Gross Domestic Product and Gross Domestic Happiness:
A Review of Asian Economic Development Models

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Abstract
Comparative analysis of Gross Domestic Product (GDP) and Gross Domestic Happiness (GDH) is a strategic approach towards adding value to international economic modeling. This paper is an innovation in economic thought and will discuss the concept of Gross Domestic Product and gross domestic happiness. It will present and analyze Flying Geese Model (FGM) of Asian economic development models developed by Japanese scholar, Kaname Akamatsu in 1930s as a key contributor to Asian Economic Miracle. The paper will outline the critiques GDP and analyze important variables of GDP and GDH. One key innovation in the paper is the discussion of morality and economy as a strategic Asian Economic Model, looking at Confucian capitalism. The paper analyzed data, using ordinary least square (OLS) on Gross Domestic Happiness variables of World Happiness indicators on Japan. The results depicts that GDP leads to higher happiness among citizens of the country, meaning that individuals become happier as their national economies grow. However, from the findings, the study concludes that GDP growth increases happiness over time but not always and weakly as the outcome of the results are positive, negative, significant and insignificant. The paper concluded that Asian development models are strategic deviation from conventional economic models and that Gross Domestic Happiness originated in Asian are the components of Asian Economic Models. The paper recommends Asia economic development models to African countries and other developing countries that are aspiring for rapid economic growth and development.

Keywords: Gross Domestic Products, Gross Domestic Happiness, Economic Development Models, Asian

Introduction

Over the years, economists have started reconsidering the preconceived notions and theories about gross domestic product (GDP). One major theory that is springing up is the concept of gross domestic happiness (GDH) which originated in Asia. GDH theory is somewhat intended to fill the gap GDP theory has created. It has also somewhat originated in Asia economic development concept of shared growth which is embedded in Flying Geese Development Method, an Asian economic development models developed by Japanese scholar, Kaname Akamatsu in 1930s. Shared growth is an innovative theory, different from economic theory of classical and neo-classical economics. Shared growth is the modern theoretical application of inclusive economic growth. Gurría (2014), asserts that the OECD's vision for inclusive growth is about win-win policies that combine strong economic growth with improvements in all those aspects of life that matter for people's wellbeing – good health, jobs and skills, and a clean environment, which means improving these outcomes for all countries, all regions and all citizens.

The emerging economies in Asia based on shared growth concept depict a successful application of inclusive growth theory. Flying Geese development model is an important component of Japanese economic history which promoted the economic development of Japan and Asia economies. In essence, Flying Geese Model depicts the development pattern of economic and industrial evolution in Asia and important theory of modern Japanese economic history. Modern Japanese economic history can be dated back to 1600 when Tokugawa Ieyasu emerged as the most powerful warlord in Japan. This period, according to Kodansha International (1995) is called the Edo-Period Economy which sprang from 1600-1868 and was a period of increased agricultural production, urbanization, restricted foreign trade, and the growth of big enterprises such as Mitsui and Sumitomo. Another important period of modern Japanese economic development history was between 1868 and 1945, known as Meiji Restoration Period when Japan experienced growth of a large education population, a surplus of labor in agricultural sector, a highly monetized economy controlled by wealthy and capable merchant class, and large samurai class, capable of filling leadership and administrative positions. The major characteristic of Meiji period as regard Japanese economy are: industrial and economic modernization, private sector development efforts of *Zaibatsu* (major corporation like Mitsui, Mitsubushi, Sumitomo, Yasuda, etc), the development of the factors of production, industrial growth, and problem of Japanese economic growth such as income inequality, the Japanese depression of 1920, Tokyo Earthquake in 1923, financial crisis as a result of major bank failures, and worldwide depression of 1930-31 as result of US stock market crash, the Manchuria incident which led to Sino-Japanese War of 1937 and Japanese entry into World War II. Years preceding 1920s were defining periods for Japanese economic and technological growth and development as demonstrated in her success in Russo-Japanese War, WW1, and involvement in WWII (Kodansha International, 1995).

Most experts in economic history of Japan believe Japan entered the WW 11 in order to assert itself as world economic and technological power and also to protect Asia continents from economic dominance of European and American powers. Japan played significance role to protect Asia from experiencing the type of balkanization European did in African continent. She has also fought for against racial discrimination and domination. Referring to the outcome of Versailles Peace Conference of January 18, 1919, Bix stated that Japanese Press reported how disappointed Japan was for the rejection of its proposal on racial equality, and dispute over Japan's wartime seizure of Shandong Province in China (Bix, 2000).

Moreso, reflecting on what happened in the global economy from 1930, such as great depression, we can assume Japanese was thinking ahead of time with the publication of Flying Geese Economic Development Theory Document in 1930. It is obvious Flying Geese theory preceded the Bretton Woods System and the use of Gross Domestic Product as a modern measurement of economic activity and growth. Jhingan (2011) outlines six characteristics of modern economic growth as investigated by Prof Simon Kuznets in his theory in 1934. First of GDP characteristics is high rate of growth of per capita products and population; second, is the rise in productivity; third, is high rate of structural transformation; fourth, is urbanization; fifth, is the outward expansion of developed countries; and sixth, is international flow of men, goods, and capital. This paper will look at Global GDP indicators and Asian ranking, the GDP measurement and per capita income, the Global GDH indicators and Asian ranking, literature reviews on Asian Economic Development, looking at flying geese model of development FGM, theory of morality and economy. In the methodology, it will look at the relationship between GDP and GDH, using statistical techniques and World Happiness Report data on Japan. The results of regression analysis will be presented and the finding will be discussed. The paper will be concluded with recommendations.

Global GDP Indicators and Asian Ranking

GDP indicators outlines the variables include in its measurement. It measures products and services produced in a given country with a specific period, such as annually. When GDP is used to measure ranking of countries in global economy, United States is a leader. Flying Geese Pattern is focused on technological development of South East Asia with Japan as a leading nation.

Even before the establishment of Bretton Woods System and the use of GDP as economic measurement, Japan development experts like Kaname Akamatsu have foreseen a need for shared economic growth concept through technological transfer among nations as most sustainable economic development. In his admiration of Japan economic development approach, Kuznets opined that the outward expansion of developed countries (DC) contributed immensely in promotion of modern economic growth, even though majority of least developed countries (LDCs) failed to take advantage of the spread with the exception of Japan (Jhingan, 2011).

Japan is a success story of country, moving from being developing country to become a world power after defeating Russia in 1904- 1905. Describing the war that change the international status of Japan, Bix (2000), said that the two major wars fought in Meiji's name are against Ch'ing China in 1894- 95 and Czarist Russia in 1904-5 which altered the conditions of Japanese national life and changed the international environment surrounding Japan. The significance of Japanese victories in these wars is the demonstration of Japanese technological and industrial prowess, depicting a country that was willing to move from the committee of developing countries to join the developed league. The history of modern economic development of Japan can somewhat be linked to Flying Geese Method, the source of Japan version of gross domestic happiness (GDH) and share economic growth. Flying Geese is the pattern of economic development which centered on increasing economic well-being of the citizens or the happiness of the citizens and the promotion of shared growth between Japan and other Asian countries.

Looking at the global indicator, as outlined by the World Bank (2020), United States is the highest country in term of GDP. It has 24 percent of the global GDP, followed by China

(16.34 percent), Japan (5.7 percent), Germany (4.4 percent), and India (3.2 percent). From six to ten global largest economies have 12.67 percent. Eleven to fifteen global largest economies have 8.43 percent. Sixteen to twenty-five have 7.9 percent. The remaining 168 countries have 16.80 percent of global GDP. China, Japan, and India belong to first five. Only Japan belongs to this group in last few decades. There is no single African country in the first 10th largest economy. Nigeria was number 25 in the first 25 largest global economies in the GDP measurement. The ranking depicts the sources and increasing of global economic inequality as result of GDP measurement. See above figures in chart one.
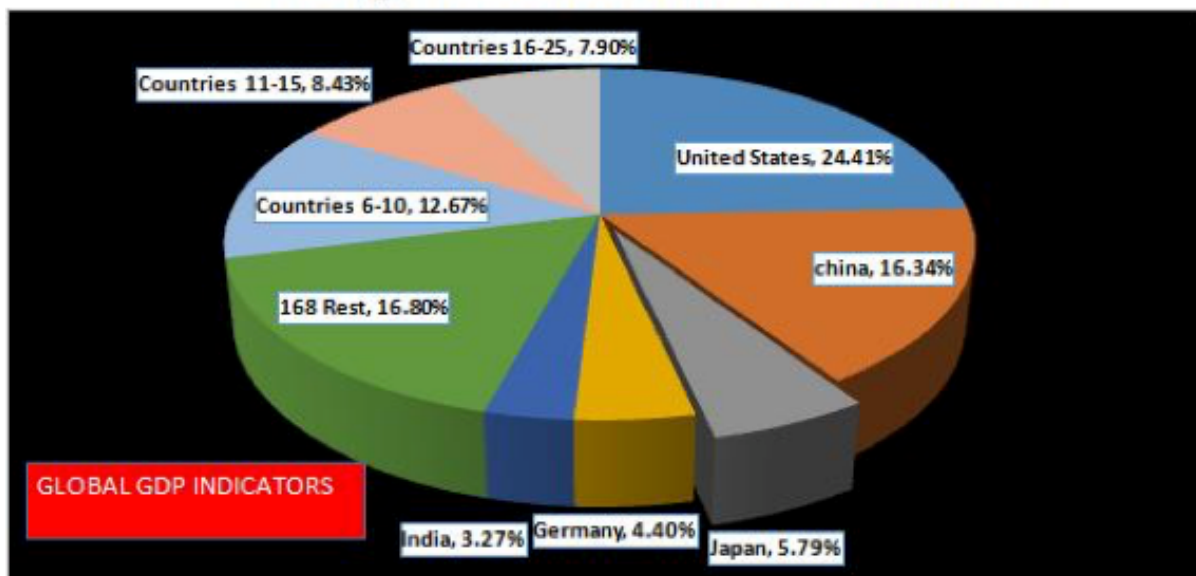

Chart 1: Share of Global GDP
Source: World Bank (2020)

Global GDH Indicators and Asian Ranking

It is somewhat difficult to state the origin of Gross Domestic Happiness (GDH)'s economic theory or measurement. However, we can assume that GDH sprang from the critiques of GDP or as a result of gap created by GDP measurement. Obviously, the official national policy of GDH can be linked to Bhutan, whose King Jigme Singye Wanchuk proclaimed the replacement of GDP to GDH as its national measurement in 1972 (Karabell, 2014). Karabell identifies booming research interest in GDH and states the Bhutan's definition of happiness is different from the definition of happiness in the Western scholars. In his view, what differentiate Western happiness and Bhutan happiness is the concept of individual happiness and collective happiness. Bhutan renounced GDP's economic theory based on output. According to Wanchuk, as stated in Karabell (2014), "The true forms of wealth are a ravishing environment, vibrant health, strong communal relationships and meaning in life and freedom to have free time." Karabell states that Wanchuks assertion is acceptable in Bhutan and sounds wonderful but it comes at the cost of renouncing growth and output, which are the core of the modern economic systems of the rest of the world. In essence, Bhutan's national policy in replacing GDP with GDH is just a replacement of output to happiness which in economic sense has less impact on other country outside Bhutan.

To discuss GDH holistically is to compare GDP's measurement of individual output, such as per capita income and collective happiness of the citizens of a particular country or a economic region, such as the impact of Flying Geese economic model in the South East Asia region. The region has experienced unprecedented economic growth and development which has moved many people out of poverty within a shortest timeframe recorded in human history.

Gross Domestic Happiness concept is somewhat the source of East Asia economic miracle which has been in existence even before Bhutan proclaimed it as its economic measurement yardstick. GDH is a marriage between morality and economy which agree with the critiques of GDP measurement. Zachary Karabell in his book, "The Leading Indicators," published in 2014, refers to early critique of Gross National Product by Robert Kennedy in 1968. Other critiques of GDP which favor the concept of GDH and somewhat promotes its ideology are: Alan Krueger, Nicolas Sarkozy, Jawaharlal Nehru, Paul Romer, Paul Krugman. In 1990, World Value Surveys brought European and American scholars together to conduct surveys in more than a hundred countries about peoples' experience, beliefs, and happiness. Nicolas Sarkozy, former French President, convened a high-level commission whose member includes: Joseph Stiglitz, Amartya Sen, and Jean-Paul Fitoussi, with the explicit mandate to rethink GDP as the measure of all measures and replace it with something akin to what that sixteen-years old Bhutanese King had set in motion in 1972. According to Sarkozy, at the inauguration of the commission, "I hold a firm belief we will not change our behavior unless we change the ways we measure our economic performance. Jawaharlal Nehru, a former Indian Prime Minister spoke for a different set of principles and metrics that could guide national success than GDP. Paul Romer, a Noble Prize winner in economics, said that preparing his Noble Lecture in 2018 prompted him to think about progress gap in the America, and his worrying trends, such as a decline in life expectancy, rising deaths of despair from suicides and drug overdoses, falling rates of labor participation for adults in their working years, growing wealth gap and increasing inequality. In his critique of GDP measurement stated that progress is not just economic growth but should also be seen in measures of individual and social well-being.

Even though the concept of GDH measurement originated from Bhutan, Japan is a success story on how a country can achieve economic success, ignoring the main idea of Western economic thinking, such as GDP measurement. According to Paul Krugman, in his book, "The Return of Depression Economics and Crisis of 2008," stated that there were two sides of why Japan was successful. One side explained the growth as a product of good fundamentals, such as excellent basic education and high savings and manufacturing of high-quality products at low cost. The other side was that Japan had developed a fundamentally different economic system, a new and superior form of capitalism.

A very comprehensive recent study of happiness among nations was done by Mark Travers, an author and psychologist, who made reference to work done by Helliwell, J.F., Richard Layard, Jeffrey Sachs, and Jan-Emmanuel De Neve, in the World Happiness Report 2021 and published by United Nations' s Sustainable Development Solutions Network. Travers outlines three insights that can be used to measure happiness in every country, such as benevolence, employment, and psychological well-being.

Travers's data depicts that people are happier in societies where there is a high degree of trust between people, with reverence to research which states that benevolence carries more than twice as much weight as what would be expected from doubling one's annual salary. On the

third indicator, Travers data analyzed what makes people happy at work by investigating 11 characteristics, such as: feeling like we achieve our goals at work; having a clear sense of purpose; feeling appreciated; feeling a sense of belonging; having time and location flexibility; working in an inclusive and respectful environment; learning at work; having a manager who helps us succeed, being paid fairly; feeling supported; and trusting our colleagues. He quoted Helliwell et al research which found that the top four drivers of workplace happiness were belonging, flexibility, inclusiveness, and purpose and that having a helpful manager was the characteristic least correlated with workplace happiness.

GLOBAL GDH RANKING

Country	Ranking	Country	Ranking
Finland	1	Canada	11
Denmark	2	Australia	12
Switzerland	3	UK	13
Iceland	4	Israel	14
Norway	5	Costa Rica	15
Netherlands	6	Ireland	16
Sweden	7	Germany	17
New zealand	8	US	18
Luxembourg	9	Czech Republic	19
Austria	10	Belgium	20

Table 1: Global Gross Domestic Happiness Ranking
Source: United Nations World Happiness Report (2020)

ASIA GDH INDICATORS AND RANKING

Country	Global Ranking	Regional Ranking
Taiwan	24	1
Singapore	32	2
Thailand	54	3
Japan	56	4
Philippines	61	5
South Korea	62	6
Mongolia	70	7
Hong Kong	77	8
Vietnam	79	9
Malaysia	81	10
Indonesia	84	11
China	87	12
Nepal	89	13
Maldives	100	14
Laos	105	15
Bangladesh	114	16
Pakistan	126	17

Table 2: Asian Countries' GDH Ranking
Source: United Nations World Happiness Report (2020)

In essence, Japan supposed to achieve high ranking looking at the three insights enumerated by Travers, especially as it relates to benevolence which is embedded in the moral education in Japan. According to global gross domestic happiness (GDH) ranking by World Happiness Report (2020), Finland has consistently over the years ranked first among ten countries, followed by Denmark, Switzerland, Iceland, Norway, Netherlands, Sweden, New Zealand, Luxembourg, and Austria. The next 10 happiest countries are: Canada, Australia, Uk, Israel, Costa Rica, Ireland, Germany, US, Czech Republic Belgium. Even though many Asia country is ranked among the highest 20. The US, which is first ranking in terms of GDP is number 18 in global ranking of gross domestic happiness.

In Asia ranking, however, Taiwan is the first, followed by Singapore, Thailand, Japan, Philippines, South Korea, Mongolia, Hong Kong, Vietnam, Malaysia, Indonesia, China, Nepal, Maldives, Laos, and Pakistan. China which is the largest economy in terms of GDP ranked number 12 in Asia and 87 in global index. Japan is number four in Asia and ranked 56 in global index while India which is the fifth global largest economy is not in the first 15th happiest countries in Asia.

GDP Measurement

One important concept of GDP measurement is the calculation of nominal and real GDP, through GDP deflator. Applying Blanchard model, the GDP deflator will help to explain the difference between nominal and real GDP. The GDP deflator shows the trends of price movement of the national economy and gives the average of output. Equation (1) depicts the relation which holds between nominal GDP, real GDP, and GDP deflator.

$$\$Y_t = P_t\ Y_t \hspace{4cm} \textbf{Equation One}$$

Nominal GDP ($\$Y_t$) is the sum of the quantities of the final goods produced times their current price. Real GDP (Y_t), on the other hand, is constructed as the sum of the quantities of final goods times constant prices. Defining the price level as GDP deflator implies that a simple relation holds between $\$Y_t$, Y_t, and P_t.

GDP rebasing is the recent measurement of GDP. It is the inclusion of some variables earlier ignored in GDP calculation. GDP rebasing does not imply any increase in national income and productivity. Various schools of economic thought criticized GDP rebasing. According to them, GDP rebasing does not alter the current poor performance of GDP in terms of poverty reduction, unemployment and inequality. That is, if a family was poor before the rebasing, it remains poor; the fellow who did not have a job, remains without one; and our wide inequality between the rich (indeed very rich) and the poor persists. In short GDP rebasing does not change the much in economic basket however it does give us a more accurate picture of the current state of our economy. It presents a more credible and contemporary report of the state of sectors within the economy and overall activity within the economy.

Another critical area of debate is the concept of economic liberalization and global economic crisis. Former U.S President, Franklin D. Roosevelt in far back as 1938 criticized economic liberalization in his address to the US Congress. Roosevelt asserted that the truth is that the liberty of a democracy is not safe if the people tolerate the growth of private power to a point where it becomes stronger than their democratic state itself (Weeks, 2018). John Williamson,

the author of the "Washington Consensus," collaborated with President Roosevelt in his article published in Journal of Post Keynesian Economics, "The Strange History of the Washington Consensus." Oleg Komlik, quotes Williamson's article as an alternative to his theory , termed, "Ten Commandment" of Washington Consensus published in published in 1989. Ten Commandments listed budget deficits, redirection of public expenditures, tax reform, financial liberalization, unified exchange rate, quantitative trade restrictions, abolition of barrier to trade, privatization, and provision of secure property rights. In modern international economy, we can assert that international economic institutions, such as World Bank and International Monetary Fund are the vanguard of promotions of international economic liberation and integration. However, their regulatory and operational strategies called to questions after series of global economic crises. In October 2008, the United Nations General Assembly established a commission, headed by Joseph Stiglitz which other members includes economists from both developed and developing countries with mandate to proffer solution to current global economic crises and mechanism to detect future crises. The commission identify flaws in institutions, in policies, and in theories. The commission identified five sources of the crisis from 2008 to 2010, such as: Laissez Affaire of economic policy, international economic interdependence, growing Inequality, global imbalance in global aggregate demand, and inability to respond to shock and new bank regulations.

Per capita income, which is GDP divided by population is one component of human development index (HDI) of UNDP. Per capita is somewhat a major measurement flaws of citizen's wellbeing. Its contribution to individual citizen's happiness is yet to be accepted by many schools of economic thought. More so is the UN's World Happiness Report being published by Sustainable Development Solutions Network (SDSN). Even though the resolution was proposed by Bhutan, the country is not included in the ranking because most of the indicators being used in ranking relate to GDP and its components. In most recent World Happiness annual Report, most developing countries are in the least of happiness index collaborating the critique of the current measurement, especially the Gallup World Poll surveys. According to NoCamel Online publication, the results of 2021 World Happiness Report is being dominated by mostly European countries. In essence, any happiness indicator without Asian attributes will not yield globally accepted resulted. Asia is the melting point of gross domestic happiness because of its rapid and inclusive economic growth which originated from Japanese Flying Geese Development Model. See table one.

GLOBAL GDP PER CAPITA AND POPULATION			
Country	GDP Per Capita USD	GDP ($B,USD)	Population (M)
Luxembourg	$109,600	$68.61	0.63
Switzerland	$81,870	$707.87	8.65
Ireland	$79,670	$399.06	5.01
Macao SAR	$54,510	$26.35	0.69
Norway	$67,990	$366.39	5.39
Qatar	$52,750	$147.79	2.76
United States	$63,050	$21,427.70	331.05
Iceland	$57,190	$20.81	0.36
Singapore	$58,480	$337.45	5.7
Denmark	$58,440	$339.63	5.84
Netherlands	$51,290	$886.34	17.28

Table 3: Global GDP per Capita

Source: World Bank (2020)

Flying Geese Model of Economic Development

Even with many of its critiques, Flying Geese Model of economic development has continued to attract policy and academic discourses in Japan, Asia, and globally. One major critique of Flying Geese Modern is its association with the concept of "Greater East Asia Prosperity Sphere, " propaganda term used by the Japanese to legitimize Japan's expansion in Asia in the 1930s and 1940s or purely analytical descriptive account of changing international division of labor during the catching up process of late industrializing countries (Schroppel and Nakajima, 2002). What makes Flying Geese critiques irrelevant is intension to interpret the model with western preconceived notion of regarding every theory outside Europe and US as primitive. The concept is Japanese origin and has many cultural and social attributes that depicts its Asian-proved. The verifiable prove is East Asian Economic Miracle, a successful economic development pattern that lifted many citizens out of poverty within a short period of time – a success never experienced since modern economic history. Flying Geese Model is what might be termed unconventional economic theory. In essence, it is innovative approach to the measurement of Gross Domestic Happiness and should be effective indicator of economic inclusiveness and inter-independence among nations. Chart 2 below depicts the economic development pattern of FGM.
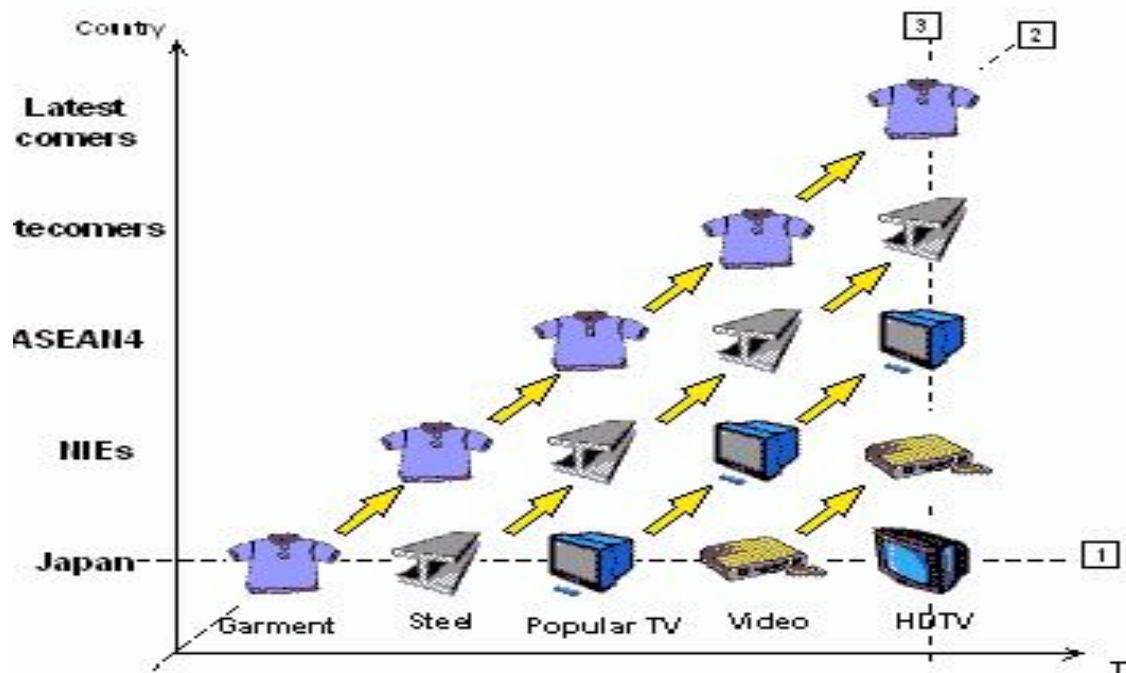
Chart 2: Flying Geese Economic Development Pattern
Source: grips.com

Theory of Morality and Economy

Excellent application of morality and economy is what most economic assumption about Japan and its rapid economic development ignored for so long. The idea of paring economy with morality has been one of the challenges facing economists for decades. Describing economic incentives and governance, Samuel Bowles, in his book, " The Moral Economy-Why Good Incentives Are No Substitute for Good Citizens," argues that an erosion of the ethical and other social motivation essential to good government could be an unintended cultural consequences of policies that economists have favored, including more extensive and better-defined private property rights, enhanced market competition, and the greater use of monetary incentives to guide individual behavior. Bowles, further shows that these and other policies advocated as necessary to the functioning of a market economy may also promote self-interest and undermine the means by which a society sustains a robust civic culture of cooperative and generous citizens.

Low level of crime rates in Japan depicts classical example of cooperative citizens. Japan is success story of how patriotic citizens can contribute to their nation's economic development. Social norms based on Confucius philosophy can be one of the yardstick to measure the level of Japanese patriotic zeal. Kazuo Inamori, the founder of two Japanese corporate giants (KDDI and Kyocera) and the author of "A Compass To Fulfillment- Passion and Spiritual in Life and Business," believes that the issues currently confronting the human race, including environmental destruction, terrorism, and international disputes, are caused by evil thoughts that each individual harbors in his or her mind. Inamoto refers to evil thoughts as selfish, unbounded greed that has been the driving force behind the worrisome trajectory of our current civilization. In the introduction of his book written in Japanese but translated to

English and other foreign languages, Inamori criticizes conventional economic thoughts and calls humanity that it is time to earnestly explore how humanity can coexist on this planet by basing our way of life not on economic growth driven by selfish desire, but on consideration, love, affection, and altruism.

A Japanese Scholar, Dr.Chikuro Hiroike, the founder of the Moralogy Foundation, in his Treatise On Moral Science, outlines the ethical problems that present themselves in variety of connected areas, especially the economy, management, religion, and society. Dr.Hiroike, who was an ardent follower of Confucius business philosopher of Shibusawa Eiichi, advocates for business ethics based on the idea of unity of morality and the economy. In his view, organization contributes to the sound development of economic world and meant to promote business management with the principles of "San-Po-Zen (three-way virtue, meaning all involved parties are able to benefit). Moralogy Foundation is the head office for Japan Morality Business Association.

Shibusawa Eiichi is a Japanese industrialist, who helped established more than 500 companies and organizations that transformed modern Japan economic history. His major contribution to economic development theory is the introduction of join-stock corporations. Shibusawa's philosophy of economic is based on the unity of morality and economy. He cautioned against the pursuit of profit alone, derived inspiration from Confucian Analects, and a promoter of Confucius capitalism. He is regarded as a moral capitalist, who contributed to founding of Tokyo Stock Exchange, Tokyo Chamber of Commerce, numerous educational and philanthropic organizations.

Having outlined the Global GDP indicators and Asian ranking, the theory of GDP measurement, the Global GDH indicators and Asian ranking, literature reviews on Asian Economic Development, looking at flying geese model of development FGM, theory of morality and economy through the exposition of Japanese scholars and industrialists like Inamori, Chikuro Hiroike, and Shibusawa Eiichi, this research work will move on to the research methodology. In research methodology, model will be specified to find relationship between GDP and GDH, using statistical techniques.

Methodology

In this section of the study, we are going to look at the comparative analysis of GDP and GDH, applying statistical methodology. We start by presenting a chart of Japanese Gross Domestic Happiness with data from World Happiness Report 2020.

Year	Life Ladder	Log GDP Per Capital	Social Support	Healthy Life Expectancy At Birth	Freedom To Make Life Choice	Generosity	Perception of Corruption	Positive Effect	Negative Effect
2005	6.510	10.528	0.928	73.2	0.868		0.659	0.738	0.153
2007	6.233	10.558	0.938	73.44	0.788	-0.08	0.808	0.731	0.207
2008	5.911	10.548	0.887	73.58	0.772	-0.135	0.818	0.78	0.191
2009	5.845	10.491	0.888	73.68	0.73	-0.21	0.74	0.785	0.168
2010	6.057	10.532	0.902	73.8	0.772	-0.14	0.77	0.827	0.188
2011	6.203	10.532	0.817	73.98	0.814	-0.052	0.738	0.778	0.181
2012	5.968	10.548	0.905	74.16	0.753		0.692	0.777	0.171
2013	5.858	10.57	0.924	74.34	0.821	-0.147	0.65	0.784	0.175
2014	5.923	10.575	0.9	74.52	0.838	-0.138	0.817	0.742	0.188
2015	5.88	10.588	0.923	74.7	0.832	-0.155	0.654	0.768	0.178
2016	5.955	10.595	0.9	74.8	0.838	-0.082	0.688	0.78	0.182
2017	5.911	10.618	0.882	74.9	0.848	-0.208	0.659	0.74	0.178
2018	5.794	10.623	0.886	75	0.773	-0.261	0.607	0.703	0.185
2019	5.908	10.632	0.878	75.1	0.808	-0.255	0.817	0.743	0.184
2020	6.118	10.58	0.887	75.2	0.808	-0.258	0.603	0.742	0.188

Table 4: Japan GDH Indicator

Source: World Happiness Report (2020)

Model Specification

Model specification is used specify the models and find out the relationship between GDP and GDH. Objective is to find out whether GDP Contributes to GDH. Ex-post factor data analysis will be applied in the study, using selected variables from Japan's GDH indicators.

Due to lack of exact single data that can define GNH, various proxies were used, hence, the following four equations which were used to examine each proxy of GNH against other variables

SS = f(LGDP, HLEX, FC, PC)
HELIX = f (LGDP, SS, FC, PC)
FC = f (LGDP, SS, HLEX, PC)
PC = f (LGDP, SS, HLEX, FC)   **Equation Two**

SS (Social support), HELIX (Healthy Life Expectancy, FC(Freedom), PC(Corruption Perception)

Presentation and Discussion of Result of the Finding

SS = f (LGDP, HLEX, FC, PC)   **Equation Three**

From the OLS result for equ.1, LGDP has a positive and insignificant impact on social support with coefficient and p.value of 0.277990 and 0.0848 respectively. The insignificant

impact could be as a result of using aggregate measure (LGDP) for individual level performance. The implication of the result as supported by Inglehart et al. (2008) is that material growth, in terms of GDP per capita, is welfare-improving measure in developing countries, as it takes people out of poverty which does not translate to meaningful impact in the developing societies, like Nigeria and some developing economies in Africa, where survival is taken for granted and human development becomes the only valuable goal. However, many economists and social scientists have concluded that, in developed countries like Japan, economic growth has little impact on well-being and should therefore not be the primary goal of economic policy (Oswald, 1997).

HELIX = f (LGDP, SS, FC, PC)   **Equation Four**

GDP per capita has negative and significant impact on health life expectancy with the coefficient of -1.11E-11 and probability value of 0.0114. it is undeniable that overall there is no progress in quality of life without GDP growth, but a negative factor implies that poor economic performance could be inhibitor to healthy life expectancy, leading to increase in infant mortality and child death which are measures of life expectancy.

FC = f (LGDP, SS, HLEX, PC)   **Equation Five**

GDP per capita has positive and insignificant impact on Freedom of choice. This means that there is positive effect of increased income on gross national happiness through freedom of choice, but not significant. This is supported by the coefficient of 0.398312 and p.value of 0.1918. Greater income per capita always comes with increased labour productivity, which means a greater choice in time-use for those who are concerned. As argued by Sen (2001), it is because it enhances the freedom of choice (by enlarging their set of capacities) that growth is expected to raise people's well-being. Identically, GDP growth is known for being associated with demographic transitions in developing countries.

PC = f (LGDP, SS, HLEX, FC)   **Equation Six**

The growth of domestic economy exhibit positive significant impact on Perception of corruption with coefficient of 0.94450 and probability value of 0.0020. The result could be justified by the ill practices that emanate at the point of increased well being of most people. This result is against the apriori expectation that corruption has negative impact on GDP of any country.

Correlation

From the correlation result, it can be deduced that LGDP has both positive and negative relationship with gross domestic happiness in Japan, as can be seen in the proxies (SS - 0.3616000, HLEX – 0.82834547, FC – 0.38833069 and PC -0.5741513).

Generally, as depicted by the statistical result, higher income leads to higher happiness, meaning that individuals become happier as their country grow richer. However, from the findings, the study concludes that income growth increases happiness over time but not always and weakly as the outcome of the results are positive, negative, significant and insignificant.

Conclusion

Over the years there have been resenting voices against GDP as instrument of measurement of economic success. Some arguments against GDP are: most developing countries remain poor as inequality among nations has continued to expand; per capita income growth does not transform to per happiness, even in some developed economies; GDP rebasing does not solve the problems of poverty reduction, increase in unemployment and problem of inequality. Most economists are concerned about economic liberalization as promoted by the capitalists and its contribution in constant global economic crises. Notable critiques of GDP and western economic theories are: Joseph Stiglitiz, Nicolas Sarkozy, Amartya Sen, and Jean-Paul Fitoussi, Alan Krueger, Zachary Karabell, Jawaharlal Nehru, Paul Romer, Samuel Bowles.

Asian economic development models are analyzed through Flying Geese Model, developed by Kaname Akasumatsu and the theory of morality and economy as posited by the philosophies of Kazuo Inamori, Chikuro Hiroike, and Shibusawa Eiichi.

Through methodology, the studies analyzed Japan; s Gross Domestic Happiness data from World Happiness Report. From the correlation result, it can be deduced that LGDP has both positive and negative relationship with gross domestic happiness in Japan. The study proved the efficacy of Asian home-grown economic development models and recommends the applying of Asian these models by other developing countries.

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