraw-Hill.

Liker, J. and Rother, M. (2011) 'Why lean programs fail', *Lean Enterprise Institute*.
Lin, Z. and Hui, C. (1999) 'Should lean replace mass organization systems? A comparative examination from a management coordination perspective', *Journal of International Business Studies*, 30(1), pp. 45–79.

Lozeau, D., Langley, A. and Denis, J.-L. (2002) 'The Corruption of Managerial Techniques by Organizations', *Human Relations*, 55(5), pp. 537–564. doi: 10.1177/0018726702055005427.

MacDuffie, J. P. and Helper, S. (1997) 'Creating Lean Suppliers: Diffusing Lean Production through the Supply Chain', *California Management Review*. California Management Review, 39(4), pp. 118–151.

Mann, D. (2009) 'The missing link: Lean leadership', *Frontiers of health services management*, 26(2), p. 15.

Mann, D. (2014) *Creating a Lean Culture: Tools to Sustain Lean Conversions, Third Edition*. 3rd edn. CRC Press.

Marodin, G. A. and Saurin, T. A. (2013) 'Implementing lean production systems: research areas and opportunities for future studies', *International Journal of Production Research*, 51(22), pp. 6663–6680. doi: 10.1080/00207543.2013.826831.

Matsui, Y. (2007) 'An empirical analysis of just-in-time production in Japanese manufacturing companies', *International Journal of Production Economics*, 108(1-2),

pp. 153–164. doi: 10.1016/j.ijpe.2006.12.035.

Maull, R., Brown, P. and Cliffe, R. (2001) 'Organisational culture and quality improvement', *International Journal of Operations & Production Management*. MCB UP Ltd, 21(3), pp. 302–326. doi: 10.1108/01443570110364614.

Mehri, D. (2006) 'The Darker Side of Lean: An Insider's Perspective on the Realities of the Toyota Production System.', *Academy of Management Perspectives*, 20(2), pp. 21–42. doi: 10.5465/AMP.2006.20591003.

Morrissey, W. J. (2006) 'Buyer-Supplier Relationships in Small Firms: The Use of Social Factors to Manage Relationships', *International Small Business Journal*, 24(3), pp. 272–298. doi: 10.1177/0266242606063433.

Munene, J. (1995) '"Not-on-seat": An Investigation of Some Correlates of Organisational Citizenship Behaviour in Nigeria', *Applied Psychology*, 44(2), pp. 111–122. doi: 10.1111/j.1464-0597.1995.tb01069.x.

Naor, M., Goldstein, S. M., Linderman, K. W. and Schroeder, R. G. (2008) 'The Role of Culture as Driver of Quality Management and Performance: Infrastructure Versus Core Quality Practices*', *Decision Sciences*, 39(4), pp. 671–702. doi: 10.1111/j.1540-5915.2008.00208.x.

Oackland, J. (1995) *Total Quality Management. The Route to Improving Performance*. 2nd ed. Oxford: Butterworth-Heinemann.

Olivella, J., Cuatrecasas, L. and Gavilan, N. (2008) 'Work organisation practices for lean production', *Journal of Manufacturing Technology Management*, 19(7), pp. 798–811. doi: 10.1108/17410380810898750.

Oliver, N. and Hunter, G. (1998) *The financial impact of 'Japanese' manufacturing methods*, *Manufacturing in transition*. London: Routlege & Kegan Paul.

Ouchi, W. (1981) 'Theory Z: How American business can meet the Japanese challenge', *Business Horizons*.

Pakdil, F. and Leonard, K. M. (2015a) 'The effect of organizational culture on implementing and sustaining lean processes', *Journal of Manufacturing Technology Management*, 26(5), pp. 725–743. doi: 10.1108/JMTM-08-2013-0112.

Pakdil, F. and Leonard, K. M. (2015b) 'The effect of organizational culture on implementing and sustaining lean processes', *Journal of Manufacturing Technology Management*, 26(5), pp. 725–743. doi: 10.1108/JMTM-08-2013-0112.

Panizzolo, R., Garengo, P., Sharma, M. K. and Gore, A. (2012) 'Lean manufacturing in developing countries: evidence from Indian SMEs', *Production Planning & Control*, 23(10-11), pp. 769–788. doi: 10.1080/09537287.2011.642155.

Pay, R. (2008) 'Everybody's jumping on the lean bandwagon, but many are being taken for a ride', *Industry Week*, May, pp. 21–23.

Peters, T., Waterman, R. and Jones, I. (1982) *In search of excellence: Lessons from America's best-run companies*. 1st edn. New York: Harper.

Pooyan, B., Napsiah, I. and Zulkiflle, L. (2014) 'Review of Lean Adoption within Small and Medium Sized Enterprises', *Advanced Materials Research*. Trans Tech Publications, 903, pp. 414–418. doi: 10.4028/www.scientific.net/AMR.903.414.

Porter, M. (1985) 'Competitive advantage: creating and sustaining superior performance, 1985'.

Prajogo, D. I. and McDermott, C. M. (2005) 'The relationship between total quality management practices and organizational culture', *International Journal of Operations & Production Management*, 25(11), pp. 1101–1122. doi: 10.1108/01443570510626916.

Prajogo, D. I. and McDermott, C. M. (2011) 'The relationship between multidimensional organizational culture and performance', *International Journal of Operations & Production Management*, 31(7), pp. 712–735. doi: 10.1108/01443571111144823.

Quinn, R. and Spreitzer, G. (1991) 'The psychometrics of the competing values culture instrument and an analysis of the impact of organizational culture on quality of life', *Emerald.*

R. Jadhav, J., S. Mantha, S. and B. Rane, S. (2014) 'Exploring barriers in lean implementation', *International Journal of Lean Six Sigma*, 5(2), pp. 122–148. doi: 10.1108/IJLSS-12-2012-0014.

Rother, M. (2009) *Toyota Kata: managing people for improvement, adaptiveness and superior results*. McGraw-Hill Professional.

Saha, C., Lam, S. S., Beckman, D. and Davis, N. (2014) 'Lean Transformation for Server Manufacturing Environment', in *In IIE Annual Conference. Proceedings*. Institute of Industrial Engineers-Publisher., p. 2902.

Schein, E. H. (1984) 'Coming to a New Awareness of Organizational Culture', *Sloan Management Review*, 25(2), pp. 3–16.

Schonberger, R. J. (2007) 'Japanese production management: An evolution—With mixed success', *Journal of Operations Management*, 25(2), pp. 403–419. doi: 10.1016/j.jom.2006.04.003.

Schouteten, R. and Benders, J. (2004) 'Lean Production Assessed by Karasek's Job Demand–Job Control Model', *Economic and Industrial Democracy*, 25(3), pp. 347–373. doi: 10.1177/0143831X04044831.

Shah, R. (2003) 'Lean manufacturing: context, practice bundles, and performance', *Journal of Operations Management*, 21(2), pp. 129–149. doi: 10.1016/S0272-6963(02)00108-0.

Shah, R. and Ward, P. T. (2007) 'Defining and developing measures of lean production', *Journal of Operations Management*, 25(4), pp. 785–805. doi: 10.1016/j.jom.2007.01.019.

Shingo, S. (1988) *Non-stock production: the Shingo system of continuous improvement*. Productivity Press.

Siehl, C. and Martin, J. (1989) 'Organizational culture: A key to financial performance?', *Graduate School of Business, Stanford University.*

Singh, J. and Singh, H. (2012) 'Continuous improvement approach: state-of-art review and future implications', *International Journal of Lean Six Sigma*, 3(2), pp. 88–111. doi: 10.1108/20401461211243694.

Sørensen, J. B. and Sorensen, J. B. (2002) 'The Strength of Corporate Culture and the Reliability of Firm Performance', *Administrative Science Quarterly*, 47(1), p. 70. doi: 10.2307/3094891.

Stock, G. N., McFadden, K. L. and Gowen, C. R. (2007) 'Organizational culture, critical success factors, and the reduction of hospital errors', *International Journal of Production Economics*, 106(2), pp. 368–392. doi: 10.1016/j.ijpe.2006.07.005.

Stone, K. B. (2012) 'Four decades of lean: a systematic literature review', *International Journal of Lean Six Sigma*, 3(2), pp. 112–132. doi: 10.1108/20401461211243702.

Stuart, I. and Boyle, T. (2007) 'Advancing the adoption of'Lean'in canadian SMEs', *Ivey Business Journal*, 71(3), pp. 1–6.

Sun, S. (2008) 'Organizational Culture and Its Themes', *International Journal of Business and Management*, 3(12), p. P137.

Sun, S. (2009) 'Organizational Culture and Its Themes', *International Journal of Business and Management*, 3(12). doi: 10.5539/ijbm.v3n12p137.

Swank, C. (2003) 'The lean service machine', *Harvard business review*, 81(10), pp. 123–130.
Thomas, B. (1995) *The human dimension of quality*. New York: McGraw-Hill.

Trompenaars, F. and Hampden-Turner, C. (1997) 'Riding the Waves of Culture: Understanding cultural diversity in business, Nicholas Brealy', *London, England*.

Vijay, S. (1985) 'Culture and related corporate realities'.

Wang, Y. and Huzzard, T. (2011) 'The impact of lean thinking on organizational learning', *OLKC 2011–Making Waves, Conference ...*, pp. 1–19.

Wanitwattanakosol, J. and Sopadang, A. (2012) 'A framework for implementing lean manufacturing system in small and medium enterprises', *Applied Mechanics* 110, pp.

3997–4003.

Wilkinson, A., Redman, T., Snape, E. and Marchington, M. (1998) *Managing with total quality management*. LONDON: Macmillan.

Wincel, J. and Kull, T. (2013) *People, Process, and Culture: Lean Manufacturing in the Real World*. CRC Press.

Womack, J., & Jones, D. T. (2003) *Lean Thinking: Banish Waste And Create Wealth In Your Corporation*. 2nd edn. New York: Simon and Schuster.

Womack, J., Jones, D. and Roos, D. (1990) *Machine that changed the world*. Simon and Schuster.

Womack, J. P. and Jones, D. T. (1996) *Lean Thinking: Banish Waste And Create Wealth In Your Corporation*. New York: Simon and Schuster.

Womack, J. P., Jones, D. T. and Roos, D. (1991) *The Machine That Changed the World: The Story of Lean Production*. HarperCollins.

Yamamoto, Y. and Bellgran, M. (2010) 'Fundamental mindset that drives improvements towards lean production', *Assembly Automation*, 30(2), pp. 124–130. doi: 10.1108/01445151011029754.

Yan-jiang, C., Lang, X. and Xiao-na, W. (2006) 'Empirical Study of Influencing Factors of Continuous Improvements', in *2006 International Conference on Management Science and Engineering*. IEEE, pp. 577–581. doi: 10.1109/ICMSE.2006.313966.

Yasin, M. M., Small, M. H. and Wafa, M. A. (2003) 'Organizational modifications to support JIT implementation in manufacturing and service operations', *Omega*, 31(3), pp. 213–226. doi: 10.1016/S0305-0483(03)00024-0.

Zhou, B. (2012) 'Lean principles, practices, and impacts: a study on small and medium-sized enterprises (SMEs)', *Annals of Operations Research*, (Krafcik 1988), pp. 1–18. doi: 10.1007/s10479-012-1177-3.

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Palm Oil Sustainability Certification and Firm Performance: Is There a Conflict Between RSPO and MSPO?

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Abstract
Malaysia is very proactive in governing its palm oil industry since it contributes highly to the country's export earnings. The current requirement imposed on developing economies to export only RSPO-certified palm oil to the Western countries has raised concerns among the industry players. RSPO stands for Roundtable on Sustainable Palm Oil. It was initiated in January 2003 by a non-profit, private-sector organization. In Malaysia, RSPO certification is still voluntary and a debatable issue. Malaysia has implemented its own system known as Malaysian Sustainable Palm Oil (MSPO). Companies are also encouraged to practice environmental disclosure in the annual reports. This paper discusses the principles of sustainability certification for RSPO and MSPO. The effects of sustainability certifications, environmental disclosure, export earnings and palm oil technology are examined. A total of 103 companies participated in the research. 72.8% of the companies is export-oriented, 54.4% is currently RSPO-certified while 29.1% is MSPO-certified. The study suggests that both certification systems use similar principles. Furthermore, both RSPO and MSPO have no significant effect on firm performance and thus, not in conflict. 70% of the companies view that both certifications should be mandatory. On the other hand, export earnings show a negative impact on performance. As predicted, environmental disclosures and palm oil technology contribute positively to performance (p-value<0.01). Thus, the disclosure practice and investment in technology should be enhanced to promote sustainability. The paper suggests that halal certification could be a value added to the MSPO certification and further enhance palm oil sustainability.

Keywords: Sustainability, RSPO, MSPO, Environmental Disclosures, Technology, Firm Performance

Introduction

Sustainability studies attempts to promote responsible consumption and conservation of natural resources and generally focus on the economy, environment and human well-being. At present, 71% or 4.7 million hectares of agricultural land in Malaysia is planted with palm oil and 93.6% of the total industry output is exported. In total 560,000 workers are directly involved in this sector. 60% of the plantation areas can be categorized as large, 28% is termed as smallholders and 12% is independent smallholders (Palm Oil Research, 2016).

Export revenues of palm oil are very significant to the Malaysian economy since the country currently contributes 39% of the world's production, and 44% of the world's exports (MPOC, 2015). Between 2013 and 2014 the growth of crude palm oil production was very favourable rising from 19.2 million tons to 19.6 million tons or 2.3% (MPOC, 2015). The growth was supported by technological advancement which significantly improved oil extraction rate and consequently, supply of palm oil at the time of rising global demand. Two major importers of palm oil who provide support for Malaysia's growth in export earnings are India and China.

The palm oil industry has recently been distracted by a requirement to export only RSPO certified palm oil to Western countries. According to RSPO's current estimates the total global certified production areas is 2.53 million hectares and 41% of that is in Malaysia. The newly imposed system RSPO certification was established on the ground of protecting the environment and promoting social equity and economic development in developing countries. RSPO stands for Roundtable on Sustainable Palm Oil and was initiated in January 2003. It is still not a mandatory exercise in Malaysia. According to Nasir (2004) compliance with RSPO certification is costly and lengthy since it takes about three years to complete the process.

In April 2014 Malaysia launched its own sustainability certification standards known as Malaysian Sustainable Palm Oil (MSPO). It was designed to complement the existing law and unique environment in Malaysia (MPOB, 2015). According to the Ministry of Plantation Industries and Communities (MPIC, 2013) the objectives of MSPO are similar as those of RSPO but it eliminated the irrelevant processes particularly on the legal aspects which have been separately covered within the Malaysian law (MPOB, 2015). Earlier in the year 2011 Indonesia, the world's largest palm oil exporter implemented its own and mandatory Indonesia Sustainable Palm Oil (ISPO). Since the Malaysian government is yet to decide whether the MSPO should be mandatory, this study compares the principles governing the RSPO and MSPO certifications, and also assesses their impacts together with export earnings, environmental disclosure and palm oil technology on firm performance.

The findings of this study are important to provide recommendations for strengthening the industry's sustainability. Firstly, the local certification could serve the same purposes but at lower costs and thus, more effective than the RSPO. Secondly, the impact of exports on firm performance when subject to RSPO certification is crucial for the industry in its strategic positioning. Thirdly, stakeholders are concerned with environmental disclosures and the use of technology to improve sustainability and therefore, their impact of firm performance are examined.

Literature Review

The accusation that forest burning for palm oil plantation is endangering orangutans (Bruce et al., 2010) forms the basis for the Western countries to demand RSPO certification. The accelerated expansion of the plantation areas in Malaysia and the developing countries also led to the environmentalists' concerns on sustainability (e.g., Bruce et al. 2010; Turner et al., 2011; and Fitzherbert et al., 2008). The plantation companies was criticised for destroying the natural rainforests the unfavourable climate changes.

The MSPO Standards (MS2530)

The MSPO certification is designed for palm oil producers and growers, including smallholders to ensure responsible business practice. Its main aim is to achieve sustainable production and improves market access. The standard provides an alternative verification system of sustainable practice such as the RSPO certification. Figure 1 presents the stages involved in the MSPO certification.

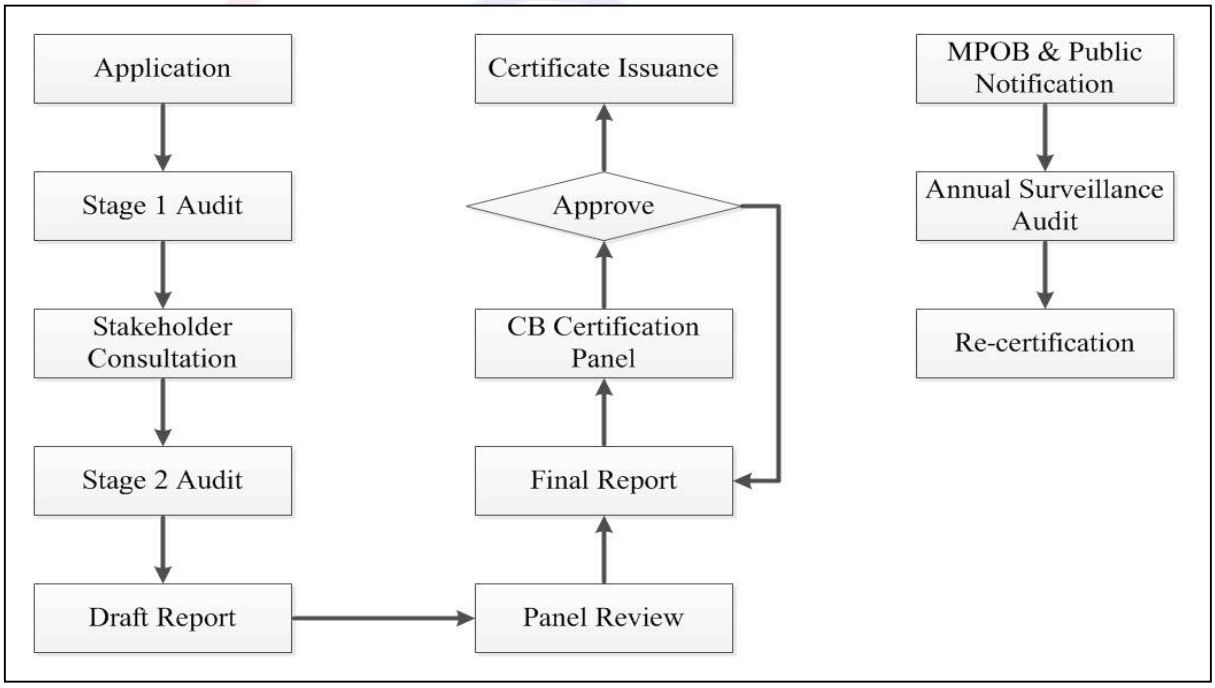

Figure 1: Procedure of MSPO Certification Scheme.

The MSPO are set in a series known as MSPO (MS2530:2013) Parts 1 to 4, and specify the sustainability principles, criteria and indicators. The actual compliance with the standards is verified through auditing. The MSPO also states the requirements on environmental, safety and health of business practices not covered under the existing national legislation and the industry control mechanisms. Its implementation is governed by the Malaysian Palm Oil Board (MPOB).

After submission, a stage 1 audit is performed to verify document and practices. The audit is performed by independent Certification Bodies (CBs), accredited by Standards Malaysia (SM). The CBs are registered with MPOB and provides assurance

of compliance with the sustainability standards (Mokmin, Ainie, Kushairi, et. al., 2014). Then a consultation session with stakeholders is held to allow for clarifications. A second stage audit is scheduled to close any gap obtained during the first audit. A draft report of the findings is issued following the second audit and reviewed by a panel of appointed experts. The final report is tabled to the Certification Board for the final approval. The approved application is awarded a certificate of MSPO compliance. The certificates are issued by the CBs after approval of MPOB after a successful audit. A renewal is required every 3 years through annual surveillance audit.

Export Earnings

Unlike Indonesia, Malaysian companies rely on the exports to sell their output due to low domestic demand. The export earnings from oil palm are critical for the country to support its economic growth and social development and only 10% of its total production is consumed domestically (Nam, 2011). As an export-oriented industry, large companies in the industry are forced to obtain the RSPO certification and thus, actively pursuing the certification standards. Redding and Venables (2004) describe export performance as having two components: (i) external which relates to market access; and (ii) internal which refers to supply-side conditions. According to Bernard and Jensen (1999) both exports and production efficiency have positive effects on firm performance. In terms of value of exports, demand conditions have been shown to have an impact on firm performance (Fugazza and McLaren, 2013).

Environmental Disclosure

Accounting studies involving sustainability generally examine issues related to the practice of environmental disclosures. Deegan (2000) asserts that the information disclosed within the Corporate Social Responsibility (CSR) framework should also address the impact on three main pillars of sustainability which are the environment, social and economics. With respect to environmental disclosures, the stakeholder theory specifically suggests the right of all stakeholders to information which should be made available through the disclosures. The disclosed information should assist them to make decisions regarding the economic activities of the business.

In developing countries two main sustainability issues are deforestation and endangerment to *orangutan* species. The accelerated growth of the plantation areas due to global demand was blamed for the damages to the environment and ecosystems (Bruce, Carmody, Shaw and Morales 2010). As demand for managers to be accountable to all stakeholders the practice of accounting disclosure becomes increasingly common even if it is only voluntary. These other stakeholders include employees, suppliers, customers, communities, trade associations and government agencies (e.g., Freeman, 1984; Freeman, 1994; Donaldson and Preston, 1995; Dima, 2008). Environmental disclosures and reporting are associated with responsible corporate behaviour. Early environmental studies (e.g., Wiseman 1982; Gray, et al. 1987; and Harte and Owen, 1991) indicate that only descriptive information on environmental reporting was reported in the disclosures. To overcome these concerns and improve transparency Malaysian companies are now encouraged to disclose environmental-related information in the annual reports.

Palm Oil Technology

In protecting the environment and promoting sustainability the Malaysian government is committed to use green technology. The green technology refers to products, equipment or systems which minimizes environmental degradation, reduces gas emissions from greenhouses, promotes healthy and improved environment for all forms of life, conserves energy usage and natural resources consumptions and promotes the use of renewable resources. The palm oil industry is currently working towards sustainable farming practices. Extensive research on oil-palm technology is on-going to determine improved methods and strategy for palm-oil cultivation. One of the options is to use genetic engineering or gene technology to modify oil-palm to boost palm-oil production and achieve sustainable oil-palm farming (Prakash, 2013).

The government has introduced Green Technology Financial Scheme (GTFS) which provides a guarantee of 60% on the loan via Credit Guarantee Corporation Malaysia Bhd (Mahfuzah, 2011). The types of green technology financing include term loan, overdraft/revolving credit, bank guarantee, working capital (Liew, 2011). Malaysian palm oil companies have started to consider investing in green technology to convert palm oil wastes into renewable energy such as electricity. The advanced technology helps to reduce greenhouse gas emissions by 80% which in turn increases profits (The Borneo Post, 2013). One potential is to use the palm oil empty fruit bunches (EFB) as biomass fuel and palm oil mill affluent for biogas production. Instead of using fossil fuel the technology captures methane emissions from palm oil affluent which is then used to generate power. Thus, the use of technology may result in improved palm oil yield and waste management to support the industry sustainability.

Firm Performance

Profit maximizing behavior of firms has always been a concern in studies related to business sustainability. According to the stakeholder theory managers have the duty to protect the stakeholders and the shareholders. Most studies of firm performance seeks to determine factors which produce positive impact on performance (e.g., Wally, 2003; Ramasamy, Ong and Yeung, 2005; Mishra and Suar, 2010). Firm performance was traditionally measured using only financial criteria or objective financial data. Among them include size, return on assets, return on equity, asset age and return on sales (Griffin and Mahon, 1997). However, Kelly (2003) argues that financial accounting measures are lagging and historical. Also, Gholami (2011) suggests that the measures may be inaccurate due to aggregation. Furthermore, the validity and reliability of these measures have been questioned. Thus, firms are increasingly incorporating non-financial performance measures (Mansor and Wong, 2013). These measures include research and development, innovation, employee and customer satisfaction (Kaplan and Norton, 2001).

Methodology

In the first part, document analyses using publicity available information (printed and on-line) was performed to gather information on the current state of sustainability certification in Malaysia. Annual reports of the selected companies were accessed and examined to determine the current disclosure practices in the industry. A survey questionnaire was designed based on the literature review and experts' opinion of representatives from the relevant government agencies including Malaysian Palm Oil Board (MPOB) and Malaysian Palm Oil Association (MPOA). The study population was palm oil plantation companies which fulfil the following criteria: (i) registered with and listed in the directory of Malaysian Palm Oil Associations (MPOA); and (ii) classified as palm oil plantations and organized smallholders. A non-systematic sampling was performed and a total of 300 respondents were selected. The non-probability sampling was appropriate in this study due to a limited sampling for the population (Blaxter, Hughes, and Tight; 2010). The questionnaire was divided into 2 parts. Part 1 addresses the profile and descriptive statistics while Part 2 covers statements corresponding to the independent and the dependent variables. A ten point Likert-scale was adopted and the questionnaires were sent to CEOs, accounting/finance managers or their equivalent rank. Follow-up telephone calls were made after 4 weeks for non-response cases and appropriate action was taken. A total of 108 were returned but 5 of them were incomplete. Thus, 103 (34%) responses were included in the final analysis using Structural Equation Modelling (SEM).

Findings and Discussion

Palm Oil Sustainability Certification Principles

Accredited third parties are appointed to audit and assess the compliance level under both RSPO and MSPO. The former consists of 8 Principles, 39 Criteria and 120 indicators while the latter is governed by 7 principles, grouped into 4 parts. These are outlined in the Malaysian Standard (MS 2530:2013). Table 1 presents the principles used under the two schemes.

RSPO		MSPO Equivalent	
P1	Commitment to transparency.	P2	Responsible to transparency of information, documents, method of communication, traceability.
P2	Compliance with applicable laws and regulations.	P3	Compliance to legal requirements.
P3	Commitment to long-term economic and financial viability.	P1	Management commitment and responsibilities.
P4	Use of appropriate best practices by growers and millers.	P6	Implement standard best practices.
P5	Environmental responsibility and conservation of natural resources and biodiversity	P5	Environment, natural resources, biodiversity and ecosystem.
P6	Responsible consideration of employees and of individuals and communities affected by growers and mills.	P4	Social responsibility, health, safety and employment conditions.
P7	Responsible development of new plantings	P7	Commitment to development of new planting
P8	Commitment to continuous improvement in key areas of activity		Not stated as a specific principle, partly embedded in MSPO-P1.

Table1. Principles of RSPO AND MSPO and ISPO

Each of the RSPO principle is matched with the equivalent MSPO principle in the column labelled 'MSPO Equivalent'. The shaded areas show where both schemes use the same principles and in the same sequence. The first RSPO principle is commitment to transparency where provision of sufficient information on environmental, social and legal issues to stakeholders are the key concern. Growers and millers which apply for certification must have a documented Standard Operating Procedures (SOPs) and evidence of timely communication with stakeholders on RSPO related issues. Management documents such as land titles, pollution prevention, complaints and grievances and human rights policy are required to be made publicly available. Under this principle, a written policy of ethical conduct set within the United Nation framework against corruption shall be communicated to the workforce. This same principle is equivalent to principle number 2 of the MSPO.

The second RSPO principle addresses compliance with applicable laws and regulations, and equivalent to MSPO principle number 3 (P3). Companies must comply with all legal requirements including local and customary land-use rights,

labour and agricultural practices. They must prove that representatives of the affected communities including legal counsel were chosen by the communities. Where the customary rights areas are not clearly stated, participatory mapping excercise must be conducted and involve the affected parties.

The third RSPO's principle deals with commitment to long-term economic and financial viability. Companies must provide evidence of having at least a 3-year business plan that includes information on production costs, forecasts of prices and financial indicators. Under MSPO this is listed as principle number 1 (P1).

The use of appropriate best practices forms the fourth principle under RSPO and the criteria include having a Standard Operating Procedures (SOPs) for maintaining soil fertility, minimizing soil erosion and degradation, protecting surface and ground water, pesticides controls and appropriate plan for occupational health and safety. The same principle is applicable under MSPO, stated as principle number 6 (P6).

The fifth principle is dedicated to environemental preservation and biodiversity protection. Both RSPO and MSPO classify this as principle number 5. Growers and millers are also required to implement a plan to reduce pollution and greenhouse emissions before 2017. Companies must have a monitoring system to measure polluting activies and report them to or seek advice from RSPO working group on the best environmental practices.

Guidelines on communication with affected employees, individuals and communities including handling complaints and grievances fall under principle 6 for RSPO, and number 4 for MSPO. The guidelines also cover issues related to workers' pay and conditions of employment, equal opportunities, fair pricing and human rights policies. Companies should provide evidence that local people understand their right to refuse plantation of palm oil on their land, and have access to information on legal, economic, environmental and social implications of the new planting.

Both certifications provide guidelines on new planting under principle number 7. In contrast to MSPO, the RSPO has an additional principle (P8) on commitment to continuous improvement in key activities. The guidelines include reduce use of pesticides, pollution and greenhouse gases and waste reduction. MSPO does not specifiy this commitment under a separate principle but partly embedded them in P1.

Profile of Respondents

Table 2 presents the company profiles. 68.9% of the companies were relatively small with plantation areas of less than 3000 hectares while 22.3% had more than 5000 hectares. Only 8.7% were mid-size with total areas between 3000 to 5000 hectares. In terms of total investment 33% reported having invested less than RM5million while 16.5% had investment between RM5 million to RM20 million. The balance 34% of the companies had invested more than RM100 million.

No.	Profile	Description	No. of Respondents	%
1	Size of Plantation Area	Less than 3000 hectares	71	68.9
		3001-5000 hectares	9	8.7
		More than 5001 hectares	23	22.3
2	Total Invested Capital	Less than RM5 million	34	33.0
		RM5 –RM20million	17	16.5
		RM20 – RM50million	8	7.8
		RM50 – RM100million	9	8.7
		More than RM100million	35	34.0
3	Total Number of Employees	Less than 100 employees	28	27.1
		101-500 employees	48	46.6
		More than 500 employees	27	26.2
4	Total Annual Sales Turnover	Less than RM10 million	46	44.7
		RM10 – 50 million	30	29.1
		More than RM50million	27	26.2

Table 2. Profile of Palm Oil Plantation Companies

The industry is relatively labour-intensive and 46.6% of the companies employed between 101-500 people while 26.2% had more than 500 labourers. In terms of annual sales 44.7% of them had less than RM10 million, 29.1% had between RM10 million to RM50 million, and 26.2% had more than RM50 million annual sales.

Hypotheses Testing

Five hypotheses were tested in this study to examine the relationships between the exogenous variables and firm performance as follows:

H1: RSPO certification has a negative impact on firm performance.

H2: MSPO certification has a negative impact on firm performance.

H3: Environmental disclosure has a positive impact on firm performance.

H4: Export earning has a negative impact on firm performance.

H5: Palm oil technology has a positive impact on firm performance.

Structural Equation Modelling

Figure 3 presents the standardised regression estimates. The coefficient of each correlation between the latent exogenous constructs is less than 0.85, which indicates that the assumption of discriminant validity was achieved.

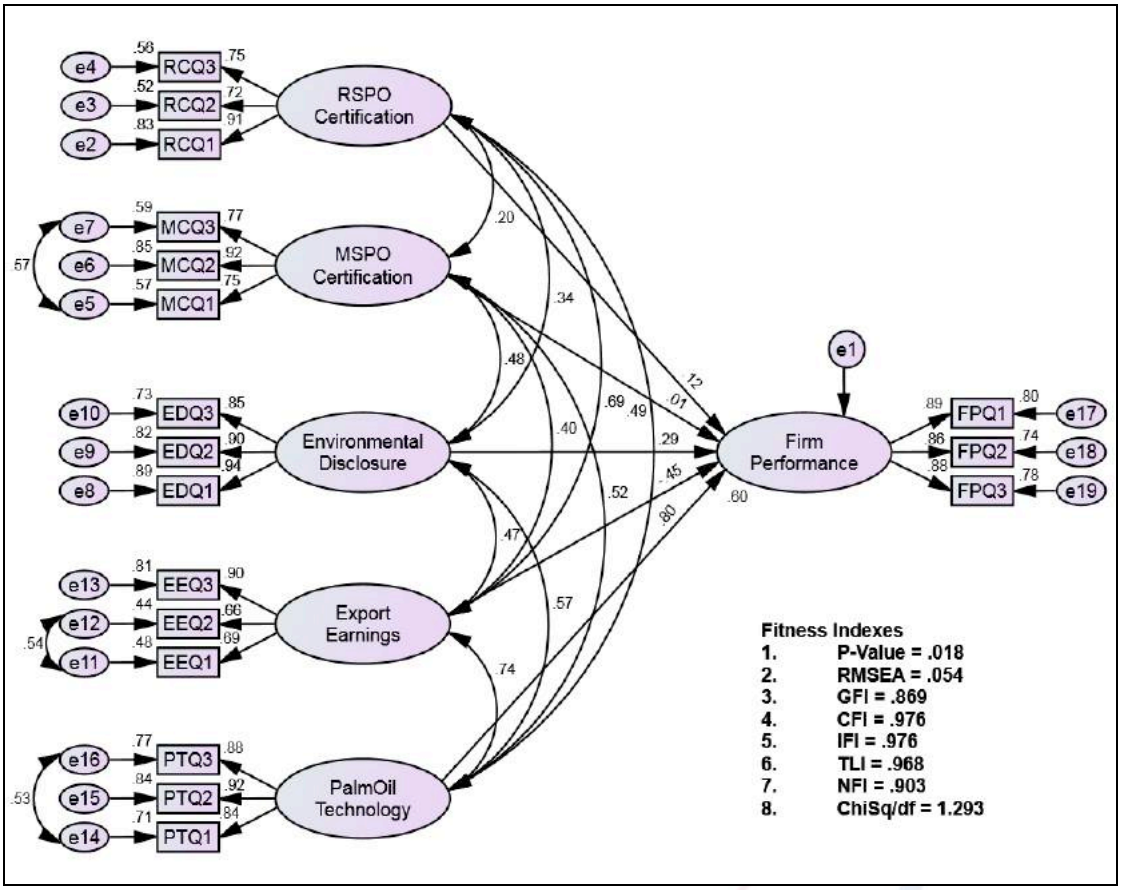

Figure 3: Standardized Regression Weight Output

Table 3 presents the results of path analysis using SEM. The path coefficient between RSPO certification and firm performance and, between MSPO certification and firm performance are not statistically significant (p-values 0.038 and 0.917, respectively). The coefficient for environmental disclosures, export earnings and palm oil technology are however, statistically significant.

Construct	Path	Construct	Estimate	S.E	C.R	P	Result
Firm Performance	←	RSPO Certification	0.093	0.108	0.863	.388	Not Significant
Firm Performance	←	MSPO Certification	0.014	0.133	0.104	.917	Not Significant
Firm Performance	←	Environmental Disclosures	0.352	0.130	2.713	.007	Significant
Firm Performance	←	Export Earnings	-0.480	0.222	-2.163	.031	Significant
Firm Performance	←	Palm Oil Technology	0.948	0.210	4.509	***	Significant

Table 3. Path Analysis Results between Exogenous and Endogenous Constructs

The results indicate that the practice of environmental disclosures has a significant positive impact on performance. This is consistent with the continuing demand by stakeholders for increased transparency in this environmentally sensitive industry. Thus, environmental disclosures in the annual reports should be improved and further promoted.

The performance of plantation companies is negatively affected by the export earnings. The RSPO certification costs are fixed in nature and unavoidable for companies which export their oil palm. The additional costs, however, are not compensated by sales to the Western countries since the price for certified oil palm is the same as the non-certified oil palm. Thus, the rise in exports led to reduced firm performances.

Unlike sustainability certification systems, technology shows a significant positive impact on the performance of firms in this industry. The investment in technology is in the long run beneficial for companies to reduce waste and improve yields and thus, promote sustainability.

Conculsion and Recommendations

Even though RSPO carries a global element it is a product of a voluntary organization. MSPO, in contrast, is developed by a government agency and has a clear framework to serve the interest of the Malaysian palm oil industry. The MSPO was not intended to compete or be in conflict with the RSPO. Rather, it is consistent with the principles of RSPO and further strengthens the existing standards and laws for sustainable palm oil market. Thus, the RSPO and MSPO certifications are not in conflict with one another, and Malaysia should self-govern its MSPO certification system in producing sustainable palm oil. However, implementing both systems may be redundant and not performance-driven if the increased in compliance costs does not result in positive impact on firm performance. Improved coordinations among the

existing government agencies such as MPOB, Malaysian Palm Oil Association (MPOA) and Malaysian Palm Oil Council (MPOC) could provide more assurance for the effectiveness of the MSPO certification in the global market. As a highly organised sector and heavily followed by investors, the industry needs to promote a culture of responsible business community. It is important for the industry to fulfil stakeholders continuing demand for increased transparency of financial and non-financial (i.e., balanced) business performance. The complexity of today's business environment demands balanced information for stakeholders' decisions. Companies which practice environmental disclosures and sustainability reporting are moving closer to Integrated Reporting (IR). By adopting the IR reporting framework, palm oil companies are being proactive in enhancing sustainability.

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References

Ainie, K. (2015). *MSPO means more business*. Retrieved from: http://www.thestar.com.my/Business/Business-News/2015/02/28/MSPO-means-more-business/.

Basiron, Y., & Chan K.W. (2004). The Oil Palm and Its Sustainability. *Journal of Oil Palm Research*, Vol 16 (1).

Blaxter, L., Hughes, C. and Tight, M. (2010) How to Research, Open University Press, 4th Ed. doi:10.2307/1319404

Board, R. E. (2009). RSPO Supply Chain Certification Systems, (November), 1–54.

Bruce, B., Carmody, L., Shaw, N. & Morales, R. (2010). *Issues for Responsible Investors: Palm Oil in Asia*. Singapore: Responsible Research Pte Ltd.

Chan, K.W. (1996). The Economics of Environmental Protection and Sustainable Crop Management Practices in the Oil Palm Industry.

Corley, R. H. V. & Tinker, P. B. (2007). *The Oil Palm*. 4th. ed. Oxford: Blackwell Pub. Co.

Deegan, C. (2000). *Financial Accounting Theory*, McGraw-Hill Book Company, Sydney.

Deegan, C. (2002). Introduction: The legitimising effect of social and environmental disclosures – a theoretical foundation. *Accounting, Auditing and Accountability Journal* (Vol. 15). doi:10.1108/09513570210435852

Douglas U.A. (2013). Malaysia to Launch National Palm Oil Standard Next Year. Retrieved from http://www.thesundaily.my/news/820929.

Douglas U.A, (2015). Govt Intensifies Efforts to Meet RM178 Billion Mark for Palm Oil. Retrieved from http://www.therakyatpost.com/business/2015/01/19 /govt-intens-ifies-efforts-meet-rm178-billion-mark-palm-oil/

Fitzherbert, E.B., Struebig, M.J., Morel, A., Danielsen, F., Bruhl, C.A., Donal, P.F. and Phalan, B. (2008). How will oil palm expansion affect biodiversity?. Trends in Ecology and Evolution. 23(10): 538-545.

Gillespie, P. & Harjanthi R. S. (2012): ISPO, RSPO : two sides of the same coin? in: The Jakarta Post. Retrieved from http://www.thejakartapost.com/news/2012 /11/02/ ispo-rspo-two-sides-same-coin.html.

Harsono, D., Chozin, M. A., & Fauzi, A. M. (2012). Analysis on Indonesian Sustainable Palm Oil (ISPO): A Qualitative Assessment on the Success Factors for *ISPO, 9,* 39–48.

IPOC (2010). Toward Sustainable Certification Sustainable Palm Oil Indonesia 2010. Indonesian Palm Oil Commission. Jakarta.

Liew S. S. (2011) Issues and Challenges of Bankability of the Biogas Projects AmInvestment Bank Berhad. Paper presented at the National Seminar on Biogas and Palm Oil Mill Effluent Treatment (Biogas-POMET) held on 6-7 June 2011 at Sutera Harbour Resort, Kota Kinabalu, Sabah

Mahfuzah B. (2011) Government Incentives for Biogas Projects. Ministry of Finance Paper presented at the National Seminar on Biogas and Palm Oil Mill Effluent Treatment (Biogas-POMET) held on 6-7 June 2011 at Sutera Harbour Resort, Kota Kinabalu, Sabah

Malaysian Palm Oil Board (2014).Malaysian Palm Oil Industry. Retrieved from http://bepi.mpob.gov.my/index.php/statistics/price/monthly.html.

Malaysian Palm Oil Council (2015).Malaysian Palm Oil Industry. Retrieved from http://www.kppk.gov.my/index.php/news-cutting/3692-palm-oil-implementation-of-the-malaysian-sustainable-palm-oil-mspo-certification-scheme.html.

Malaysian Standard (2013). MS 2530 : 2013 Malaysian Sustainable Palm Oil (MSPO) The Malaysian Standard for Sustainable Palm Oil Production, Benefits: Transparency and credibility are assured, Complies to legal requirements.

Mokmin, M., Ainie, K., & Kushairi, A. (2014). Malaysian Sustainable Palm Oil (MSPO) [PowerPoint slides]. Retrieved from http://www.ipicex.com/docs/2014/oral/EN%20MOHD%20MOKMIN%20BAHARI%20IPiCEX%202014/.

Nasir, M. (2014). Standard for Sustainability. Retrieved from http://bepi.mpob.gov.my/news/detail.php?id=14765.

Palm Oil Research (2016). Untangling the Great Palm Oil Debate. Retrieved from http://www.palmoilresearch.org/statistics.html

Prakash, C. S. (2013). GM in the media: A look at the news from around the world on genetically modified food and crops. *GM Crops Food* 4: 85-87

Rosediana, S. (2013). News Release ISPO and RSPO Enter Into Strategic Co-Operation of Promoting Sustainable Palm Oil, (October), 2–4.

RSPO, E.B (2009). RSPO Supply Chain Certification Systems, (November), 1–54.

Teoh C. H. (2002). The Palm Oil Industry in Malaysia from Seed to Frying Pan, *Journal of Oil Palm Research.*

The Borneo Post (2013). New Technology to Improve Sustainability of Malaysia Palm Oil Mills. Retrieved from:

http://www.theborneopost.com/2012/11/03/kubota-to-build-cutting-edge-biogas-plant-industry-in-sarawak.

Turner, E.C., Snaddon, J.L., Ewers, R.M., Fayle, T.M. and Foster, W.A. (2011). The Impact of Oil Palm Expansion on Environmental Change: Putting Conservation Research in Context. Environmental Impact of Biofuels. Retrieved from: http://www.intechopen.com/books/environmental-impact-of-biofuels/the-impact-of-oil-palmexpansion-on-environmental-change-putting-conservation-research-in-context.

Unerman, J., Bebbington, J. & O'Dwyer, B, (2007), Sustainability accounting and accountability, Routledge, London.

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The Efficiency of Commodity Futures Market in Thailand

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Abstract
Two commodity futures markets are organized in Thailand for more than ten years. One is the Thailand Futures Exchange (TFEX) which mainly trades financial assets and non-agricultural commodities (gold and Brent crude oil). Another is the Agricultural Futures Exchange of Thailand (AFET) which only trades agricultural commodities (rubber, rice, tapioca chip, etc.). This paper mainly examines commodity futures in both markets and compares the efficiency in these two markets. Basically, the results reveal the non-stationary in daily spot prices as well as futures prices for all commodities. The Cointegration method confirms the long-run relationship between futures price and spot price in both markets. However, the joint restrictions on the cointegrating regression reveals that futures price is not a good estimator for future spot price and risk premium exists for all commodities. The Error Correction Model is employed for the short-run efficiency testing. The short-run relationship between futures and spot prices is inefficiency. According to the results, producers, hedgers, or investors should be aware in managing their price risk since the futures price is not a good estimator of future spot price. In addition, market regulators should concern about over-speculation from this inefficiency.

Keywords: Thai commodity futures markets, Market efficiency, Unbiasedness hypothesis

Introduction

In Thailand, two futures exchange markets have been established for more than ten years, where farmers or agricultural producers can use these futures markets in managing their risk or investors can use these markets as an alternative investment or protect their portfolios from unanticipated events. One is Thailand Futures Exchange (TFEX) which is mostly traded financial products such as equity index, interest rate, currency as well as some commodities such as energy and precious metal. Another is The Agricultural Futures Exchange of Thailand (AFET) which mainly traded the agricultural products such as Ribbed Smoked Rubber Sheet No.3 (RSS3), Block Rubber 20 (STR20), White Rice 5% (BWR5, WRF5), Thai Hom Mali 100% Grade B Both Options (BHMR), Tapioca Chip Both Options (TC) and Canned Pineapple Pieces in Light Syrup (CPPL). Both futures markets have been growing in last ten years. The transaction, volumes, including the variety of products traded have significantly increased. However, commodities are separately traded in these two markets where non-agricultural commodities are traded in TFEX and agricultural commodities are traded in AFET, this paper aims to examine and compare the efficiency of these two markets. Understanding the futures market efficiency is important to many stakeholders. Agricultural producers, hedgers, or investors are able to use the futures price as an optimal forecast for future spot price. This could help them effectively manage their price risk if futures price is an unbiased estimator of future spot price. The policy makers also benefit from this study if markets are efficient. The price stabilization and direct market intervention is not required by the government.

Even though the extensive literature on the futures market efficiency has been reviewed, the study of futures market efficiency in Thailand is still limited. This paper strengthens the previous literature by examining the futures market efficiency in Thailand and comparing the efficiency in two futures markets. Since Thailand is the biggest natural rubber producer, the 32% of rubber traded in the world are produced from Thai producers. The ribbed smoked rubber futures, which have been trading in the AFET since 2004, are therefore selected for study in this paper. The gold and Brent crude oil futures are only two commodities, which have been traded in the TFEX since 2009 and 2011, respectively. Gold and Brent crude oil are also examined. Hence, this paper tests the market efficiency of three commodities in two markets which are gold, Brent crude oil, and ribbed smoked rubber.
The remainder of this paper is organized as follows: the next section reviews the literature related to the study of futures market efficiency. The third section discusses the data applied in this paper. The fourth section presents the testing procedure. The empirical results present in the fifth section. A final section concludes.

Literature review

The study of market efficiency has been heavily influenced by Fama (1970), who proposed the Efficient Market Hypothesis (EMH). According to the EMH, the prices are fully reflected all publicly available information in the market. Investors therefore are unable to gain abnormal returns from their investment. This hypothesis is also applied to the test of futures market efficiency. The futures market efficiency implies that no investors obtain the abnormal returns because the futures price is an unbiased estimator of future spot price. Therefore, Gulen (1998) and Zivot (2000) state that the

futures price at time t-1 (F_{t-1}) should be equal to the future spot price at time t ($E(S_t)$) for any underlying assets. Even though the literature examining the futures market efficiency is very extensive, a number of previous studies has revealed the mixed results of this efficient market testing for commodities. For example, Gulen (1998) examines 'simple efficiency of futures market' by testing monthly ahead contracts of crude oil futures for 1-month, 3-month, and 6-month at NYMEX by the cointegration analysis. The results show that futures price is an unbiased estimator of the spot price as both prices are cointegrated in the long-run. Kellard et al. (1999) study the efficiency of futures market by examining variety of futures commodities such as Brent crude oil, gasoil, soybeans, live hogs, live cattle, and DM/$ with the forecast horizons of 28 and 56 days. They test both long-run and short-run market efficiency by using the cointegration method. The model is also extended in order to measure the relative efficiency, which is able to compare the performance of different markets. The results show the cointegration between futures and spot price, implying the existence of long-run efficiency for all commodity futures. However, the empirical evidence in the short-run exhibits inefficiency in many markets, implying the existence of risk premia. Crowder and Hamed (1993) explain the existence of risk premia as a compensation for the risky assets according to the non-zero speculative returns in the futures market. The results also indicate a degree of inefficiency which cattle market has a greater degree inefficiency, following by Brent crude market, live hogs market, DM/$ market, and gasoil market, respectively. Mckenzie and Holt (2002) apply the two-stage Engle-Granger and Johansen cointegration approach to test the long-run market efficiency as well as the unbiased estimator of future spot price. Five futures commodities, which are live cattle, live hogs, corn, soybean meal and iced broilers are tested with the forecast horizons of 2 months. The empirical results reveal that four out of five markets (live cattle, live hogs, corn, and soybean meal) are efficient as well as unbiased in the long-run, suggesting that the risk premia do not exist in these four markets. Only iced broilers market exhibits biasedness in the long-run. When short-run efficiency is studied, the error correction model (ECM) is allowed for the constant risk premia while the ECM-GARCH in mean is applied for the time-varying risk premia. The inefficiency exists for all market in the short-run. Chin et al. (2005) examine the efficiency of energy commodities market, which are crude oil, gasoline, heating oil, and natural gas. Using the OLS technique, the change in the spot rate is regressed on its relation to the basis in order to analyse the long-run dynamics. In addition, the predictive abilities of futures price are tested. The results reveal that futures prices of crude oil, gasoline and heating oil are unbiased estimators. The futures prices of natural gas and gasoline are good estimators, with smallest forecast errors. Wang and Ke (2005) examine the efficiency of two futures market in China. Two commodities-wheat and soybean-are studied. The results based on the Johansen cointegration technique suggest that long-run efficiency exists only in soybean futures market. The wheat futures market shows inefficiency according to the market manipulation.

According to substantial studies on futures market efficiency, the analysis of the efficiency is fruitful. However, the empirical results have been controversial in terms of market efficiency or inefficiency. Besides, the study of commodity markets in Thailand is scant. This paper contributes to the literature by extensively comparing the efficiency in two futures markets in Thailand and strengthening the concepts of market efficiency.

Data

To compare the futures market efficiency in TFEX and AFET, the futures price (F_{t-1}) and spot price (S_t) of commodities (Brent crude oil, gold, and rubber) are required to test for both long-run and short-run efficiency. Following the martingale definition of efficiency by Samuelson (1965), Crowder and Hamed (1993) suggest that the futures price should be the closing price 30-day prior to the last trading day of the futures contract. Kellard et al. (1999) confirm that the choice of a date close to contract maturity helps to minimize inefficiency arising from a risk premium. Kristoufek and Vosvrda (2014) analyze the efficiency of commodities futures by using daily futures price with the earliest delivery. Therefore, this paper analyses only nearby contract of all commodities futures, which mostly traded and much more liquid. The detail of each commodity is as follows:

RSS3 is a futures contract of Natural Rubber Ribbed Smoked Sheet No.3 traded in AFET. Most Thai rubber production is RSS3 is popular for Thai rubber production according to its properties which are easily transport, storage and its standard. There are seven consecutive months from the nearest contract month traded in AFET. The series of RSS3 cover the period from January 2009 to December 2015. The futures price of RSS3 is obtained from AFET.

GF and *GF10* are futures contracts of gold traded in TFEX. The underlying asset of both contracts are gold bullion with 96.5% purity. The contract size of GF is 50 Thai Gold baht (762.20 grams) whereas the contract size of GF10 is 10 Thai Gold baht (152.44 grams).[1] Three nearest even month contracts are traded. Since GF and GF10 expires every even month, the GF and GF10 prices of 2-month contract before expiration are examined, which covers the period from January 2010 to December 2015. The futures prices of GF and GF10 are obtained from TFEX.

BR is a futures contract of Brent crude oil traded in TFEX. Since Brent crude oil is one of the world major's benchmark, the BR has started trading in TFEX since 2011 to help the investors manage their portfolio risk. The nearest 3 consecutive-month contracts are traded. The BR series cover the period from November 2011 to December 2015. The futures prices of BR are obtained from TFEX.

Regarding to Crowder and Homed (1993) suggestions, the spot price is the cash price on the last day of trading of the corresponding futures contract. The spot prices for ribbed smoked rubber sheet No.3 are obtained from the Rubber Research Institute (RRI) of Thailand. The spot prices for gold bullion with 96.5% purity are obtained from Gold Trader Association, Thailand. The spot prices for Brent Crude oil are obtained from TFEX. All dataset is daily closing price.

Methodology

It is clearly presented in section 2 that the method of cointegration is employed in much previous literature to test the market efficiency. The analysis of unit root for all

[1] 1 Thai gold Baht equals to 15.244 grams

data series is required before the cointegration testing. The augmented Dickey-Fuller (ADF) and the KPSS techniques are account for the order of integration. The unit root test of all series are estimated as follows

$$\Delta y_t = b_0 y_{t-1} + \sum_{i=1}^{\Gamma} b_i \Delta y_{t-i} + c_t \quad \text{Eq. (1)}$$

where y_t represents the log level of futures or spot price for all commodities. For the ADF technique, the null hypothesis is that y_t is non-stationary. For the KPSS technique, the null hypothesis for the KPSS is that y_t is stationary. Following Lai and Lai (1991) and Kellard et al. (1999), the model for testing commodity market efficiency is as follows

$$S_t = \alpha + \beta F_{(t-1)} + u_t \quad \text{Eq. (2)}$$

where F_{t-1} is the natural logarithm of futures price before the contract matures at time t-1, S_t is the natural logarithm of spot price at time t, and u_t is an error term with mean zero and finite variance. The Eq. (2) can be rearranged as follows

$$u_t = S_t - \alpha - \beta F_{(t-1)} \quad \text{Eq. (3)}$$

According to Engle and Granger (1987), the residual series (u_t) in Eq. (3) are required to test for stationary. S_t and F_{t-1} are cointegrated if both futures price (F_{t-1}) and spot price (S_t) for all commodities are integrated at the same order of I(1). In addition, the Johansen's cointegration method is further explored the long-run relation between both prices. Eq. (2) also accommodates for testing the unbiased estimators of future spot price. Under the hypothesis of market efficiency, if the futures price is an unbiased estimator of future spot price and no risk premium exists, the β and α in Eq. (2) should be equal to 1 and 0, respectively. The α and β should be tested independently and jointly. Following Wang and Ke (2005), the likelihood ratio test (LR test) is employed for testing joint null hypothesis of $\alpha = 0$ and $\beta = 1$. Using canonical correlation proposed by Johansen and Juselius (1990), the likelihood ratio test follows an asymptotic chi-square distribution.

For the short-run efficiency, the Error Correction Model (ECM) is employed. This model allows for the long-run relationship as well as short-run adjustments. The ECM with 1 cointgrating vector is as follows

$$\Delta S_t = \rho_0 + \rho_1 \Delta F_{t-1} + \rho_2 ECM_t + \nu_t \quad \text{Eq. (4)}$$

where

$$ECM_t = S_{t-1} - \alpha + \beta F_{t-1} \quad \text{Eq. (5)}$$

The coefficient ρ_1 indicates the short-run relationship between change in F_{t-1} and change in S_t. The coefficient ρ_2 indicates the speed of adjustment back to equilibrium. Conventionally, the sign of ρ_2 is expected to be negative, implying that S_t finally converges to the long-run equilibrium relationship.

Empirical results

Table 1 provides the unit root test for the levels of log prices of all commodities, which is the first step of testing cointegration. The augmented Dickey-Fuller (ADF) and the KPSS techniques are account for the order of integration. The results indicate that the unit root exists for all data series. When the first difference of all price series is applied, it can be confirmed that the futures and spot price have integrated at the same order of I(1). Table 2 shows the t-statistics of the ADF test on the residual series from Eq. (3). The t-statistics are more negative than the critical values at all levels. It

can be concluded that the residual series are stationary, implying that the futures price and spot price are cointegrated for all series data.

Table 1 Unit root tests for all data series

	ADF	KPSS
RSS3		
Spot	-1.071	1.717***
Futures	-0.605	2.108***
GF		
Spot	-2.069	1.251***
Futures	-2.088	1.251***
GF10		
Spot	-1.696	1.872***
Futures	-1.595	1.865***
BR		
Spot	1.213	2.658***
Futures	0.818	2.671***

Notes: Both spot and futures price are presented in log level. The t-statistics are shown for the ADF test. The lag length is automatic selection by SIC. The LM-statistics are presented for the KPSS test. *, **, *** denote 10%, 5%, and 1% significant level, respectively.

Table 2 The ADF test on the residual series

	AFET	TFEX		
	RSS3	GF	GF10	BR
T-statisitcs	-3.709414	-14.70139	-34.07882	-15.46485
Test critical values:				
1% level	-3.433986	-3.434147	-3.435211	-3.436625
5% level	-2.863033	-2.863104	-2.863574	-2.864199
10% level	-2.567612	-2.567650	-2.567903	-2.568238

Notes: The lag selection is based on SIC, with the maximum of 24. The constant but no trend are employed in a regression on the levels of the series.

Using the Johansen's cointegration testing, the trace test (λ_{trace}) in Table 3 shows that the null hypothesis of the zero rank (r=0) is rejected at 1% significant level for all commodities. Meanwhile, the null hypothesis of one cointegrating regression ($r \leq 1$) cannot be rejected. This is confirmed by the maximum eigenvalue test (λ_{max}). The maximum eigenvalue and trace test identify one cointegrating vector. Thus, the results from Johansen approach are consistent with the Engle-Granger approach in Table 2, indicating the futures price and spot price of all commodities are cointegrated. Therefore, the long-run efficiency exists in both markets. The results emphasize previous literature such as Gulen (1998), Kellard et al. (1999), Mckenzie and Holt (2002), that the long-run relationship between futures price and future spot price exists.

Furthermore, Eq. (2) is account for testing the unbiased estimators of future spot price. The estimated cointegrating vector of Eq. (2) is presented in Table 4 with the value of normalized intercept (α) and futures prices coefficients (β). Under the hypothesis of market efficiency, the null hypothesis of $\alpha = 0$ and $\beta = 1$ is investigated. For the individual null hypothesis test of $\alpha = 0$ or $\beta = 1$, the α of RSS3 and GF is not rejected at 5% significant level, suggesting that no risk premium exists for RSS3 and GF market.

Table 3 Johansen's Conitegration testing for long-run efficiency

	AFET	TFEX		
	RSS3	GF	GF10	BR
λ_{trace}				
r = 0	42.79911***	107.3849***	112.0185***	187.9689***
	(20.26184)	(20.26184)	(20.26184)	(20.26184)
r ≤ 1	0.772526	4.532285	2.327329	3.011063
	(9.164546)	(9.164546)	(9.164546)	(9.164546)
λ_{max}				
r = 0	42.02658***	102.8526***	109.6911***	184.9578***
	(15.89210)	(15.89210)	(15.89210)	(15.89210)
r ≤ 1	0.772526	4.532285	2.327329	3.011063
	(9.164546)	(9.164546)	(9.164546)	(9.164546)

Notes: The deterministic test specification allows for no linear trends and the cointegrating equations have intercepts**.** The critical value at 0.05 level is shown in parentheses. *, **, *** denote 10%, 5%, and 1% significant level, respectively.

The β of RSS3 is not rejected at 10% significant level, implying that futures price of RSS3 is a good predictor for its spot price in the long-run. However, the results for unbiasedness in TFEX contradict the findings in AFET. The α and β of GF10 and BR is rejected at 1% significant level, implying that the risk premium exists and the futures price of GF10 and BR is a poor predictor for their spot price. Then, the joint null hypothesis of α = 0 and β = 1 in cointegrating equation is imposed. The χ^2 statistic expresses the LR statistic for joint restrictions. The null hypothesis is rejected for all commodities at 1% significant level, suggesting that risk premium exists and futures price is not a good estimator of future spot price for all commodities.

Table 4 Test of unbiasedness estimators

	AFET	TFEX		
	RSS3	GF	GF10	BR
α	0.354920*	0.026635	0.061602***	-0.311666***
	(0.21291)	(0.02787)	(0.01993)	(0.02728)
β	0.932785	0.996493***	0.992994***	1.038002***
	(0.04785)	(0.00281)	(0.00200)	(0.00342)
χ^2	607.4128***	763.1264***	776.5589***	140.0598***

Notes: Standard errors are shown in parentheses. *, **, *** denote 10%, 5%, and 1% significant level, respectively.

Since only one cointegrating vector is estimated, the Error Correction Model (ECM) is testing for the short-run efficiency. Table 5 presents the empirical results of short-run efficiency. The speed of adjustment (ρ_2) for all commodities shows the expected sign and is significant at 5% level. The futures prices of all commodities will eventually adjust to a long-run relationship. The adjustment of RSS3, GF, GF10, and BR is about 1.61%, 12.94%, 6.53%, and 32.41% of the deviation of their spot prices, respectively. The commodities in TFEX have a greater speed in adjustment to a long-run relationship than commodity in AFET. However, the short-run multiplier coefficient (ρ_1) for RSS3 and GF10 is not significant, suggesting that the change in futures price of RSS3 and GF10 is not correlated with the spot price in the short-run.

Hence, the short-run relationship between futures and spot prices in RSS3 and GF10 is inefficiency.

Table 5 Short-run efficiency

	AFET	TFEX		
	RSS3	GF	GF10	BR
ρ_0	0.0000518 (0.00024)	0.000101 (0.000267)	0.034231 (0.025310)	-0.000840** (0.000421)
ρ_1	0.000870 (0.012837)	0.131438** (0.063531)	-0.003438 (0.002542)	0.131728*** (0.024729)
ρ_2	-0.016097*** (0.002038)	-0.129379** (0.054436)	-0.065324** (0.027794)	-0.324093*** (0.016364)

Notes: Standard errors are shown in parentheses. *, **, *** denote 10%, 5%, and 1% significant level, respectively.

Conclusion

This paper investigates the efficiency of commodity futures market in Thailand – AFET and TFEX. The variety of commodities are selected from both markets to examine. Since Thailand is the biggest natural rubber, the ribbed smoked rubber (RSS3) from AFET are selected. Gold (GF and GF10) and Brent crude oil (BR) are selected as they are only two commodities which have been traded in TFEX among various financial assets. Concerning about the liquidity and trading volume, only series of nearby contract for all commodity futures are obtained. The Engle-Granger approach and Johansen technique confirm the long-run equilibrium in both AFET and TFEX. This strengthens the much previous literature in terms of long-run equilibrium. When the unbiased estimators of future spot prices are investigated, the joint null hypothesis of $\alpha = 0$ and $\beta = 1$ is rejected, suggesting that the risk premium exists and futures price is not a good estimator for future spot price for all commodities. Using the ECM to investigate the short-run efficiency, the short-run relationship between futures and spot price is only found in GF and BR. However, the futures price of all commodities will eventually adjust to a long-run relationship. According to the results, even though the long-run equilibrium exists in both commodity markets, producers, hedgers, or investors should be aware in predicting the future spot price as the futures price is not a good estimator. In addition, market regulators should concern about over-speculation from this inefficiency, particularly in the shot-run.

References

Chin, M.D., LeBlanc, M., & Coibion, O. (2005). The predictive content of energy futures: An update on petroleum, natural gas, heating oil and gasoline. *The National Bureau of Economic Research*, 11033.

Crowder, W.J., & Hamed, A. (1993). A cointegration test for oil futures market efficiency. *The Journal of Futures Markets*, *13*, 933-941.

Engle, R.F., & Granger, C.W.J. (1987). Cointegration and error correction: representation, estimation, and testing. *Econometrica*, *55*, 251-276.

Fama, E.F. (1970). Efficient capital markets, a review of theory and empirical work. *Journal of Finance*, *25*, 383-414.

Gulen, S.G. (1998). Efficiency in the crude oil futures market. *Journal of Energy Finance & Development*, *3(1)*, 13-21.

Johansen, S., & Juselius, K. (1990). Maximum likelihood estimation and inference on cointegration – with applications to the demand for money. *Oxford Bulletin of Economics and Statistics*, *52*, 169-210.

Kellard, N., Newbold, P., Rayner, T., & Ennew, C. (1999). The relative efficiency of commodity futures markets. *The Journal of Futures Markets, 19(4)*, 413-432.

Kristoufek, L., & Vosvrda, M. (2014). Commodity futures and market efficiency. *Energy Economics*, *42*, 50-57.

Lai, K. S., & Lai, M. (1991). A cointegration test for market efficiency. *The Journal of Futures Markets*, *11(5)*, 567-575.

McKenzie, A. M., & Holt, M. T. (2002). Market efficiency in agricultural futures markets. *Journal of Applied Economics*, *34(12)*, 1519-1532.

Samuelson, P. (1965). Proof that properly anticipated prices fluctuate randomly. *Industrial Management Review*, *6*, 41-49.

Wang, H.H., & Ke, B. (2005). Efficiency tests of agricultural commodity futures markets in China. *The Australian Journal of Agricultural and Resource Economics*, 125-141.

Zivot, E. (2000). Cointegration and forward and spot exchange rate regressions. *Journal of International Money and Finance*, *19*, 785-812.

Quality Management and the Reduction of Unproductive Times in Agro-Industrial Processes: Bonduelle Portugal

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Abstract
Because of not adding value to the final product, the unproductive times are the subject of this study, in order to proceed, when possible, to its elimination, or the reduction of its duration.
The studies to be developed during this work has as main objective, the creation and implementation of a procedure to reduce the variability, and the duration of unproductive times in production processes, at one food industry factory of a company operating in Portugal.
Moreover, we are also looking to profitably integrate the quality management system already implemented in the company, thereby promoting progress towards a substantial increase in productivity.
First of all, were determined which factors influenced the variability of the unproductive times of the process under study.
After the study, has been found that the use of methods and tools such as 5S, Standardization of Processes (tasks), Visual Control, and the SMED methodology, contributes to the reduction of the variability and/or the duration of unproductive times.
Despite not having been carried out the full integration of the procedure on the quality management system implemented in the company (ISO9001), due to its emphasis on continuous improvement (this being one of the eight basic principles of ISO9001 requirements), it was found that the quality management system already implemented, supports and facilitate the process of reducing the duration of the unproductive times.

Keywords: Unproductive Times, Continuous Improvement, Quality Management, Food Industry, 5S, SMED.

Introduction

The Toyota Production System (TPS), Total Quality Management (TQM) and Total Productive Maintenance (TPM) were developed in Japan as philosophies oriented towards efficient satisfaction of constantly evolving customer needs and expectations. In the US, companies like Motorola and GE developed the concept of Six Sigma (6σ) to pursue similar goals. Quality management systems such as ISO9000 and QS9000 were also developed to guide companies in their conquest of better performance and permanent waste reduction (all that does not add value to products and services) (Pinto, 2006a).

Due to globalization of the economy and markets, companies now face increased competition. There is great pressure to reduce production costs, especially in Western Europe and in the United States, because of increasing opportunities for the relocation of production to more competitive countries (Van Goubergen, 2007).

By not adding value to the final product, unproductive times should be studied, in order to, whenever possible, eliminate or reduce its duration.

This study arises from the need of Bonduelle Portugal continue their loss reduction effort (waste).

In agro – industrial processes using quick freezing as the conservation technology of its products, it is necessary to regularly stop to perform the so-called "thawing" of the equipment carrying out the deep-freezing, the freezing tunnels. The frequency of this stop is related to the equipment being used, and can vary from some hours to some days.

Two other activities where the variation of its duration is also significant are the start and completion of production.

The problem identified is characterized by the existence of a weak optimization in carrying out different tasks during the defrosting activity and/or product change, starting and completion of production, which causes some instability in the planning of production, as well as increases in unproductive times, because when performing these activities the lines are stopped.

The Bonduelle Group was established in the twenties, in France, when Pierre and Benôit Bonduelle decided to begin marketing the vegetables from their family farm in Woestyne. The company thrives and goes into great development after World War II, with registration of the Bonduelle brand in 1947.

In 1989 Bonduelle Portugal was created, and from 1999 onwards the capital of Bonduelle Portugal Agro SA, was fully controlled by Bonduelle SA.

The studies to be undertaken during this work have as main objective the creation and implementation of a procedure to reduce variability and duration of unproductive times in production processes, seeking to integrate advantageously the quality management system already implemented in the company, thereby promoting progress towards a substantial increase in productivity.

Literature review and research questions

The Lead Time and downtimes

According to Pinto (2006a) to start a time reduction process, which is one of the factors contributing to the success of a company, it is important to know the size of each portion of the lead time.

Lead time is the time taken to do something, e.g.: manufacturing lead time, supply lead time or lead time to meet a request from a client.

The main components of lead time, are the following:

- Run: processing time (e.g.: dealing with a customer and manufacturing operations). During this period of time value is added to products or services;

- Unproductive Times: represent all performed activities that do not add value to products or services. Examples: waiting times, setups, transport, breakdowns, delays, quality problems, excess production, etc.

Waste

Unproductive times are considered losses or waste, as they do not bring any benefit to organizations or their production processes.

There are several definitions for loss or waste, and Fernandes (2005) defines loss as the deviation between the ideal situation and the real, deprivation of something, either by loss, destruction, seizure or lack of production, which results, materially, in a loss or decrease in the value of someone's patrimony.

Jackson (1996) *apud* Sebrosa (2008) states that Taiichi Ohno of Toyota defined waste as any activity that does not add value to a product or service. "Value" is what a well informed client is willing to pay for a perfect product delivered at the desired time. As such, anything that, in a process, does not contribute to the creation of a perfect product from the defined date is considered waste.

Amaro and Pinto (2007) describe a number of techniques and tools to identify and classify waste, the three MUs.

In this waste identification approach, the goal is to reach a condition where capacity and what is produced are equal. In other words, there is the amount of labor, materials and equipment to produce the right amount of product/item that has been requested to deliver in a timely manner to the customer.

For the Japanese business management, this is expressed in terms of *muda*, *mura* and *muri*. Three Japanese words that mean (Pinto, 2009):

- *Muda* (waste) – the capacity exceeds what is necessary. All that does not add value is waste and thus should be reduced or eliminated. Seen from another perspective,

waste refers to all components of the product and/or service that the customer is not willing to pay for;

- *Mura* (inconsistency or variation) – the capacity sometimes exceeds what is produced, and sometimes is below;

- *Muri* (irrationality) – to produce above capacity. It is eliminated by the standardization of work, ensuring that all follow the same procedure, making processes more predictable, stable and controllable.

Productivity

Many factors affect how people see and define productivity. For example, perception, knowledge and experience, influence how productivity is seen, defined, measured and improved (Smith, 1995).

According to Prokopenko (1992), productivity is the ratio between the output generated by a production system or service and the input used to create such output. Productivity is then defined as the efficient use of resources (e.g.: labor, capital, materials, energy, information), in the production of goods and services.

Greater productivity means more products or services, using the same amount of resources. Usually we have that: Output / Input = Productivity.

Productivity can also be defined as the relationship between the results achieved and the time spent in obtaining them. The shorter the time needed to achieve the desired result, the more productive the system is.

Labor Study

According to Kanawaky (1992), one of the most powerful tools for increased productivity is the labor study.

The labor study consists in systematically examine the methods of implementation of activities in order to improve the efficiency in the use of resources. The major objective of the labor study is to simplify and/or modify the execution method of the different tasks, in order to reduce or eliminate unnecessary work, or the waste in resource usage.

According to Pinto (2009), unnecessary work refers to the movement that is not really necessary to perform the operations. Or it is too slow, or too fast, or too much.

Common causes of unnecessary work are:

a) Isolated operations;
b) Lack of motivation of people;
c) Incorrect work layout;
d) Lack of, or insufficient, education and training of people;
e) Skills and competencies not developed;
f) Instability in operations.

Many of the movements that we do may not be necessary: work is the movement made to create value to the product or service.

The following figures (Figures 1 and 2) show examples of difficult handling and excessive movement.

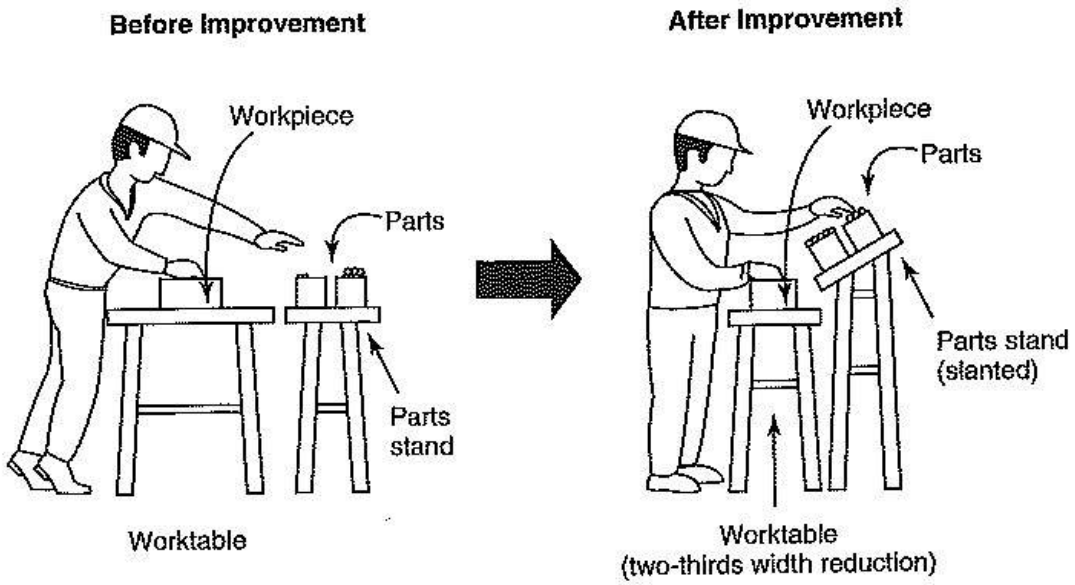

Figure 1: Example of excessive movement and its improvement
Source: TPPDT (1996a), pp. 54

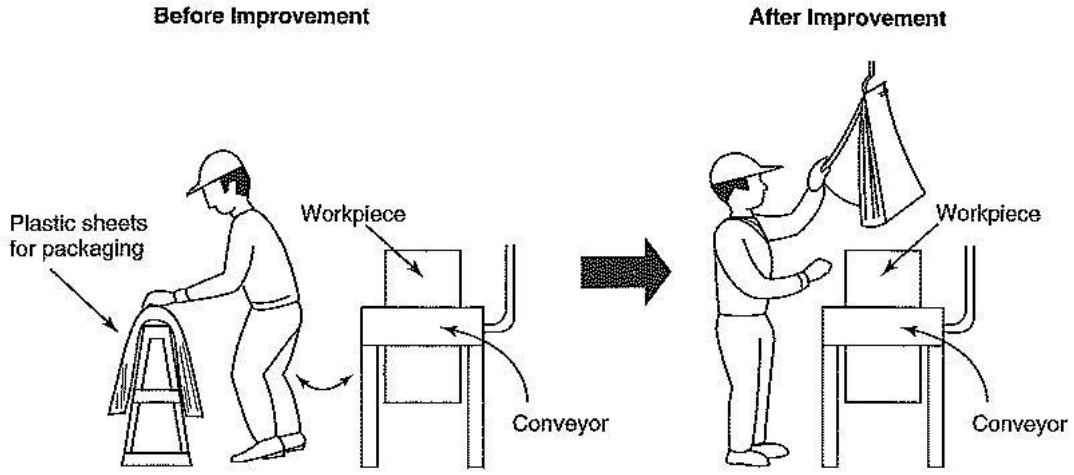

Figure 2: Example of excessive movement and its improvement
Source: TPPDT (1996a), pp. 55

Setup

Van Goubergen and Van Landeghem (2002) and Ulutas (2011) define setup as the time between the production of the final product A and the first good product B, that is, within the standards specified by quality.

In Figure 3 you can see an example of the consequences of a setup in the production of two products.

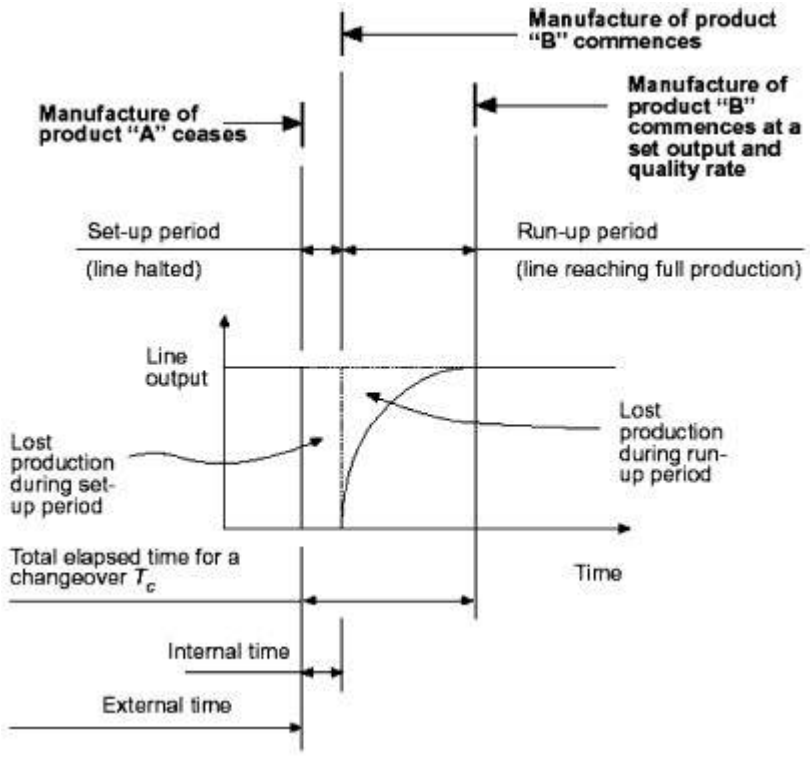

Figure 3: Setup operation period and the obtained output
Source: Cakmakci e Karasu (2007), pp. 335

Michels (2007) emphasizes that, traditionally, companies sought to keep the number of setups at a minimum in order to support production strategies in large batches. The theory was that, in order to justify the setups, the production of large batches was necessary to reduce as much as possible the setup costs. Although the traditional methods minimize the number of setups by producing large batches, this method also contributes to excess stocks, due to the production of a greater amount than what was needed to meet customer orders.

Lopes, Neto and Pinto (2010), report that the diversification of products is growing in current markets, offering greater choice to clients. But a higher number of available goods results in the reduction of the size of orders for the product, and therefore of the setup time, although Jayant, Dhull, Chan and Tang (2007) consider that setup times, in any industry, can be lengthy operations.

Kumar (2013), in turn, presents three reasons for setup reduction:

- Flexibility and inventory reduction: reducing setup time allows the production of small batches, and therefore increases the variety of products available in smaller quantities;

- Production capacity: reducing setup time means increasing production capacity;

- Cost Reduction: part of a product's cost is caused by the cost of production, and production will be stopped less time by reducing the setup time.

Elia (2006) divides the results obtained by reducing setup time into two categories, direct and indirect results:

Direct:

- Reduction in the time of line inactivity;

- Reduction in the time to restore production;

- Reduction of setup errors;

- Product quality improvement;

- Increased workplace safety.

Indirect:

- Inventory reduction;

- Increase in productive flexibility;

- Rationalization of equipment usage.

According to Gathen (2004), the key ingredient for the implementation of a setup time reduction strategy, is total commitment of top management toward the team responsible for this project.

Van Goubergen and Van Landeghem (2002) state that there are several methods of reducing setup times, but that the basic approach and philosophy existent in all of them is the method SMED (Single Minute Exchange of Die). Groote (2006) states that using the SMED method, agribusinesses can reduce the setup time of their lines of packaging until up to 20%. The extra production time obtained can be used, without expensive investments, for higher production volumes and greater flexibility.

SMED Methodology

SMED means Single-Minute Exchange of Die (Tool change in minutes, typically less than 10) and attempts to perform setup operations in short periods of time, i.e., time expressed in less than two digits. The concepts of SMED were introduced by Shigeo Shingo in the 50s in Japan, and from the 80s onwards there was a widespread application of SMED techniques outside Japan's borders (Dave & Filiz, 2012).

In 2001, Moxham and Greatbanks (2001) stated that the SMED method could be applied to any equipment and in any industry.

The SMED methodology takes place in four phases (Dave & Filiz, 2012):

Preliminary phase – Observe and analyze in detail how the setup activities are carried out;

Phase 1 – Remove any unnecessary activity from currently running activities, separate the internal activities from the external ones. Try to perform external activities with the equipment/process running;

Phase 2 – Whenever possible, convert internal activities into external activities;

Phase 3 – Simplify, optimize and rationalize all activities (reduce the duration of the activities, whether internal or external).

In Figure 4 we can see a schematic example of SMED process's steps, noting the large difference in setup time from the beginning to the end of the process.

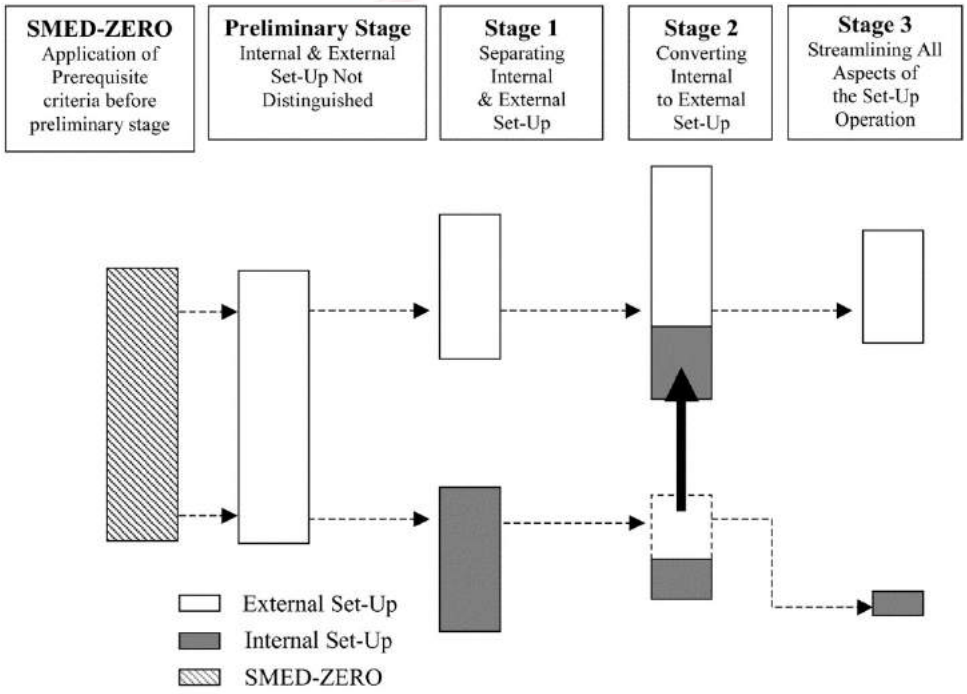

Figure 4: Steps of SMED methodology
Source: TPPDT (1996b), pp. 60

Van Goubergen and Van Landeghem (2001) emphasize that in order to focus initial efforts of setup time reduction it is useful to use a Pareto chart, as shown in the example of Figure 5, which allows to identify which task or set of tasks take more time in the setup process, and the effort of task time reduction should initially focus on these tasks.

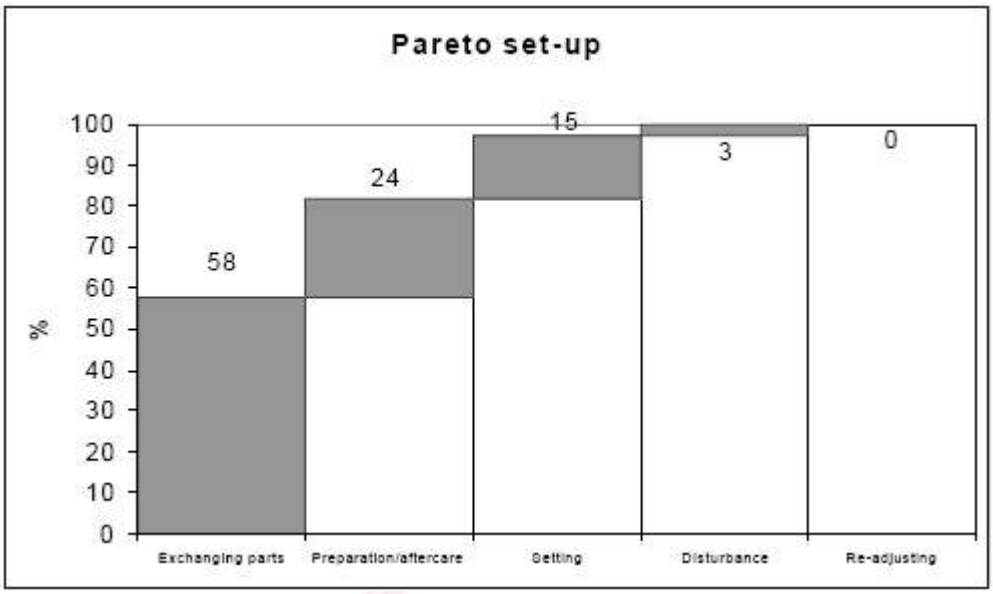

Figure 5: Pareto setup graph
Source: Van Goubergen and Van Landeghem (2001), pp. 6

The SMED method has proven effective for over twenty years, and Trovinger and Bohn (2005) refer to its integration with the modern tools of information technology, giving examples of the use of wireless terminals, bar code and relational databases.

5S Methodology

The 5S methodology is based on five Japanese words, Seiri, Seiton, Seiso, Seiketsu and Shitsuke, that by beginning with the letter S made this methodology known as 5S (Peterson & Smith, 2001; Michalska & Szewieczek, 2007; Foster, 2013).

According to Pinto (2009) the 5S refer to a set of practices that seek to reduce waste and improve the performance of people and processes through a very simple approach that is based on the maintenance of optimal conditions of workplaces (i.e.: ordered, tidy and organized).

The elements of the 5S methodology are (San Miguel, 2010; Heizer & Render, 2011):

• *Seiri* (eliminate): consists in distinguishing between necessary and unnecessary items based on the degree of need, which will determine where the item should be saved or if it should be eliminated, eliminating all unnecessary objects.

• *Seiton* (order): consists in defining the form and identification of storage as well as the quantity and the distance from the point of use. Factors such as frequency of use, size, weight and the cost of the item influence this definition.

• *Seiso* (clean): cleaning means much more than improve the visual aspect of an equipment or environment. It means preserving the functions of the equipment and eliminate risks of accidents or quality loss.

• *Seiketsu* (standardize): standardization of tasks allows maintaining the previous three S (Seiton, Seiso, Seiketsu). This S creates a consistent way so that the tasks and procedures are performed.

• *Shitsuke* (discipline): This concept is based on education and compliance with work rules, particularly concerning organization and security. It is a change of behavior that ensures the maintenance of the remaining S.

The implementation of the 5S is performed in five stages, each stage promoting the application of an element (S). At the end of each phase an analysis of the situation is done in order to verify their correct implementation and subsequent passage to the next stage (Moraes, 2004).

Within the scope of this study, the following research questions have been identified:

• What are the components that influence the variation of unproductive times in the production process under study?

• Will the application of methods and tools such as the 5S and SMED methodology, contribute to the reduction of variability and duration of unproductive times in production processes?

Methodology

Due to the existence of several production processes at Bonduelle Portugal, all of them with a high degree of complexity, only one process was chosen to perform this study.

The choice was the process that is in production during the course of this work, not being revealed by recommendation of the company.

After this work is completed, if the company management team recognizes the procedure created as beneficial, then the procedure can be applied to other processes.

To achieve the defined purpose, the methodology used is as follows:

Bibliographical research and study of several works on implementation techniques/improvement tools.

Information collection and statistical analysis concerning the production carried out to study unproductive times and variations imposed by the several variables, such as:

• Line Manager – verify the existence of differences in the duration of activities between different line managers, and verify that the realization of the whole activity by a single manager is different of the activity be performed by two managers, that is, the person starting the activity it is not the same as the one finishing it, due to shift changes;

• Activity Shifts – verify the existence of differences between the performance of activities in different shifts of eight hours (00-08h, 08-16h, 16-24h);

• Product Sequence – compare duration differences, when a change in product is made, and check for differences between the various product combinations;

• Try to recognize best practices through the use of improvement techniques and tools, and to make changes in the process, in order to standardize the tasks performed, as well as to reduce its duration;

• Creation or change of work instructions to standardize procedures in product changes, as well as in the start and completion of production;

• Information collection and statistical analysis to verify the impact of the changes introduced.

Results analysis and discussion

The content presented below will serve as a guide to reduce unproductive times, and as a basis for the development of training of team leaders as well as of the remaining team elements.

This work is related to the theme of continuous improvement, so this procedure is a cycle, when reaching the end it starts again, as in a culture of continuous improvement there is always something to improve.

Identification of variability factors

In this topic a study of factors that can influence the length of the product change will be presented.

For the process under analysis the following factors have been proposed to the study:

- Shift change: check for variations attributable to the fact that the realization of product change is made by different shifts, that is, the shift that starts the product change is not the same that ends the product change;

- Change of forming tube: in this process, to obtain the final product packaging, the packaging film must go through a tube forming the packaging. Each packed format (e.g.: units of 400g, 750g, 1250g, 5kg...) in combination with each vegetable (e.g.: pea, broccoli, zucchini...), requires a specific tube. There is the possibility that this change results in variations in the time of product change due to the need to change the packaging forming tube;

- Vegetable change: Each vegetable has specific needs of production line cleaning upon completion of production, either by its natural characteristics or by the technological conservation process that has undergone earlier. Therefore, there is a possibility of variation due to product change (reference), with vegetable change;

- Realization Turn: Possible variations due to product change in different shifts of eight hours (00-08h, 08-16h, 16-24h);

Once all information concerning product changes to the process under study was collected, all data was introduced into a statistical software, and after being organized and analyzed, the following conclusions concerning the factors under study were obtained:

- Shift Change: we find that the product change not being started and finished in the same shift, causes a substantial increase in the average duration time of product change. In this case the increase in the average time of the product change due to this factor is between 32% and 108%.

- Forming Tube Change: it is found that the factor forming tube change increases product change time, with an average increase between 49% and 135%.

- Vegetable Change: evidence from the results obtained suggests that this also contributes to the increase in the average duration time of product changes. In this case the average increase is between 43% and 87%.

- Implementation Shift: From the data obtained it is clear that the implementation shift factor influences the duration of unproductive times, by looking to the observed variations. It is worthy of notice that, by the data obtained, it was possible to identify the shift from 00-08h as the shift having values above average, that is, it is expected that in this shift the average duration of a product change is higher than in other shifts.

Enunciation of good practice

Good practices resulting from this example of study of factors that influence the length of product changes time will be enunciated:

- Prevent product changes to coincide with shift changes. To do so, teams should be allowed to continue production until the end of the shift whenever they predict that it is not possible to finish all product change operations in their shift, so that the following shift performs the whole product change.

- In terms of production planning, seek to select the production sequence involving the least possible number of changes in the forming tube;

- As in the case of the forming tube, the number of changes in vegetables must be minimized, by optimizing the planning of the production sequence;

- For the process under study, product planning changes to the shift of 00-08h should be avoided, trying whenever possible to make those changes in the shift of 08-16h;

- Avoid last-minute changes. It is problematic to have a whole line prepared for the production of a given product reference and have to disassemble it all, to make the production of another product that was not originally anticipated.

Application of the 5S Methodology

One of the activities to be developed in order to improve unproductive times is the application of the 5S methodology.

One factor deserving special attention in implementing the 5S methodology is the need to perform activities that are completely different from the normal daily activities of the different actors in the process (e.g.: line managers, operators ...). For this reason it is necessary to pay special attention to compliance with all the rules and safety procedures.

To simplify the audit process all anomalous situations should be recorded. This registration allows an easy transmission of the audit results to the various actors in the process under analysis as well as a proper monitoring of anomalies identified in previous audits. The registration of abnormal situations should always be updated in all audits made to the corresponding area.

The abnormal situation registry map consists in registering the abnormal situation, within the 5S methodology, identifying to which S or S's the identified situation corresponds. Record of the person who identified the situation, so that at the time of resolution any doubt about the planned action can be easily clarified by the person who made the identification. The date and place where the situation was identified is recorded. The action to be taken to solve the situation is recorded, as well as the person responsible for carrying out this action.

It will be good practice not to move to a next S without having all the previous S situations completely solved, naturally with the exception of situations that require a lot of time and/or a high investment.

A practical example of the application of the 5S methodology in a cabinet that supports operations is shown in Figures 6 and 7.

Initial situation (Figure 6):

- Completely messy closet;

- Absence of identifications;

- Presence of unnecessary tools and materials.

Figure 6: Operations support cabinet before 5S
Source: Author

Situation following 5S (Figure 7):

- Improvement in the organization;

- Presence exclusively of necessary tools;

- Correct identification of the location of each tool.

Figure 7: Operations support cabinet after 5S
Source: Author

Application of the SMED Methodology

To reduce the duration and variability of the length of product change time the SMED methodology is required.

This methodology is implemented in four phases, as shown in the following figure (Figure 8), with each phase objectives and application methods described below.

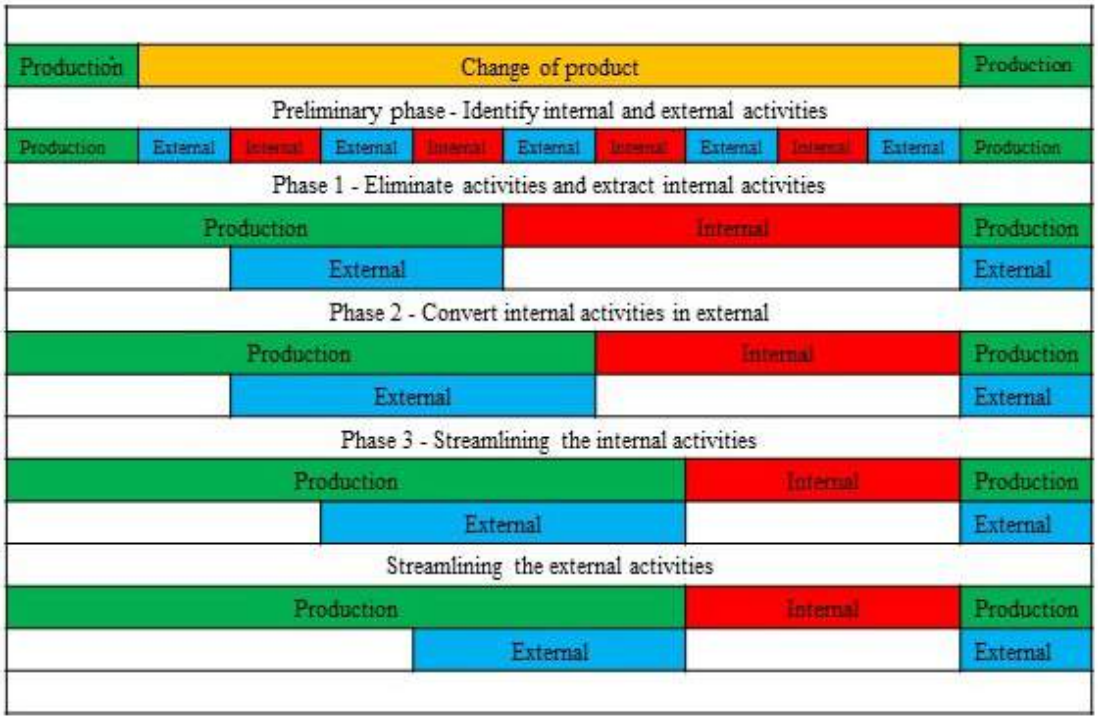

Figure 8 – Phases of the SMED methodology
Source: Author

Preliminary phase

The preliminary phase consists in observing and analyzing in detail how the activities (internal and external) of product changes are made.

- Internal activity is an operation that must be obligatorily performed with the equipment stopped;

- External activities are all activities related to the product change that can (and should) be made with the equipment in operation, either before or after the product change occurs.

The purpose of the preliminary phase is to identify and separate the internal activities from the external activities involved in the product change process.

Phase 1

Goals:

- Eliminate all unnecessary activities, whether internal or external;

- Create checklists for external activities;

- Create a temporary procedure for the remaining activities (internal activities).

Phase 2

Goal:

- Analyze all internal activities and, whenever possible, seek solutions to make them external activities.

Phase 3

Goal:

- Reduce the duration of all activities. In the process of reduction the duration of activities, it should be first reduced the duration of the internal activities, and only after that analyze and reduce the duration of external activities.

Creation of product change matrix

The creation of a product change matrix is extremely useful in terms of production planning, as it allows a simple way to choose the sequence of products in order to reduce overall processing time.

Note that it is important to analyze a product change in both directions, that is, analyze the change from product A to product B, and the change from product B to product A, because they may have significant differences in duration.

This difference is due to the characteristics of each product: for example, if product A is pre-fried and product B is blanched, the change from A to B will always be longer than changing from B to A, because cleaning a line in which a pre-fried product was packed is much more complex than cleaning a blanched product.

Figure 9 exemplifies a product change matrix. In this case the duration of the product change times were grouped into three major groups, long duration, medium duration, and short duration changes.

		Initial product						
		Vegetable A 1,0 kg bleached	Vegetable B 5,0 kg pre fried	Vegetable B 1,0 kg bleached	Vegetable A 400 gr bleached	Vegetable C 1,25 kg bleached	Vegetables A + B 1,0 kg bleached	Vegetable C 2,50 kg bleached
Next Product	Vegetable A 1,0 kg bleached		G	S	M	M	S	G
	Vegetable B 5,0 kg pre fried	M		S	G	S	S	G
	Vegetable B 1,0 kg bleached	M	S		M	G	M	S
	Vegetable A 400 gr bleached	S	G	S		M	G	S
	Vegetable C 1,25 kg bleached	M	S	M	S		S	M
	Vegetables A+B 1,0 kg bleached	S	G	G	M	S		S
	Vegetable C 2,50 kg bleached	M	S	M	S	G	S	

Figure 9: Change of product matrix
Source: Author

Note - Extent of the change: G – Great; M – Medium; S – Short.

Figure 10 shows a practical example of the application of the product change matrix. In this case the initial planning involved seven product changes, four of these changes were long duration, one was a medium duration and two were short duration changes.

After reformulating the initial planning, taking into account the information in the matrix, it was possible to reduce the number of product changes to five, all of them being short duration changes.

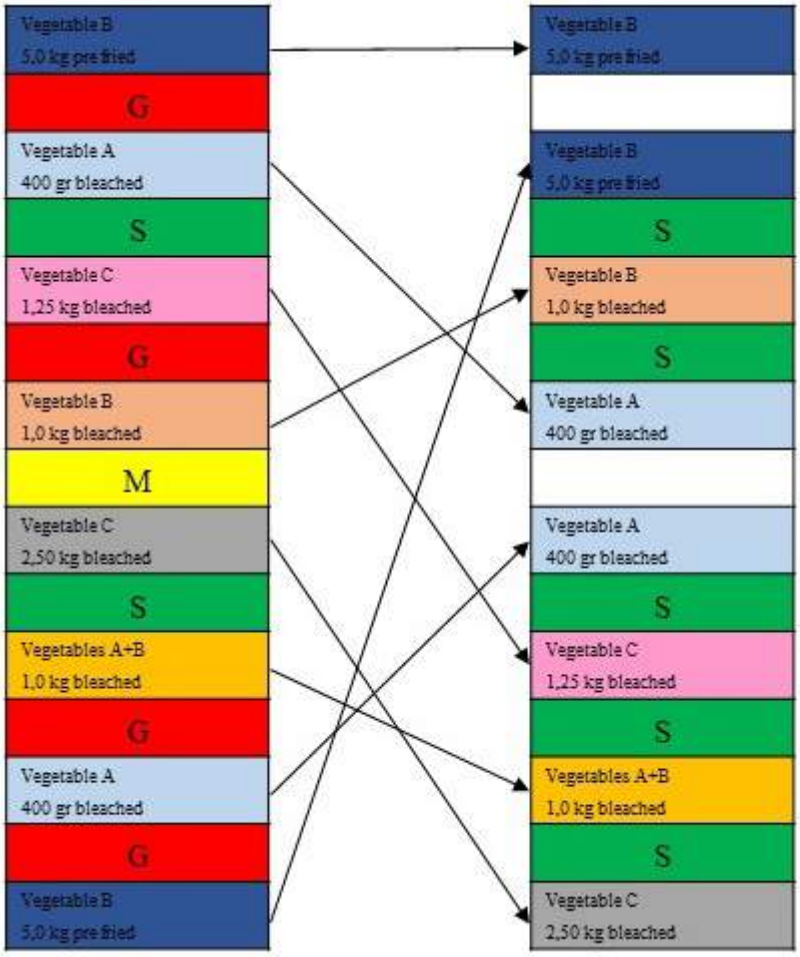

Figure 10: Change of product matrix example
Source: Author

This reformulation of the planning allowed a considerable improvement in production, reducing product changes from seven to five, all five of them being short duration changes.

Conclusions and recommendations

Based on the previous chapter we can say that the objective of this study was achieved because at the level of the research questions, either by the practical work performed, or by the literature review, we obtained favorable conclusions, which will be presented below.

Looking to the good practices identified, it can be said that the result presented is positive, as it serves the purpose of continued loss (waste) reduction effort by Bonduelle Portugal.

In what concerns the first research question, we conclude that the factors that influence the variation of unproductive times are:

- Shift Change;

- Forming Tube Change;

- Vegetable Change;

- Implementation Shift.

In what concerns the second research question, we can conclude that the continuous improvement methods and tools used facilitate the reduction of variability and duration of unproductive times.

It can also be concluded that the 5S method is more influential in the reduction of work duration, and that the SMED methodology influences either the reduction of work duration, or the reduction of the variability of unproductive times.

As main recommendations for future research we can highlight the continued application of the procedures in the area under study, and the extension to other areas of the plant where its effect will be even more visible, and also the study of other continuous improvement techniques and tools that can be integrated in the procedure presented aiming the optimization of the entire production process.

References

Amaro, A. P., & Pinto, J. P. (2007). Criação de valor e eliminação de desperdícios. *Revista Qualidade*, (Primavera), 38-44.

Cakmakci, M., & Karasu, M. K. (2007). Set-up time reduction process and integrated predetermined time system MTM-UAS: A study of application in a large size company of automobile industry. *International Journal of Advanced Manufacturing Technology, 33*, 334-344.

Dave, Y., & Sohani, N. (2012). Single Minute Exchange of Dies: Literature Review. *International Journal of Lean Thinking, 3*(2), 27-37.

Elia, S. (2006). Applicazione della metodologia S.M.E.D. alla trafilatura di superconduttori. Unpublished PhD dissertation, University of Pisa, Pisa.

Fernandes, A. R. (2005). Manutenção produtiva total: uma ferramenta eficaz na busca da perda-zero. Trabalho final de MBA, Universidade Federal de Itajubá.

Foster, S. T. (2013). *Managing Quality – Integrating the Supply Chain* (5th ed.). Upper Saddle River: Pearson Prentice Hall Inc.

Gathen, G. (2004). What can SMED do for you?. *Industrial Maintenance & Plant Operation*, July, 10-12.

Groote, Y. (2006). More flexibility and productivity SMED reduces changeover times. *Food Engineering & Ingredients*, November, 32-34.

Heizer, J., & Render, B. (2011). *Operations Management - Global Edition* (10th ed.). Upper Saddle River: Pearson Prentice Hall Inc.

Jayant, A., Dhull, U., Chan, C. Y., & Tang, J. C. S. (2007). Implementing Single Minute Exchange of Dies Concept in Indian Manufacturing Company. *Annual Journal of Institute of Industrial Engineers, 27*, 20-30.

Kumar, P. C. (2013). Set up Reduction – A perfect way for productivity improvement of computer numerical control (CNC) set up in manufacturing company. *Journal of Mechanical Engineering Research, 5*(8), 166-170.

Lopes, R., Neto, C., & Pinto, J. P. (2007). QUICK CHANGEOVER Aplicação prática do método SMED. *Kéramica*, (302), 31-36.

Michalska, J., & Szewieczek, D. (2007). The 5S methodology as a tool for improving the organisation. *Journal of Achievements in Materials and Manufacturing Engineering, 24*(2), 211-214.

Michels, B. T. (2007). *Application of Shingo's single minute exchange of dies (SMED) methodology to reduce punch press changeover times at Krueger International*. Unpublished MS dissertation, University of Wisconsin-Stout, Wisconsin.

Moraes, P. H. A. (2004). *Manutenção produtiva total: estudo de caso em uma empresa automobilística.* Unpublished MS dissertation, Universidade de Taubaté, São Paulo.

Moxham, C., & Greatbanks, R. (2001). Prerequisites for the implementation of the SMED methodology - A study in a textile processing environment. *International Journal of Quality & Reliability Management, 18*(4), 404-414.

Peterson, J., & Smith, R. (2001). *The 5S Pocket Guide*. New York: Quality Resources.
Pinto, J. P. (2006a). *Gestão de operações na indústria e nos serviços.* Lisboa: Lidel.

Pinto, J. P. (2009). *Pensamento Lean a filosofia das organizações vencedoras.* Lisboa: Lidel.

Prokopenko, J. (1992). *Productivity management a practical handbook.* Geneva: International Labour Office.

San Miguel, P. A. (2010). *Calidad* (2nd ed.). Madrid: Paraninfo.

Sebrosa, R. (2008). *Modelo de avaliação das condições de aplicação da produção magra.* Unpublished MS dissertation, Universidade Nova de Lisboa, Lisboa.

Smith, E. A. (1995). *The productivity manual.* Houston: Gulf Publishing.

The Productivity Press Development Team (TPPDT). (1996a). *5S for operators: 5 pillars of the visual workplace*. Portland: Productivity Press.

The Productivity Press Development Team (TPPDT). (1996b). *Quick changeover for operators: the SMED system*. Portland: Productivity Press.

Trovinger, S. C., & Bohn, R. E. (2005). Setup Time Reduction for Electronics Assembly: Combining Simple (SMED) and IT-Based Methods. *Production and Operations Management, 14*(2), 205-217.

Ulutas, B. (2011). An application of SMED Methodology. *World Academy of Science, Engineering and Technology*, (79), 100-103.

Van Goubergen, D. (2007). Using Time Studies for Quantifying Waste and Improvement Opportunities in Work Methods. *IIE Annual Conference and Expo 2007*.

Van Goubergen, D., & Van Landeghem, H. (2001). An Integrated Methodology for More Effective Set-up Reduction. In *Proceedings IIE Annual Conference 2001 Solutions*, publish on CD, May 20- 23, Dallas, Texas.

Van Goubergen, D., & Van Landeghem, H. (2002), Reducing Set-up Times of Manufacturing Lines. *Proceedings of the International Conference on Flexible Automation and Intelligent Manufacturing*. July 15-17. Germany.

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Corporate Governance, Corporate Social Responsibility And Community Development: The Case of Niger Delta

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Abstract
In recent years, multinational companies operating in developing countries, have come under increasing pressure to engage in community development as stakeholders and as a consequence, the activities of these companies have been subjected to greater public scrutiny. The multinational companies have responded by ensuring that global corporate social responsibility strategies are incorporated into their larger global business strategies.
Based on a case study of a multinational oil company operating in Nigeria, this paper examines the role of multinational companies in community development. An assessment of the corporate community initiatives by oil companies, initiated to achieve community development, through corporate governance and corporate social responsibility was carried out. A major argument presented is on the inability of the initiatives to douse the crises in Niger Delta. This is argued to be due to issues such as corruption, which is seen to be largely responsible for most of the crises between multinational companies and communities and has affected the way the local communities perceive the multinational companies and corporate social responsibility.
This paper suggests that the decisions of those charged with governance as well as their corporate social responsibility initiatives, should serve as a means of managing the relationship between the oil and gas companies and the Niger Delta community and encouraged wider participation of community members.

Keywords: Corporate governance, CSR, Multinationals, Communities, Development

Introduction

Globally, increasing emphasis has been placed on the need for good corporate governance and corporate social responsibility, which will enhance community development. Stakeholders have also placed a demand on the oil and gas companies with respect to developing community development projects, which will improve the conditions of the communities in which they operate. This demand is due to the minimal existence of infrastructure and community development projects. Prior research has shown that oil and gas companies can have a positive impact in communities where they operate, through good corporate governance and corporate social responsibility strategies, which prioritises sustainable community development (Chan, Watson and Woodliff 2014). Corporate governance and corporate social responsibility are two different concepts essential to community development. While corporate governance is seen as the way companies are directed and controlled (Cadbury committee1992), corporate social responsibility is seen as a way to characterise corporate values and behaviour (Thomsen 2006). These two concepts have been argued to be important in ensuring that multinational oil and gas companies are involved in community development (Chan, Watson and Woodliff 2014).

Prior studies have argued about the importance of multinational oil companies' involvement in community development of communities in which they operate (Du and Vieira 2012; Crane Matthew and Spense 2013; Andrew 2015), especially in developing countries where infrastructural developments are lacking (Idemudia 2014; Imomotimi and Collins 2014; Nzeadibe, Ajaero and Noke 2015; Acey 2016). Imomotimi and Collins (2014) suggests that the multinational oil and gas companies should be involved in community development as a way to demonstrate their corporate social responsibility policies. Even though companies have been perceived as entities whose primary interest is to maximize shareholders wealth (Hg 2007), Jamali (2006) suggested the need for companies to manage the interest of other stakeholders.

Accordingly, with the increasing level of social activism, stakeholder demands and expectations, it has indeed become imperative for companies to channel their focus on other aspects of corporate performance. Scholars have argued that companies now include such indicators as environmental performance, social and community development, value added as well as economic performance in evaluating their activities (Hardjono and van Marrewijk, 2001). In addition to including the performance indicators, companies are seen to be reinforcing the issue of corporate governance and corporate social responsibility (Chan, Watson and Woodliff 2014). Corporate governance and corporate social responsibility has been reinforced in the light of how companies produce their products, their community interactions and projects, their charitable activities as well as how they relate with other stakeholder groups. Thus, stakeholders groups have increasingly placed a demand on the oil and gas companies with respect to developing community development projects, which will improve the conditions of the communities in which they operate. The demand is due to the minimal existence of infrastructure and community development projects. For instance, in the Niger Delta region of Nigeria, emphasis have been placed on increasing the level of infrastructural developments by the multinational oil and gas companies operating within the region. Idemudia (2014) argued that the multinational

oil and gas companies operating in Niger Delta should be involved in sustainable community projects as an act of their corporate citizenship.

Hence, both corporate governance and corporate social responsibility have become very essential in conducting the affairs of companies. Based on a study of the multinational oil companies operating in Nigeria, this paper examines the role of multinational companies in community development in the Niger Delta. The paper will conduct review of Niger Delta Region and level of infrastructural development. It will then assess the corporate community involvement by multinational oil and gas companies in Niger Delta. To further emphasise their corporate community effort, the paper will use an example of a multinational oil and gas company to highlight the efforts made towards community development in the Niger delta. Furthermore, the paper will identify some of the reasons why the crises in Niger Delta region still persist despite the community developmental efforts.

The Niger Delta Region and level of infrastructural development

The Niger delta region of Nigeria contributes most of the oil and gas reserves in Nigeria. Their contribution has placed Nigeria as one of the top 10 countries contributing about 60% of the world oil, while the oil and gas sector accounts most of the foreign exchange of the Nigerian Government (Obi and Rustard 2011; IEA 2013; NNPC 2013). Irrespective of the vast resources available to this region, as well as, the activities of the multinational oil and gas companies in trying explore the enormous natural resources, most people in Niger Delta region of Nigeria are impoverished (Obi and Rustad 2011a) and lack basic amenities such as healthcare, good roads, drinking water and electricity. Currently in Niger Delta, the low level of infrastructural development is caused partly due to, policies that appear to be unfavourable to the region and the oil exploration of the oil and gas companies operating within the region. One of the by-products of oil exploration within the region is the truncated sustainability of Niger Delta environment. The environmental issues, which arise as a result of the oil exploration, have greatly undermined the existence of the people of Niger Delta (Amnesty international 2009). Oil and gas exploration in Niger Delta region has contributed greatly to the environmental degradation in the region. More so, environmental degradation is argued to be the result of oil spillage, oil pipeline leakage and gas flaring. For instance, gas flaring is argued to have an undesirable effect on the safety and health of the indigenes of Niger Delta (Nwaichi and Uzazobana 2011) and have an adverse environmental impact (Homssi 2012; Ismail and Umukoro 2014).

Nevertheless, increase in the level of exploration in the region, has encouraged the inflow of the multinational oil and gas companies within Niger Delta region thereby increasing the contribution of the region to Nigerian foreign reserve and total revenue. Additionally, the presence of multinational oil and gas companies has also increased the level of association between the people of Niger Delta region and oil companies. Despite the contribution of the region to the revenue of the Nigeria, the level of poverty in Niger Delta region is pervasive. Therefore, a contrast exist between the level of contribution of the Niger Delta region to the total revenue of Nigeria and the pervasive level of poverty in Niger Delta region. Furthermore, the indigenes of Niger Delta feel alienated and deprived. This has resulted in conflicts, which sometimes involved kidnapping and violence between the people of Niger Delta and the

multinational oil and gas companies. Even though Nwankwo (2015) argued that in Niger Delta, the prevailing perspective of people is when and where will the next conflict be, Frynas (2000) suggested that conflict has not always been the nature of the relationship between the Niger Delta indigenes and the oil and gas companies. It is argued that the relationship between Niger Delta indigenes and the multinational companies were very cordial in the 1960s and there was corporation between them (Frynas 2001) but became a conflictual one due to the endemic level of poverty, feeling of alienation and deprivation as well as the undesirable impact of oil and gas activities in Niger Delta region (Okolo 2014). The expectation of the people in Niger Delta region is to see as much infrastructural development within the region as is currently seen in other parts of the country such as Abuja and Lagos. However, their expectation appears to be an illusion as very little has been done, to meet the expectations of the people of Niger Delta. This has resulted in the emergence of pressure groups.

Organizing as pressure groups, the indigenes of Niger Delta tries to put across their plight to the government of the Federal Republic of Nigeria as well as the oil and gas companies operating within the region. Irrespective of the indigenes organizing as pressure groups, they appear to be ineffective in their agitations before the multinational oil and gas companies as well as the government. This may be due to their inability to use their social positions as pressure groups, to ensure that the economic and political factors, which determine their wellbeing are influenced in their favour. In addition, the arbitrariness of the government, as well as, persistent corruption has been argued to be another reason why Niger Delta region is yet have some of their points of agitations met (Okolo 2014). This implies that the indigenes of Niger Delta region feel powerless, insecure and vulnerable in a society in which they ought to feel protected and secured. These have contributed in no small measure to the level of poverty as well as the underdevelopment of the Niger Delta region. For this reason, Nigeria has witnessed several conflicts in Niger Delta. The emergence of the Niger Delta Avengers is a prime example of a conflict propelled by economic inequality, underdevelopment, corruption, marginalization, inadequate governance and lack of basic amenities. The recent activities of the Niger Delta avengers, suggests that there is an increasing need for more corporate community relations in Niger Delta.

Thus, the situation in Niger Delta has placed a huge demand on those charged with governance of oil companies, pertaining to their corporate social responsibility, which is expected to impact on community development. This is argued to have become a strong area of focus for the oil and gas companies, especially with the level of destruction of oil and gas facilities such as oil pipelines by the indigenes, damage to company reputation as well as the cost of repairing the vandalized or destroyed facilities. The oil and gas companies, in trying to address the conflicts are argued to incorporate corporate social responsibility initiatives, such as stakeholder engagement, partnership with the Niger Delta communities through infrastructural development as well as other philanthropic activities. Despite these efforts, the relationship between the oil and gas companies and Niger Delta community has been argued to be a relationship filled with animosity (Frynas 2001; Idemudia 2014). This implies that the efforts have not been successful in putting a stop to the agitations of the indigenes of Niger Delta, which suggests a gap between community expectations

and corporate social responsibility efforts expressed through the community involvement projects or initiatives of the oil and gas companies.

Corporate community involvement in the Niger Delta

Corporate community involvement is a very broad area in corporate strategies and is impacted by both corporate governance and corporate social responsibility. Liu et al. (2013) suggests that it is a strategy, which manages the goodwill of a company, towards the community in which they operate, in order to gain social influence, community solidarity as well as access to information. This implies that corporate community involvement may include company/community partnerships, philanthropic activities and other business practices, which, may impact positively on the goodwill of the company. While Liu et al. (2013) argued that corporate community involvement provides the company with the opportunity to demonstrate their goodwill within communities, in which they operate, critics such as Idemudia (2014) suggests that corporate community involvement has such limitations as being defensive and reactive. Similarly, Acey (2016) argued that companies perform their acts of goodwill in response to certain stimulus. This implies that it may take a destructive act such as kidnapping of key company officials by Niger Delta militants or the recent bombings by Niger Delta avengers to prompt the company to perform their acts of goodwill.

According to Okafor (2003), western practices and values are the underpinnings of corporate community involvement, as a result, unsuitable for developing nations such as Nigeria. Despite this, oil and gas companies uses corporate community involvement activities or projects to drive their social responsibility agenda, in order to create goodwill, within communities in which they operate. Thus, corporate governance and corporate social responsibility have a role to play. Kemp (2010) argued that the model of governance adopted to manage the corporate community involvement practices, would impact on the outcome of such practices and may rely on such decisions as to whether to manage the practices internally, externally or in collaboration with other stakeholders.

Over the years, different corporate community involvement models have emerged. Idemudia (2014) suggests three governance models for corporate community involvement namely, traditional in house model, corporate community foundation and the global memorandum of understanding which have developed in Niger Delta region. Each of the model approaches corporate community involvement differently, and oil and gas companies in the Niger delta select their model based on organisational attributes, motives as well as contextual factors. This implies that different oil and gas companies adopt different models or a combination of models. For instance, while chevron and shell adopted the global memorandum of understanding model, Exxon Mobil uses the traditional in house model.

Ameashi and Amoa (2010) suggested that different perspectives of capitalism might determine the choice of model. The models are also determined by circumstantial factors, which influence the manner in which companies may choose to engage with local community. For instance, Idemudia (2010) argued that the change to community development approach from community assistance approach by Shell was influenced by the 1990s crises in Ogoni land. Likewise, Hoben et al. (2012) suggested that the

change from the traditional in house model to the global memorandum of understanding model by Chevron was influenced by the Warri crises in the early 2000. Idemudia (2014) argued that another reason why companies may adopt different models is inter-organizational learning. For instance, Statoil developed the corporate community foundation model to ensure that there is no repeat of the of the Royal Dutch Shell experience. Likewise, in 2005, shell adopted the global memorandum of understanding model, which was considered to be a more effective model, when they perceived the limitations of their community and sustainability development model.

Based on the arguments above, it can be deduced that the multinational companies operating in Nigeria to ensure community development in Niger Delta have used several corporate community involvement models. Also, as the multinational oil companies identify a limitation, they seek to explore an alternative model, which they believe will be more effective. For the purpose of this paper, the attempts made by Shell Petroleum Development Company hereafter referred to as Shell, to ensure community development in the Niger delta will be examined as an example.

Efforts made towards community development in the Niger delta and the challenges faced

Shell is the largest oil and gas company in Nigeria with over 1000 producing wells, eight gas plants 6000 kilometres of pipelines and flow lines, 87 flow stations. Shell has engaged in organised corporate community involvement in the Niger Delta since 1960 ranging from the implementation of various corporate community involvement models to employing the indigenes of the Niger Delta region. For example shell Nigeria records that 95% of their full time staff are Nigerians. This implies that in their bid to ensure community development, the citizens of Nigeria are employed. With strong focus on good corporate governance and corporate social responsibility Shell continues to embark upon sustainable social development. Some of the corporate community involvement efforts made by shell are shown in the table below and thereafter explained.

Period	Model	Approach
1960-1997	Community Assistance Model	Philanthropic in nature with shell providing what they perceive to be lacking in communities.
1998-2003	Community development model	Philanthropic in nature but empowered communities to fully participate in developing development plans and prioritizing their developmental needs.
2004-2006	Sustainable community development model	Appointment of area teams to communicate regularly with communities who are in charge of their development using projects which improves

		their ability to their own socio-economic development
2006-date	Global memorandum of understanding	Makes use of community clusters and brings together, communities, state representatives, non-profit organizations, local government and Shell, in a decision making committee referred to as cluster development board

Source: Author using information from SPDC website

Community assistance model

Shell adopted the community assistance model of corporate community involvement between the periods 1960 to 1997. The community assistance model is essentially about providing such amenities as healthcare, drinking water, and good roads as well as other amenities to Niger Delta communities. The philanthropic nature of this model implies that Shell will focus on what they perceive to be lacking in the communities and provide them to the communities. The non-involvement of indigenes gives the community a feeling of helplessness. Over time, the communities who would rather see themselves as partners on the wheel of progress, no longer received the amenities provided as an act of philanthropy but saw it as payment for exploring and polluting the environment. As a result, the communities expect and demand further amenities from shell as well as other multinational oil and gas companies within the region. This model seen as a top-down approach to community development and was ineffective in Niger Delta. This implies that the approach could not alleviate poverty through one off provisions of certain basic amenities for the communities and could have been sustainable, if sustainable long-term projects, which will ensure sustainable development, are embarked upon.

Community development model

Given the ineffectiveness of the community assistance model, Shell saw the need to change their approach and between the periods 1998 to 2003 adopted the community development model of corporate community involvement. The community development model was also philanthropic in nature. However, in addition to its philanthropic nature, the community development model involved the communities in the development of their collective needs, in terms of infrastructural developments in order of priority, to enable Shell assist in solving their most pressing economic needs. According to SPDC (1999), communities were empowered to fully participate in the development of a corporate development plans, with the support of Shell's partners; hence, a lot of projects were embarked on. SPDC (1999) suggests that the community development model was more effective than the community assistance approach because it emphasized a bottom up approach to community development. Ite (2004) argued that shell attracted foreign direct investments under this model, which exemplified a multi-stakeholder approach to community development. Despite the success recorded by the community development model, SPDC (2004) suggested that

shell was limited in the attainment of all the objectives of their community development policy, due to the incorporation of the community assistance model while applying the community development model. The limitations caused increased expectations from the communities and when expectations were not met, crises ensued (WAC Global Services 2003). According to SPDC (2004) Shell, identifying with the limitation saw a need to approach community development using a sustainable community development approach, which would emphasize sustainability rather than the volume of projects embarked on.

Sustainable community development model

With the challenges face by shell in in approaching corporate community involvement using the community development model, Shell adopted the sustainable community development model in 2004. The sustainable community development approach emphasized important areas of economic empowerment, healthy living, human capital development as well as partnership with progressive stakeholder groups such as international organisations. Area teams were appointed, to interact with the communities on a daily basis, which ensured that due consideration is given to community issues. SPDC (2004) suggests that the sustainable community development put the communities in charge of their development, using projects, which improves their ability to contribute to their own socio-economic development. As a strategy, shell draws resources from government agencies, local partners as well as international partners in order to complement the efforts made to ensure corporate community involvement in Niger Delta. This is achieved through project partnership and strategic alliances. For instance, Shell launched a strategic partnerships with the World Bank's International Finance Corporation to ensure seamless community development projects. According to Finlayson (2003), the project partnerships and strategic alliances provide the opportunity for joint funding of community development projects and inter-agency collaboration. These collaborations and partnerships stems from the understanding that Shell may not have all that is required, to resolve all the developmental issues in the Niger Delta.

Global memorandum of understanding

In 2006, shell in their bid to further improve the sustainable community development approach, adopted the global memorandum of understanding model. The global memorandum of understanding was considered to be a more effective model, when Shell perceived the limitations of their community and sustainability development models. The global memorandum of understanding is an agreement between community clusters based on local governments and shell, which brings together, communities, state representatives, non-profit organizations, local government and Shell, in a decision making committee referred to as cluster development board (SPDC 2013). The agreement allows shell and its joint venture partners to make available a secure funding for a period of five years, which will fund the communities preferred developmental needs. The global memorandum of understanding emphasized such issues as prevention of conflicts, transparency, and regular communication with the communities, sustainability and accountability. The progress achieved by the global memorandum of understanding, is such that other oil and gas companies, operating in the Niger Delta, have applied it successfully.

Since the global memorandum of understanding came into effect, Shell has signed agreements with over 33 clusters covering over 349 communities and has successfully completed over 723 projects with over $117 million expended on the projects. According to Amadi and Abdullah (2011), the global memorandum of understanding now forms part of Shell's wider sustainable community development strategy (Amadi and Abdullah, 2011). It aims to empower, improve quality of life, stimulate employment, reduce poverty, and fulfil Shell's social performance goals (Odeleye, 2011). Shell has provided 27 health care facilities, which serves the communities in the Niger Delta (Obore 2010). Additionally, Shell has been awarding postgraduate degree scholarships to indigenes of Rivers, Delta and Bayelsa since 2010, to study courses relevant in oil and gas industry. Some other successes recorded due to the implementation of the global memorandum of understanding are shown in the table below:

Number of clusters	**Region**	**State**	**Details**
4	Niger Delta	Rivers State	Etche 1, Akuku Toru IA and Degema 3 which are four clusters in Rivers state have had scholarships awarded to their indigenes to study both in Nigeria and abroad.
1	Niger Delta	Bayelsa State	In Bayelsa state, the Takiri cluster has implemented a four-month adult literacy program in partnership with the National Youth service Corp (NYSC). The cluster has also assisted indigenes to obtain the first school-leaving certificate.
1	Niger Delta	Rivers State	RA cluster in Rivers State provided 90 market stalls in Rumibekwe market in Portharcourt providing self-employment opportunities for about 300 women.

1	Niger Delta	Rivers State	The Rivers State Degema 3 cluster development foundation, in partnership with Skye bank launched a 'transport to wealth scheme. Shell contributed to this project with over $1.5 million. The project made 100 unemployed men and women taxi drivers, who now own their own taxis the cost of which is to be paid out of the profit of their business.
1	Niger Delta	Bayelsa State	A $90000 counterpart funding was received by the Nembe City Development foundation in Bayelsa state. The fund was used for capacity building and over 61 indigenes benefited.
1	Niger Delta	Rivers State	Through the Oyigbo Cluster in Rivers state, 15 engineering graduates are being trained, to understand the operations and maintenance of power plants and its auxiliary facilities and aims to train 30 youths over a period of four years.
1	Niger Delta	Bayelsa State	Through Nembe Bassambiri

			Development Foundation in Bayelsa State, boreholes with water quality of the world health organisation standard were provided for the Okipriri community providing 10,000 litres of water per day.

Source: Author using information from SPDC website

Suggestively, the shell initiatives and projects under the global memorandum of understanding may be seen as a reflection of good decision making by those in charge of governance as well as an effective application of Shell's corporate social responsibility policies. In spite of the initiatives and projects, Idemudia (2014) suggested that the projects have only been able to take care of a comparatively small fraction of the Niger Delta population. For example, even though financial assistance is provided for 6,670 students were assisted financially in the postgraduate, undergraduate and secondary scholarship programs in the Niger Delta, the Nigerian federal ministry of education (2015) suggests that the number of people enrolled in the region was over 20million. This implies that the number of people who benefit from the initiatives, when compared to the wider population is not very significant and the impact their education may make on the wider populace may be minimal. Based on this, there seem to be a major issue with the impact of these initiatives, which by a stretch of logic may imply a significant issue with both governance decisions regarding the initiatives, as well as the application of Shell's corporate social responsibility policies. In addition, it is argued that the total coverage, in terms of the number of people who benefitted from the projects, can be significant at micro level but may not be significant at the macro level (Christian Aid 2004; Quake 2008). Therefore, the initiatives and projects are argued to be insufficient in dealing with the environmental, social and ethical challenge (Visser 2010) and suggested a form of incremental corporate social responsibility (Visser 2012) in Niger Delta.

Seemingly, Shell has had significant corporate social responsibility expenditure yet; the impact made in the Niger Delta still remains at the micro level. Although, it may be assumed that an increasing corporate responsibility expenditure should produce a macro level development and wider societal impact, such an assumption may fail to consider other issues which affects the implementation of corporate social responsibility strategies in Niger Delta which is well out of the scope of corporate social responsibility.

Why the crises despite the community developmental efforts

Based on the corporate community developmental efforts highlighted above, the Niger delta seems to be besieged with crises, as a way of protesting the minimal impact of the projects. Scholars have suggested several factors contributing to the crises in Niger Delta region. Akpan (2006) argued that the divide and rule[1] approach by oil and gas companies is a possible reason for the ineffectiveness of the community developmental efforts. Similarly, community fragmentation, greediness among community leaders (also known as local chiefs and in some instances High chiefs) as well as ethnic competition for the ownership of natural resources, are strong indicators of how corporate social responsibility projects may influence the ongoing militant insurgency in the Niger Delta (Idemudia and Ite 2006; Watts 2008; Asuni 2009; Nwoke 2015). In addition, Omotola, (2009) suggested that the multinational oil and gas company projects may add minimal additional benefit to the indigenes of Niger Delta because they are motivated by capitalist expansionism. Furthermore, Idemudia and Ige (2006) argued that gas flaring and other oil and gas related environmental pollutions has an adverse implication for the health of the Niger Delta indigenes and the community expects to be well compensated. In line with Idemudia and Ige (2006), Nwoke (2015) argued that gas flaring and other oil and gas related environmental pollution are not sufficiently compensated for by the corporate social responsibility project in the region.

Nevertheless, with communities perceiving the corporate social responsibility projects, as rental for the use and abuse of their environment during oil exploration and the top down approach used by Shell and other multinational oil and gas companies, concerns have been raised as to what the multinational oil and gas companies perceive to be the need of the communities (Frynas 2005; Amadi and Abdullah 2011; Nwoke 2015). Therefore, it may be inferred that the corporate social responsibility projects and initiatives may cause divisions in the communities, as the communities strive for a greater level of development.

Another issue which influences the minimal impact made by the corporate social responsibility projects in the Niger Delta is corruption. Idemudia (2010) and Nwoke (2015) suggested that there is a high level of misappropriation of funds meant to alleviate poverty, provide infrastructural amenities and attain an improved level of socio-economic development. The level of corruption is argued to be a reflection of the inability of development agencies and Nigerian government, to judiciously utilise funds to foster development in the Niger Delta (Amadi and Abdullah, 2011). This implies that the potential of corporate social responsibility projects to succeed in Niger Delta, may be hindered by the level of corruption in Nigeria. Ogula (2012) recognised issues which impacts on the ability of the corporate social responsibility projects to address the developmental issues in Niger Delta, and suggests that it would be unfair to expect the projects and initiatives alone to solve the developmental issues.

It is argued that the multinational oil and gas companies politically influence government policies to favour their activities (Omeje 2005; Okontan 2008; Obi,

[1] Divide and rule is a strategy used to gain and maintain power by breaking up larger concentrations of power into pieces such that individually, they have less power than the one implementing the strategy.

2009), which may have adverse implications for the communities in which they operate. For instance, Ako and Oluduro (2010) suggested that such political influence is a reason why the Nigerian government is yet to amend the laws relating to gas flaring in order to ensure that it is stopped. This implies that they are yielded to the political lobbying of the multinational oil and gas companies regarding the issue of gas flaring. Ako et al. (2007) argued that the multinational oil and gas companies are criticised for their mode of operation, which is a reflection of poor corporate social responsibility practices. Their mode of operation is argued to be below the standard of operation in developed nations (Ajayi and Ovharhe 2016).

From the above, it is obvious that the multinational oil companies have in their attempt to ensure community development, adopted different models of corporate community involvement. However, given the current crises in the Niger Delta involving the Niger Delta avengers, it appears that these models have not effectively addressed the developmental needs of the Niger Delta community.

Conclusion

Undoubtedly, the Niger Delta generates a significant amount of the resources used for economic development in Nigeria but paradoxically; the region is among the least developed part of the country. In order to address the issue of infrastructural development, the oil and gas companies operating within the region, came up with corporate community projects, which ought to address the lack of infrastructural development within the region. However, this paper has shown that the corporate community projects on one hand, has great potential to promote development in the Niger Delta region and on the other hand, can be a source of corruption and mismanagement which results in further conflict. Additionally, the various corporate community initiatives and projects were argued to have benefited the indigenes of the Niger Delta at a very micro level, with an insignificant level of impact at the macro level.

There is evidence in literature that both corporate governance and corporate social responsibility has a role to play in community development, which may reduce the level of conflicts. The argument in this paper supported by literature suggests that lack of development in the region is one of the root causes of the conflict within the Niger Delta region. Therefore, this paper suggests that the decisions of those charged with governance as well as their corporate social responsibility initiatives, should serve as a means of managing the relationship between the oil and gas companies and the Niger Delta community. This paper also suggests a wider participation of members of communities in order to ensure that the funds made available are used for specified projects. While the expectation is that the prevalent corporate community initiatives ought to deliver maximum benefits to the communities in terms of development, they can be argued to be ineffective in addressing the undesirable impact of oil production in the Niger Delta communities. Therefore, the people in charge of governance as well as those charged with task of designing the corporate social responsibility strategy, should address the core issues causing social conflict and integrate community perceptions in designing the company's corporate social responsibility policies.

References

Acey, C., 2016. Managing wickedness in the Niger Delta: Can a new approach to multi-stakeholder governance increase voice and sustainability?. *Landscape and Urban Planning*.

Ako, R. and Oluduro, O., 2010. Bureaucratic rhetoric of climate change in Nigeria: international aspiration versus local realities. *Paper presented at the 8th IUCN Academy of Environmental Law Colloquium, Ghent, Belgium,* 14-16 September.

Akpan, W., 2006. Between Responsibility and Rhetoric: Some consequences of CSR practice in Nigeria's oil province. *Development Southern Africa* 23(2): 223–40.

Amadi, B.E. and Abdullah, H., 2011. Evaluating Multi-Sector Partnerships for Sustainable Community Development in Nigeria. *Canadian Social Science* 7(6): 272–9.

AMNESTY INTERNATIONAL 2009, Nigeria. Petroleum, Pollution and Poverty in the Niger Delta. *Amnesty International*, London, AFR 44/017/2009.

Andrews, O.T., 2015. The Nigerian State, oil multinationals and the environment: A case study of Shell Petroleum Development Company (SPDC). *Journal of Public Administration and Policy Research*, 7(2), p.24.

Asuni, J. B., 2009. Understanding the Armed Groups of the Niger Delta. Council on Foreign Relations Working Paper. *New York: Council on Foreign Relations*.

Cadbury report 1992. http://www.icaew.com/en/library/subject-gateways/corporate-governance/codes-and-reports/cadbury-report (Assessed on 12 May, 2016)

Chan, M.C., Watson, J. and Woodliff, D., 2014. Corporate governance quality and CSR disclosures. *Journal of Business Ethics*, *125*(1), pp.59-73.

Christain Aid 2004. Behind the Mask: The real face of corporate social responsibility. London: *Christian Aid*.

Crane, A., Matten, D. and Spence, L.J., 2013. Corporate social responsibility in a global context. Chapter in: Crane, A., Matten, D., and Spence, LJ,'Corporate Social Responsibility: Readings and Cases in a Global Context, 2, pp.3-26.

Du, S. and Vieira Jr, E.T., 2012. Striving for legitimacy through corporate social responsibility: Insights from oil companies. *Journal of Business Ethics*, *110*(4), pp.413-427.

Federal Ministry of Education 2015. Education for all 2015 National Review Report: Nigeria. Nigeria EFA Review Report 2000-2014. Abuja: *Federal Ministry of Education*.

Finlayson C., 2003. The business case for sustainable development: the Shell experience. *A Keynote Address Presented at the 2003 Commonwealth Business Forum, Abuja, Nigeria,* 2003.

Frynas, J.G., 2000. Oil in Nigeria: Conflict and litigation between oil companies and village communities (Vol. 1). *LIT Verlag Münster.*

Frynas, J.G., 2001. Corporate and state responses to anti-oil protests in the Niger Delta. *African Affairs*, *100*(398), pp.27-54.

Frynas, J.G., 2005. The False Developmental Promise of Corporate Social Responsibility: Evidence from multinational oil companies. *International Affairs* 81(3): 581–98.

Hardjono, T. W. and van Marrewijk, M., 2001. The social dimensions of business excellence. *Corporate Environmental Strategy*,8:223–33.

Hg, M., 2007. An essay on social responsibility and the limits of the corporate form: A perspective on environmental protection. *Journal of Environmental Law and Practice*, 17: 115–39.

Homssi, A.M., 2012. Flaring Reduction and Emission Minimization at Q-Chem. In: A.AROUSSI and F. BENYAHIA, eds. Proceedings of the 3rd Gas Processing Symposium. *Oxford: Elsevier*. pp. 58-63

Idemudia, U. and Ite, U.E., 2006a. Demystifying the Niger Delta Conflict: Towards an integrated explanation. *Review of African Political Economy* 33(109): 391–406.

Idemudia, U. and Ite, U.E., 2006b. Corporate–community relations in Nigeria's oil industry: Challenges and imperatives. *Corporate Social Responsibility and Environmental Management* 13(4): 194–206.

Idemudia, U., 2014. Oil companies and sustainable community development in the Niger Delta, Nigeria: the issue of reciprocal responsibility and its implications for corporate citizenship theory and practice. *Sustainable Development*, *22*(3), pp.177-187.

Idemudia, U., 2014. Oil companies and sustainable community development in the Niger Delta, Nigeria: the issue of reciprocal responsibility and its implications for corporate citizenship theory and practice. *Sustainable Development*, 22(3), pp.177-187.

IEA 2013. IEA [International Energy Agency] Oil market report. *OECD/International Energy Agency*, Paris (2013) Retrieved from: http://www.iea.org/oilmarketreport/

Imomotimi, E.K. and Collins, A.E., 2014. Corporate Social Responsibility and Community Development in the Niger Delta. *Africanology*, 1(1).

ISMAIL, O.S. and UMUKORO, G.E., Modelling combustion reactions for gas flaring and its resulting emissions. *Journal of King Saud University H- Engineering Sciences, (0),*

Ite U. E., 2004. Multinationals and corporate social responsibility in developing countries: a case study of Shell in Nigeria. *Corporate Social Responsibility and Environmental Management* 11: 1–11.

Jamali, D., 2006. Insights into triple bottom line integration from a learning organization perspective. *Business Process Management Journal*, 12: 809–21

Liu, G., Eng, T.Y. and Ko, W.W., 2013. Strategic direction of corporate community involvement. *Journal of business ethics*, *115*(3), pp.469-487.

Marsiglia, E. and Falautano, I., 2005. Corporate social responsibility and sustainability challenges for a Bancassurance Company. *The Geneva Papers*, 30: 485–97.

NNPC 2013. History of the Nigerian petroleum industry. *Nigerian National Petroleum Corporation*, Abuja (2013) Retrieved from: http://www.nnpcgroup.com/NNPCBusiness/BusinessInformation/OilGasinNigeria/industryHistory.aspx

Nwaichi, E and Uzazobona M., 2011. Estimation of the CO2 Level due to Gas flaring in the Niger Delta. *Research Journal of Environmental Sciences*, 5(6), pp. 565-572

Nwankwo, B.O., 2015. The Politics of Conflict over Oil in the Niger Delta Region of Nigeria: A Review of the Corporate Social Responsibility Strategies of the Oil Companies. *American Journal of Educational Research*, *3*(4), pp.383-392.

Nwoke, U., 2015. Neoliberal Corporate Governance, Oil MNCs and the Niger Delta Region: The barriers to effective CSR. *Thesis submitted for Kent Law School: Faculty of Social Sciences*, University of Kent.

Nzeadibe, T.C., Ajaero, C.K. and Nwoke, M.B., 2015. Rethinking corporate-community engagement in the petro-economy of the Niger Delta. Singapore *Journal of Tropical Geography*, 36(3), pp.376-393.

Obi, C., 2009. Nigeria's Oil in Global Energy Security: Critical Issues and Challenges, in Ruchita Beri and Uttam Sinha, eds., Africa and Energy Security: Global Issues, Local Responses, New Delhi: *Academic Foundation*.

Obi C., Rustad S. A., 2011a. Introduction: Petro-violence in Niger Delta—the complex politics of an insurgency. In Obi C, Rustad SA (eds) *Oil and Insurgency in the Niger Delta: Managing the Complex Politics of Petro-Violence*, 1–14. Zed Books, London and New York.

Oboreh, J. S., 2010. The Origins and the Causes of Crisis in the Niger Delta: The way forward in V. Ojakorotu (ed), Anatomy of the Niger Delta Crisis: Causes, consequences and opportunities for peace. *Berlin: LIT Verlag.*

Odeleye, I., 2011. Corporate Social Responsibility and the In-House Counsel, in R. Mullerat (ed.) Corporate Social Responsibility: The corporate governance of the 21st century. Frederick, MD: United States of America: *Aspen Publishers*.

Ogula, D., 2012. Corporate Social Resonsibility: Case study of community expectations and the administrative systems, Niger Delta. *The Qualitative Report* 17(73): 1–27.

Okafor, L., 2003. Enhancing Business-Community Relations: The Role of Volunteers in Promoting Global Corporate Citizenship: National Research Report, New Academy of Business and United Nations Volunteers. Retrieved online at http://www.newacademy.ac.uk/research/businesscommunity/invpages (accessed 17 June 2016).

Okolo, P.O., 2014. NDDC, Conflict, Peace–Building and Community Development in the Niger Delta Region. *Global Journal of Political Science and Administration*, *2*(1), pp.36-51.

Okonta, I., 2008. When Citizens Revolt: Nigerian Elites, Big Oil and the Ogoni Struggle for Self-Determination, Trenton, NJ and Asmara: *Africa World Press*.

Olatubosun, D., 1975. Nigerian neglected rural majority. Ibadan, Nigeria: *Oxford University Press.*

Omeje, K., 2005. Oil Conflict in Nigeria: Contending Issues and Perspectives of the Local Niger Delta People. *New Political Economy*, Vol. 10, No. 3.

Omotola, J. S., 2009. Liberation movements and rising violence in the Niger Delta: The new contentious site of oil and environmental politics. *Studies in Conflict and Terrorism* 33: 36–54.

Quak, E. J., 2008. A Delicate Business. Corporate social responsibility and development. *The Broker*, 16 June. (thebrokeronline.eu/Articles/A-delicate-business).

Thomsen, S., 2006. Corporate governance and corporate social responsibility. Corporate Social Responsibility (pp. 40-54). *Palgrave Macmillan UK.*

Shell Petroleum Development Company (SPDC), 1998. People and the Environment: 1997 *Annual Report. SPDC*: Lagos, Nigeria.

Shell Petroleum Development Company (SPDC), 1999. People and the Environment: 1998 *Annual Report. SPDC*: Lagos, Nigeria.

Shell Petroleum Development Company (SPDC), 2000. People and the Environment: 1999 *Annual Report. SPDC*: Lagos, Nigeria.

Shell International, 2002. People, Planet and Profits: the Shell Report 2001. Shell Centre: London.

Shell Petroleum Development Company (SPDC), 2004a. People and the

Environment: 2003 *Annual Report. SPDC*: Lagos, Nigeria.

Shell Petroleum Development Company (SPDC), 2004b. The New Approach: Sustainable Community Development. *SPDC: Lagos*, Nigeria.

Shell Petroleum Development Company (SPDC), 2004c. Documentation for 2004 Stakeholders' Workshop: 2003 Performance, 2004 Plans and Thrusts for 2005. SPDC: Lagos, Nigeria.
Shell Petroleum Development Company (SPDC), 2004d. Proceedings of the SPDC Integrated Environment and Community Development Stakeholders' Workshop held at the *Petroleum Training Institute, Effurun*, 2004. SPDC: Lagos, Nigeria.

Shell Petroleum Development Company (SPDC), 2005. People and the Environment: 2004 *Annual Report. SPDC*: Port Harcourt, Nigeria.

Shell Petroleum Development Company (SPDC), 2013. Global Memorandum of Understanding. http://s08.static-shell.com/content/dam/shell-new/local/country/nga/downloads/pdf/2013bnotes/gmou.pdf - [Accssed on 12 June, 2016]

Shell http://www.shell.com.ng/environment-society.html

Visser, W., 2010. 'CSR 2.0: From the age of greed to the age of responsibility, in W. Sun, J. Stewart and D. Pollard (eds) Reframing Corporate Social Responsibility: Lessons from the global financial crisis. Bingley: *Emerald Group Publishing Limited*.

Visser, W., 2012. The Future of CSR: Towards transformative CSR, or CSR 2.0. *Kaleidoscope Future Paper Series* 1: 1–17.

WAC Global Services, 2003. Peace and Security in the Niger Delta; Conflict Expert Group Baseline Report. *Working Paper for SPDC*, Port Harcourt, Nigeria.

Watts, M., 2008. Anatomy of an Oil Insurgency: Violence and militants in the Niger Delta, Nigeria in K. Omeje (ed), Extractive Economies and Conflicts in the Global South: Multi-regional perspectives on rentier politics. Abingdon: *Ashgate Publishing Limited.*

FDI Motivations and their Impacts in Former Soviet Republics

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Abstract
Foreign Direct Investments (FDI) in developed and developing countries have particular significance, because of the expected positive impacts they may have on receiving countries - growth enhancing effects caused by the new available resources such as capital, technology and skills that FDI are supposed to bring into the host countries. In particular, studies focused on developing countries point to the need of reaching a threshold level of absorptive capacity to grasp FDI benefits. Indeed, Multinational Enterprises own superior technological and managerial capabilities that may spill over affecting the production function of local firms[1]. The goal of this article is to analyze the growth impact of FDI taking into account different types of FDI and their suitability under different host-economy conditions in Former Soviet Republics (FSR) and Georgia. Eight years ago, a survey conducted about „The Motives and Impediments to FDI in the CIS"[2] in a group of four FSR countries (Ukraine, Moldova, Georgia and Kyrgyzstan) based on a survey of 120 enterprises. The same kind of survey conducted by author of this article in 2016 in Georgia based on survey of 45 enterprises (18 of them are from top 50 investors in last five years operating in Georgia). The results indicate that non-oil multi-national enterprises (MNEs) are predominantly oriented at serving local markets. Most MNEs in the FSR operate as 'isolated players', maintaining strong links to their parent companies, while minimally cooperating with local FSR firms. The surveyed firms secure the majority of supplies from international sources. For this reason, the possibility for spillovers arising from cooperation with foreign-owned firms in the FSR is rather low at this time.

Keywords: Investment Motivations in FSR

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[1] Sikharulidze D (2012). MOTIVATIONS FOR FOREIGN DIRECT INVESTMENT AND THEIR IMPACT ON GEORGIA'S ECONOMY. Economics and business 61-78
[2] Kudina, A., & Jakubiak, M. (2008). The Motives and Impediments to FDI in the CIS.

The present work is based on research (K.A; J.M; 2008) in the two countries Moldova and Ukraine attest (60 respondents) and the author's own research in 2016 in Georgia (45 respondents). The main objective was to define investment motives by asking interviewees to answer several questions: about the strategic role of the subsidiary established in the host FSR country, about their investment motives, and about the share of exported production. The 2008 year sample consisted of 30 foreign-owned companies in Ukraine, 30 foreign-owned firms in Moldova, 30 foreign-owned companies in Georgia, 29 in Kyrgyzstan and 1 in Kazakhstan. We use 2008 survey results of Ukraine and Moldova (60 firms) and own survey of Georgia (45 firms). We also compared the 2008 survey data to 2016 survey data of Georgia.

Investment Motivations

Investment motives are often classified either as market-seeking (when investing firm wants to supply products and services to a recipient country market) or as resource-seeking (intending to benefit from cost-efficient production in a recipient country) and/or as efficiency-seeking (looking for labour-productivity advantage or local specific creative assets).

Market seeking

This motive is the dominant one in the sample. Most of the companies that participated in the survey held a substantial share of the recipient country's market. Companies that participated in the survey (2007-2008), had mastered a significant part of the recipient country's market[3]. The average domestic market share for Ukrainian firms was close to 30%, while Moldovan investors held leading positions with average market share of about 47%. Only in Georgia did foreign investors estimate that they possesed less than 20% of the local market share. This means that the majority of the surveyed firms not only managed to supply their host markets, but also secure dominant positions in these markets. The percentage of local production of final and intermediate goods that is exported was rather low at 17% and 30% on average, with the exception of Moldova[4]. About 70% of all production of final goods is earmarked for local markets. Some companies even mentioned that they faced a lot of problems when trying to export their products to other countries, particularly to Russia. The role of the CIS affiliates in the operations of their parent companies as suppliers of existing products to the host country market and to other CIS markets was found to be rather important (see Figure 3). The companies noted high levels of demand in the growing markets, which is very positive for the further expansion of their businesses.

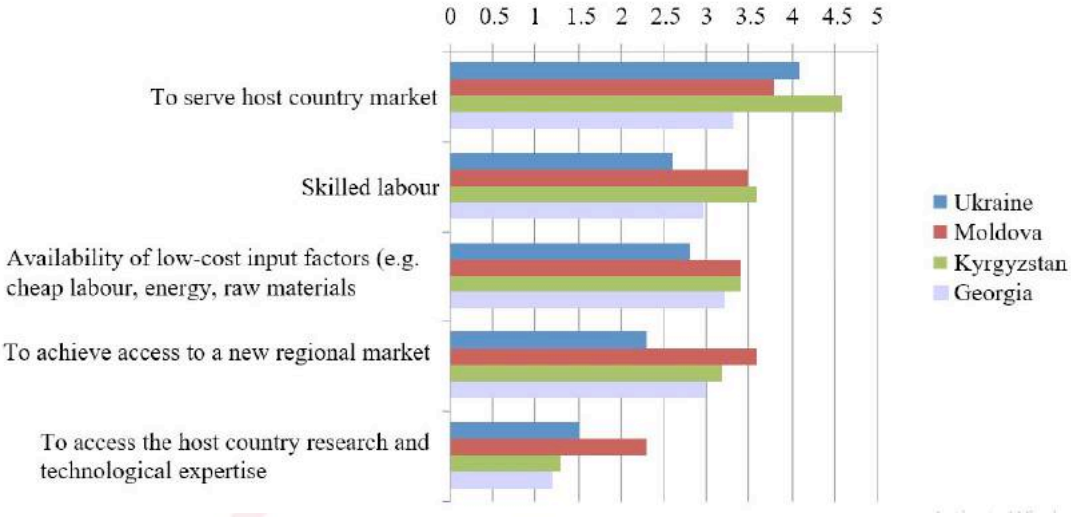
This outcome is supported by the assessment of investment motives. The interviewees were asked to grade reasons for initiating business activity in the CIS by ranking each of the options on a scale of 1 (unimportant) to 5 (very important). Most companies mentioned the ability 'to serve the host country market' as the most important motive in all four economies (see Figure 1). On the top of this, companies in Moldova and Kyrgyzstan mentioned the ability to avoid import duties while supplying the domestic

[3] Kudina, A., & Jakubiak, M. (2008). The Motives and Impediments to FDI in the CIS. 18-21; 28-35

[4] Where the majority of both intermediate and final goods are exported.

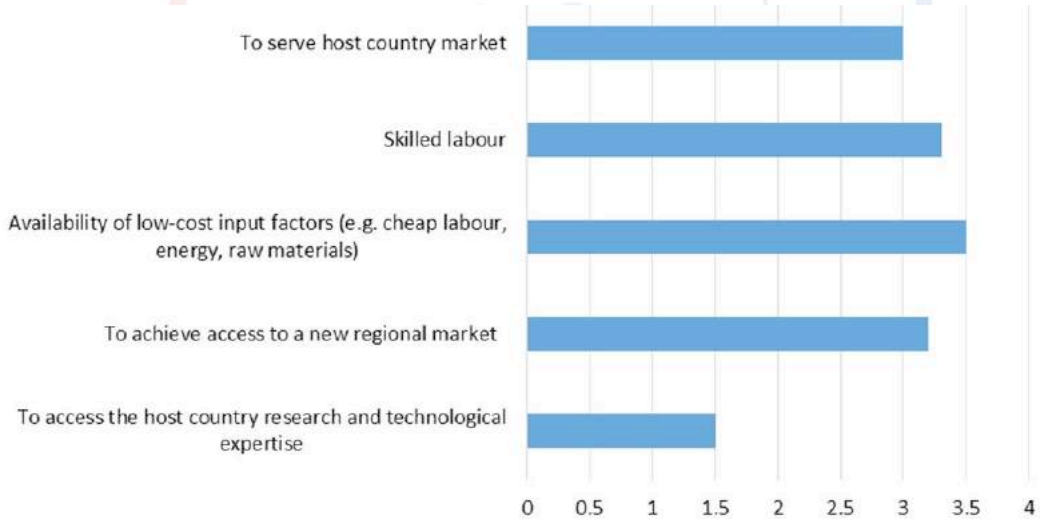
market as another reason to invest. The same result was in Georgia, author's survey in 2016 (figure 2).

Figure 1. Reasons to invest in the CIS



Source: Kudina, A., & Jakubiak, M. (2008). The Motives and Impediments to FDI in the CIS.
Note: higher number indicates that a given reason is more important. Numbers are simple averages.

Figure 2. Reasons to invest in Georgia



Source: Authors research in 2016
Note: higher number indicates that a given reason is more important. Numbers are simple averages.

Resource-seeking

The second and third most important investment motives varied across the countries, although they were predominantly concentrated on the use of low-cost factors of production and skilled labour. In Ukraine and in Georgia, the second most important motive was the availability of low-cost input factors, i.e. cheap labour, energy and raw materials. This is explained by the availability of rich natural resources along with cheap labour force and by the close proximity to the EU in the case of Ukraine. In the case of Georgia it is probably explained by high investments in pipeline transportation. Interestingly, the second most important motive for investing in Moldova was the ability to access the new regional market (Central and Eastern European)[5], which can be attributed to the country's proximity to the 'new' EU states. This motive can be also attributed to the willingness to exploit Moldovan labour and other resources (graded as the third most important motive). The possibility to access regional markets was also found to be an important factor for investors in Georgia (meaning access to whole Southern Caucasus).

Efficiency-seeking

Access to a country's research and technological expertise was found to be the least important reason to invest in the FSR (see Figure 1 and Figure 2), which suggests that investors do not yet seek efficiency in the FSR. This was confirmed by the answer that the exploitation of the cost-effective production in the FSR for the purpose of exporting products to the EU was not important for the strategy of the parent companies. Moreover, the surveyed firms export rather small volumes of intermediate goods (17% of the production of firms producing intermediate goods is exported, on average), which means that they are weakly integrated into vertical production chains.[6] The survey results indicated that market-seeking is the predominant motive for investing in the four analyzed countries. The second most important motive is for seeking resources.
Finally, based on the survey results we can say that investors in FSR are focused market, another important motive is resource seeking and efficiency-oriented FDI is weakest motivation.

Conclusion

In this paper, we explored the problems which foreign investors encounter in FSR's. Furthermore, we analyzed how different investors' profiles (market-, resource- and efficiency-seeking) affected the problems they are encountering in their countries of operation, and the particularities of their modes of operation. Analysis showed that market-seeking was a dominant motive for investors in our sample. The companies hold substantial shares of recipient country markets, and only export a small portion of their products. The growing FSR markets produce high demand, which foreign investors aim to capture in expanding their business to this region. This motivation is

[5] Collins, S., Rodrick, D. (1991), Eastern Europe and the Soviet Union in the World Economy. Institute for International Economics, Washington, D.C., 1991. - K.A and J.M

[6] With the exception of the Moldovan companies. Foreign subsidiaries producing intermediate goods in Moldova export over 50% of their production. Kudina A, Jakubiak M (2008)

similar to the motivation foreign investors in the Central Europe countries had in the early 1990s.

It had the most positive effect on investment performance, followed by skilled labour- and cheap input orientations. Hence, serving the local market was the most beneficial strategy for investors. The second and third most important investment motives varied across the countries, though they were predominantly focused on the use of low-cost factors of production (including natural resources) and skilled labour.

Econometric analysis in survey made by Kudina A. Jakubiak M. showed that the ambiguity of the legal system and problems in establishing clear property rights were the biggest concerns for investors seeking cheap factors of production in the FSR, whereas the uncertainty of the economic environment was most harmful for investors seeking skilled labour. The latter problem was also the most significant for investors who are trying to tap in into local R&D. Thus improving macroeconomic stability should be of primary importance to governments that wish to attract skilled labour- and R&D-seeking FDI, which are the two types of investors that bring the greatest benefits to the development of the host country.

It should be noted that the following impediments so that they do not override the potential profits from using cheap CIS labour: the political instability in Georgia, and the extensive bureaucracy, corruption and uncertainties connected to domestic legislation in Moldova and Ukraine.

The results suggest rather pessimistic implications for the influence of technological spillovers on the productivity of domestic firms. In studies examining CEE data, it was apparent that the highest productivity-increasing gain for local firms took place when foreign-owned and technologically superior firms bought local supplies, taught suppliers and made them acquire new technologies. Only in this case do positive technological spillovers take place. However, in the case of our sample, it seemed that potential spillovers from FDI are rather limited to certain firms and/or sectors of economic activity.

Based on 2009-2015 statistical data of top 50 investors in Georgia, Investment were entering annually, mainly to the existing companies. This situation improved in 2015. According to the survey results of 18 companies (from top 50 investors in Georgia in last 5 years), the investment environment has been improved compared to the mentioned post-Soviet countries in terms of ease of business registration and bureaucratic processes.

Finally it can be said that the post-Soviet countries, politicians and economists have to work to improve the political and economic environment, which provides a positive outlook for foreign investors to invest in this countries. Efficiency-seeking FDI is crucial for the country's attraction and it include an investment in Research & Development, but with the high level of corruption, investing in post-Soviet countries is becoming quite unattractive.

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References

Sikharulidze D (2012). MOTIVATIONS FOR FOREIGN DIRECT INVESTMENT AND THEIR IMPACT ON GEORGIA'S ECONOMY. Economics and business 61-78.
UNCTAD reports 2008-2016
www.geostat.ge

Kudina, A., & Jakubiak, M. (2008). The Motives and Impediments to FDI in the CIS.
Dunning, J.H. (1993), Multinational enterprises and the global economy. Workingham: Addison-Wesley.

Altomonte, C. and E. Pennings (2006). Searching for Horizontal Spillovers Through Incremental Foreign Direct Investment. Tinbergen Institute Discussion Paper 05-101.

Globerman, S., Shapiro, D. and Tang, Y. (2004), *Governance and Foreign Direct Investment in Emerging and Transition European Countries.* Working Paper – Western Washington University (2004)

Collins, S., Rodrick, D. (1991), Eastern Europe and the Soviet Union in the World Economy. Institute for International Economics, Washington, D.C., 1991.

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Study on Service Quality of Select Indian Banks: Usage of Data from Online Review Sites

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Abstract
Measuring Service Quality has bas been an area of interest for researchers since 1980s. As the retail banking institutions become more customer centric, the focus on customer service quality is increasing across the world. Pre-existing service quality frameworks such as SERVPERF and SERVQUAL have been applied to evaluate the quality levels in banking. However, these frameworks are expensive, as these instruments need to be replicated across the bank branches. With this in consideration, through this study, we have explored a cost and time effective approach to approximate SERVPERF model based on sentiment analysis of online reviews on various social media sites. This paper proposes an innovative approach to measure service quality in a cost effective way. In this paper, our main objective is to analyze customer reviews to better understand bank's service quality and performance. We have collected large number of online reviews from a website for three private Indian banks. Our data set is distributed into three banks that have a similar proportion of reviews (33% each). For each bank, we have a similar mix of products- Credit Card(15-31%), Loan(60-71%) and CASA(9-11%). Further, we also note that the average ratings across banks and products reveals that customers feel differently about different products and banks.The reviews have been mapped to RATER dimensions of SERVPERF model, followed by calculating sentiments for each of these dimensions by adapting an upcoming field in informatics called as text analytics. Finally, a logistic regression model has been developed to understand importance of RATER dimensions in the mind of consumers. Our results show that improved sentiment on RATER dimensions especially on Tangibles and Responsiveness can lead to enhanced customer satisfaction.

Keywords: Service Marketing; Opinion Mining

Introduction

Indian banking industry has seen a paradigm shift due to liberalization and globalization measures initiated in 1991 in the country. Entry of private and foreign banks has resulted in increased competition to acquire and retain customers, making banks sensitive to needs of the customers. The banks are moving away from transactional to more relationship or customer focused operating models. Today, Banks are looking to become integral part of customers' lives by even moving to newer social media platforms such as Facebook. Leading banks in India now are at the forefront of developing solutions and facilitating the digital banking revolution which make banking simple and convenient for its customers through customized solutions to specific segments.

Banks in India have been waking up in recent times to the impact of social media on customers' perception of bank's products and services. Reserve Bank of India (RBI) (Deputy Governor) has suggested public sector banks to use social media to profile customers and to gain deeper insights into customers' creditworthiness [Reserve Bank of India 2011]. Keeping existing customers and acquiring new clients require study of customers' preferences in choosing banks (and their products) and identification of the critical effective factors for bank selection/rejection. Hence, marketers must gather as much information as they can about attitudes and preferences of customers. Therefore, it is very critical for banks to continuously monitor and improve their service levels. Moreover, banks also need to manage and maintain perception on online platforms, social media and review sites.

Measuring service quality has bas been an area of interest for researchers since 1980s. Out of the related models, many researchers have applied SERVPERF or SERVQUAL models to evaluate service quality for banks. In today's fast paced environment, collecting, processing and analyzing survey responses can be both time consuming and costly. Newman (2001) has studied the implementation of SERVQUAL by a major UK high street bank at an annual cost of one million pounds. Accordingly, SERVPERF implementation may be in the similar price range also. With this in consideration, through this study, a cost and time effective approach has been explored to approximate SERVPERF model based on sentiment analysis of online reviews.

Well established service quality literature and sentiment analysis literature have served as the foundation of this study. In this study, the main objective has been to analyze customer reviews to better understand bank's service quality and performance through development of the new model. We have collected large number of online reviews from a website for three leading private Indian banks. These large numbers of comments have helped us to develop a deeper understanding of underlying structure of the reviews. We have then drawn upon text mining literature and have deployed a novel sentiment analysis technique to understand what consumers are talking about in these reviews, and how this can be mapped to five theoretical dimensions of SERVPERF model. We have studied the correlation of the sentiment analysis results with the review ratings given by the users for each bank. We have tested the validity of the sentiment analysis technique and have then developed a logistic regression model to identify important service quality dimensions for Indian banking customers.

One of the most popular assessment tools is SERVQUAL developed by Parasuraman et al. (1988). In the model, service quality has been conceptualized within the disconfirmation paradigm and within the widely accepted American perspective on service quality in academics. They have defined service quality as the gap between customers' expectation from the service and their perception of service received (Parasuraman et al. 1988). Parasuraman et al. (1985) initially provided a list of ten determinants of service quality; access, communication, competence, courtesy, credibility, reliability, responsiveness, security, understanding and tangibles which they subsequently aggregated to five RATER dimensions as mentioned below.

1. Reliability - ability to perform services dependably and accurately
2. Assurance - knowledge and their ability to perform with confidence and trust
3. Tangibles – physical location, equipment, appearance is up-to date
4. Empathy – care and individual attention the firm provides to its customers
5. Responsiveness – willingness to help and respond to customer need

SERVQUAL model has been criticized (Buttle 1996) both on theoretical and on operational fronts. Some of the limitations of SERVQUAL model lie in its lack of applicability and generalizability across different service industries and in its psychometric properties such as the use of gap scores and the measurement of expectations. Accordingly, Cronan & Taylor (1992) have proposed to evaluate services only on the performance scale and not on expectations. They and other researchers have highlighted that the performance based measure has a higher degree of model fit, and have explained more of the variation in overall measure of service quality than the gap based SERVQUAL scale. In the process, they have reduced the overall instrument size to 22 items from original 44 items. They have shown that for banking industry, SERVPERF model performs better than SERVQUAL model. SERVPERF model has been deployed and tested extensively on banks across various cultures and countries. Most of these studies have showed importance of five dimensions of SERVPERF model in assessing service quality of the banks. As customer expectation is not always easy to measure from customer reviews, we have evaluated banks in the present study using SERVPERF model.

Opinion mining, popularly known as sentiment analysis, is an analytical technique that measures polarity (positive, negative or neutral) of the language. When a customer writes a review or posts a message or tweets about some topic, essentially the customer is expressing his/her sentiment about a topic for which he or she feels strongly about. There are two broad challenges in sentiment analysis – 1) identify product features, services, or topics customer is talking about 2) to decide whether these reviews, comments, or messages are positive or negative and to what degree. An important broad algorithm for estimating the sentiment in the comments and reviews is Lexicon based methods. In this approach, opinion based words, which are commonly used for expressing sentiments, are used to estimate sentiment associated with product features. This approach is comparatively simple to understand and implement. The numbers of positive and negative words near to the product feature are counted. If the number of positive words is greater than the negative ones, then we assign a positive opinion to the product feature otherwise negative. Hu & Liu (2004) have categorized approximately 6,800 words into positive and negative ones for

sentiment analysis. Nielsen (2011) has created a list of opinion words by assigning strength or degree to the opinion words so as to negate the cancellation effect of positive and negative words. The opinion lexicon can also be built by bootstrapping process through a list of seed words using WordNet.

For this study, we have used lexicon based approach to evaluate performance of banks using the dimensions of SERVPERF model as a reference. Generally, when a customer writes a review, he or she tries to capture a recent moment of truth with the service provider. This essentially means that even when a customer may have formed an opinion about the service provider, the review may capture only two or three dimensions. Since, we are aggregating large number of reviews; all five RATER dimensions would essentially be captured for the service provider.

One purpose of this study is to demonstrate that a non-conventional approach can be studied to understand service quality levels of the banks. The methodology we have developed and refined utilizes sentiment analysis approach to determine the service levels from customers' perception point of view, as expressed in online reviews. The methodology follows a structured approach which starts with downloading data from online mediums, followed by consolidation of data from these sources. This study has used reviews from customer product or service ratings websites and forums (social media encompass wide range of online, word-of-mouth forums including the chosen forum here).

For our empirical analyses, we have collected data mainly from an Indian review site which also acts as an intermediary for financial products – bankbazaar.com. On this site, any user can become a member, and can write reviews including on banking products such as home loan, car loan and credit card. Apart from sharing his/her feedback or opinion, users also provide a rating to the review. This review rating has been taken as the satisfaction level of the customer.

Wenjing et. al (2013) have used the methodology of extracting the most frequent unigrams (single words such as Document) and bigrams (a pair of words such as phone call) and have created a mapping between these and RATER dimensions for travel and tourism industry. Whenever these words occur in a verbatim, they have assigned the corresponding dimension to the verbatim. We have replicated this methodology for assigning RATER dimensions to the reviews. Considering that opinion words, and product and service features vary with domain, it is imperative to build a list specific to banking domain to identify these words. While writing reviews, customers use opinion words such as "unresponsive", "obsolete" to express sentiment associated with a product or service. Two domain experts have identified the most frequent words that could be closely related to SERVPERF dimensions. In total 213 words (including variants) have been identified to maximize coverage of tagged reviews.

After assigning each review to one or more RATER dimensions, we have imported the data in a tool called R for sentiment analysis. The library called SYUZHET (an R package for the extraction of sentiment and sentiment based plot arcs from text) is installed for sentiment computation of each review. This library facilitates easy use of Lexicon based approach explained earlier. Library has functions to assign sentiment to each response using three lexicons including "afinn" developed by Finn {\AA} rup

Nielsen, "bing" developed by Minqing Hu and Bing Liu, and "nrc" developed by S. M. Mohammad and P. D. Turney (CRAN Project). In a lexicon based approach, pre-existing lexicons that contain words already tagged as positive, negative or neutral can be used to tag responses and to score them on a numerical scale from negative to positive. The magnitude on this scale depends on the lexicon used. We group ratings from [0,3) as Low Rating, [3,3] as Medium Rating, (3,5] as High Rating and average the sentiments obtained on the review level across these groups. These groupings are made because the number of reviews in some of the ratings is low and averages might be prone to biases if they are noted for individual ratings. The overall purpose of the averages across Low, Medium and High rating is to quickly validate if the calculated sentiments make sense in the context of ratings.

After assigning each response to one or more RATER dimensions and to sentiment scores, we have prepared the data for modeling. Since we are interested in testing whether RATER dimension sentiment scores are correlated with customer satisfaction, we postulate that it is sufficient to test whether polarity and magnitude of sentiment scores can predict if the rating has been good or bad. We define 'good' and 'bad' by grouping together any rating from [0, 2.5] (bad ratings) as 0 and (2.5, 5] (good ratings) as 1.

We have also tested whether there is a statistically significant interbank difference between RATER sentiment scores. The comparison helps us to identify points of parity (POP) and points of difference (POD) across Banks. We note that all banks focus on Tangibles (POP). We have also tested whether the differences in sentiments are statistically significant among the three Banks. This is done using the results of t-test.

We note that differences of means of sentiment scores between Bank A and Bank B are almost insignificant across dimensions except on reliability where the mean sentiment score of Bank B is higher than the same for Bank A in a statistically significant manner (probability: 0.047). We note that the differences are statistically significant for all dimensions except tangibles when Bank B is compared with Bank C (Scores for Bank B are higher than the same for Bank C). Similarly, there are statistically significant differences on dimensions of empathy and responsiveness when Bank A is compared with Bank C (Scores for Bank A are higher than the same for Bank C)

In this context, to test whether sentiment scores across RATER dimension are correlated with customer satisfaction of Indian customers, we have built the logistic regression model. The model highlights that tangibles and responsiveness are statistically significant variables. This could mean that focusing on tangibles is useful to get good customer satisfaction ratings. We also note that not all banks focus on responsiveness, although it contributes to good ratings.

The results of the logistic regression model (built using generalized linear model - glm) indicate that two of RATER dimensions scores (Average Responsiveness sentiment score & Average Tangibles sentiment score) are significant at 1% significance level. Our results show that improved sentiment on RATER dimensions especially on Tangibles and Responsiveness can lead to enhanced customer satisfaction. The developed model would help in providing parameters important for

customers while deciding to rate banks. We have test the validity of the model by using primary metric like Receiver Operating Characteristics (ROC) Curve. To test the validity of the overall model, we have run it on the test set and get the ROC curve. Area under the Curve (AUC) above 0.6 is considered to be a good fit model. Our model has an AUC of 0.67 which indicates that the model is able to predict whether rating is 'good' or 'bad' with an accuracy significantly better than random chance.

Conclusion

This paper addresses the key issues of service quality and customer satisfaction as faced by the private Banking industry in India. This paper advances methodological thinking through applied research and through description of new model. The study leverages new technological applications to provide key consumer insights. In terms of academic implications of this research, this research paper develops an interdisciplinary approach to study SERVPERF model by combining service quality and text analytics paradigms. It also demonstrates how a novel text analytics approach can be used to develop a SERVPERF model which is considered to be a good fit model based on the metrics of ROC curve.

References

Buttle, F. (1996). SERVQUAL: review, critique, research agenda. *European Journal of Marketing*, *30(1)*, 8-32.

Cronin Jr, J. J. & Taylor, S. A. (1992). Measuring service quality: A reexamination and extension. *Journal of Marketing*, *56 (3)*, 55-68.

Hu M., & Liu B. (2004). Mining and summarizing customer reviews. In *Proceedings of the tenth ACM SIGKDD international conference on Knowledge discovery and data mining* (pp. 168-177). KDD '04, August 22-25, Seattle, USA, ACM., http://userpages.umbc.edu/~juacubi1/733/presentation/Mining_and_Summarizing_Customer_Reviews.pdf, last accessed on February 11, 2016

Newman, K. (2001). Interrogating SERVQUAL: A critical assessment of service quality measurement in a high street retail bank. *International Journal of Bank Marketing*, *19(3),* 126-139.

Nielsen, F. Å. (2011). A new ANEW: Evaluation of a word list for sentiment analysis in microblogs. Cornell University Library, http://arxiv.org/abs/1103.2903, Submitted March 15, last accessed on October 27, 2015

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, *49 (4),* 41-50.

Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1988). SERVQUAL: A multiple item scale for measuring consumer perception of service quality. *Journal of Retailing*, 64(1), 12- 40

Reserve Bank of India RBI (2011). Connecting the Dots. Address by Deputy Governor on June 28, http://www.rbi.org.in/scripts/BS_SpeechesView.aspx?Id=580, last accessed on May 10, 2015

Wenjing, D., Cao, Q., Yu, Y., & Levy, S. (2013). Mining online user-generated content: using sentiment analysis technique to study hotel service quality. System Sciences (HICSS), 46th Hawaii International Conference on System Sciences, IEEE, 3119-3128,
https://www.computer.org/csdl/proceedings/hicss/2013/4892/00/4892d119.pdf, last accessed on August 02, 2015
https://cran.r-project.org/web/packages/syuzhet/index.html, last accessed on May 13, 2016

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