



MediaTrend 14 (1) 2019 p. 57-63

Media Trend

Berkala Kajian Ekonomi dan Studi Pembangunan

<http://journal.trunojoyo.ac.id/mediatrend>



Nation Aging and Development Dilemma

Sebastiana Viphindrartin¹, Zainuri^{2*}

^{1,2} Economics and Business Faculty, Jember University

Informasi Artikel

Sejarah artikel:
Diterima Desember 2018
Disetujui Desember 2018
Dipublikasikan Maret
2019

Keywords:
Nation Aging,
Development,
BCG Matrix

ABSTRACT

We are attempting to find the effect of nation aging to development in the countries- Japan, China, Brunei, Iran, Cambodia, and Russia. This research employed a quantitative descriptive method and adopted Boston Consulting Group Matrix as the mapping model based on the ratio of shares in the number of the sample countries which is measured by the total percentage. We found that countries with a high growth rate of GDP per population tend to undergo a declining productivity. Demographic factors greatly influence GDP and worth consideration incoming up with sustainable development planning. This paper has contribution to the government to re-derive the policy regarding to nation aging perspective.

© 2019 MediaTrend

Penulis korespondensi:
E-mail: zainuri.feb@unej.ac.id

DOI: <http://dx.doi.org/10.21107/mediatrend.v14i1.4647>
2460-7649 © 2019 MediaTrend. All rights reserved.

INTRODUCTION

Development planning is firmly grounded on knowledge, experience, culture and technology as well as a state's political policy (Lewis, 1966; Chenery & Bowles, 1971; Dale, 2006). Development planning of a nation is largely linked to its economy (Dale, 2006). A nation's economy has a pervasive effect on the overall activities of the state and the people therein. (Lewis, 1966; Chenery & Bowles, 1971).

The development of a nation is closely related to the medium of exchange used (Hildebrand, 1848). Before 1760, the entire world relied heavily on the nature for economy in terms of agriculture, husbandry, fishery and marine resources. It does not mean that manufacturing activity was not available then for cotton had developed since 9000 BC (Ashton, 1997; Wolfe, 2016; Beckert, 2015). The industrial revolution began in England in 1760 with the ban imposed on the export of machinery and skilled workers (Ashton, 1997; Wolfe, 2016). It was set on the manufacturing history as the backdrop especially the cotton manufacture that took place in 9000 BC and spread to all parts of the world. The international cotton trade began in 2000 BC (Beckert, 2015). The cotton was processed into a fabric for the very first time in 800 BC in India using churka roller gin. The fabric trading and spinning machinery technology has been put to a great use in Europe since 100 BC and the global textile trading has been increasingly on the rise and has connected the dots until today (Smith & Cothren, 1999, Beckert, 2015; Riello, 2013).

The churka roller gin used in England since 1600 developed into various spinning machinery such as flying shuttle crafted by John Kay in 1733 and further into James Hargreaves's spinning jenny in 1767. Since 1750 30,000 labors in England worked on the spinning that which was accounted for one of the driving forces of the economic growth (Smith & Cothren, 1999,

Riello,2013). In 1760, England prohibiting the export of machinery and skilled labors marked the start of the industrial revolution with the invention of James Watt's steam engine in 1769 (Ashton, 1997; Wolfe, 2016; Smith & Cothren, 1999). Since the Industrial revolution in the United Kingdom, the Industry has flourished throughout the world. There are two alternative state economic developments all over the world namely, agriculture-based or industry-based development (Bairoch&Leboyerd, 1981).

LITERATURE REVIEW

Planning constitutes a part of the management or governance process. The Development planning of a State comprises a part of the state governance which is mandatory to the government. Planning itself is derived from a rationalization or thinking result embedded in the experience and organizational governance culture (Lewis, 1966; Chenery & Bowles, 1971; Dale, 2006).

The government is an organization which has the authority for the state management, (1971). An organization has a material and human resources to avail (Foley, 1986; Piketty, 2018). Money can purchase material resources while humans are organizational properties. They render help and support to the organization and receive money in return for the support and aid they have provided for the organization. So it can be said that human resources serve as a form of human aid and support to the organization. And, humans have the ownership of their own (Piketty, 2018; Andrews, 2009; Bales, 1999).

A state will never be capable of building its country if it is devoid human support. And the people thereof constitute the great potential to render assistance and support of all sorts crucial to the government. So, the greater the population is, the more abundant potential human resources which can be capitalized on for the nation building are. This is closely related

to demographic governance in the country's economic development (Veterník & Gogola, 2017; Maragh, 2017; Rana & Goli, 2018).

The fertility rate, the retirement age, and the productive working force have a substantial effect on the productivity of the population of a country (Veterník & Gogola, 2017; Maragh, 2017; Rana & Goli, 2018). However, in terms of the economic development, unemployment poses a discrete cost which a country is obliged to bear. Unemployment signifies an absence of participation in the country's economic development (Marukawa, 2017; Feng *et al*, 2017; You & Wang, 2018).

RESEARCH METHOD

This research employed a quantitative descriptive method and adopted Boston Consulting Group Matrix as the mapping model based on the ratio of shares in the number of the sample countries which is measured by the total percentage. It results in the formation of objective which is formed on the basis of statistical data derived from world bank data and in-depth analysis conducted on the cause and effect in terms of the the description of the statistical data mapping that provides an objective picture as the basis of development planning. Variables employed in creating the BCG model map are delineated in the following variable description table:

FINDINGS AND DISCUSSION

It is known that Japan has the highest GDP per population out of the six countries, and is consecutively followed by Brunei and Russia. The Economic Population Participation of 52% and the population ages above 65 years of 27% indicate the high productivity of each Japanese actively participating. Japan has seen declining productivity in terms of the industrial sector by 3%, that has an effect on the dwindling of GDP by 17 % with concomitant agriculture growth of 0%. However, the monthly GDP per population remains very high at \$ 3,202.00 per month. This shows that Japan has begun to come to the enjoyment of the economic growth as the result of the development thus far in spite of the unfavorable disadvantages of population demography.

Brunei whose major income comes from oil, experiences a declining GDP. It registers a country with above average GDP per population of the six countries studied. With the number of population aged above 65% which is still rated below the average, Brunei Darussalam stands the chance of elevating its growth rate of GDP which is currently at-13%.

Although China and Cambodia have a very high growth rate of GDP by 50%, their GDP / P is still relatively below average. This signifies the universal prosperity level of China and Cambodia is still

Table 1
Variable Description

Variable	Description	Calculating unit	Description
GDP/P	Gross Domestic Product per population	\$ per month	Data of 2017
EPP	Economic Population Participation	%	Data of 2017
GDPG	Gross Domestic Product Growth	%	Data of 2010 and data of 2017
AgG	Agriculture Growth	%	Data of 2010 and data of 2017
IndG	Industry Growth	%	Data of 2010 and data of 2017
P65/P	Population ages 65 and above/Population	%	Data of 2017
APG	Average Population Growth	% per Years	Data of 1960 through 2017
UE	Unemployment per labor force (ILO estimate)	%	Data of 2017
LF	Labor Force	Lives	Data of 2017

below Japan and Brunei. The alarming economic state confronts Iran with Russian following its footsteps in terms of the below average GDP per population and economic growth.

to elevate or maintain the GDP growth that it may be able to bounce back into a Star condition as they have experienced before.

**Table 2
Matrix Result**

Countries	GDP/P	EPP	GDPG	AgG	IndG	P65/P
Japan	3202	52%	-17%	0%	- 3%	27%
China	735	57%	50%	-20%	-13%	11%
Brunei	2352	52%	-13%	0%	-13%	5%
Iran	450	34%	-11%	66%	-52%	5%
Cambodia	115	58%	50%	32%	40%	4%
Russian	910	52%	3%	33%	0%	14%
Average	1294	51%	10%	18%	-6%	11%

Source: World Bank 2018, Processed

In order to see the respective position of the six countries in the BCG matrix, the criteria for Gross Domestic Product Population (GDP / P) and Gross Domestic Product Growth (GDPG) are employed and presented in table 3 as follows:

Star countries are the ones showing the good economic performance, with high growth rates of GDP and high GDP per population. But when you have fully capitalized on the use of resources available, Star countries will become the next cashcow.

**Table 3
BCG Matrix Criteria**

Criteria	GDP/P	GDPG
Cash Cow	Above average	Below average
Star	Above average	Above average
Question Mark	Below average	Above average
Dog	Below average	Below average

Country classified as an economic Cash Cow is the one experiencing steady growth after going through the previous Star condition. The country enjoys the result of the development indicated by above average growth of GDP / P despite suffering from the negative or below average GDPG. However, when GDP is negative it should not mean that it is alright for the country to let the productivity decline and revel in the results of development without deliberately considering the level of prosperity in the future. Countries in for the cashcow condition may have used resources available to the maximum that innovating is a necessary measure in order

Countries categorized into the question mark criteria are the ones in a doubtful condition whether they are going to fall into a Dog condition or continue making strides to become Star. Countries categorized into dog criteria are confronted with sinister conditions because they lapse into a low growth of GDP per population and a low level of economic growth and when it is even worse when it continues to be negative. They need to struggle for improvements and put economic resources to maximum use.

The mapping results using the BCG Matrix based on BCG Matrix criteria, Japan and Brunei are classified cash cow

Table 4
BCG Matrix Result

Countries	Criteria
Japan	Cash Cow
China	Question Mark
Brunei	Cash Cow
Iran	Dog
Cambodia	Question Mark
Russian	Dog

countries whereas China and Cambodia fall into the Question Mark category. Iran and Russia fall into the Dog category. Each criterion provides the overview of the economic status. As previously explained, the Cash Cow criterion signifies the necessity to discover new resources or new alternatives crucial in elevating the GDP. Star criteria seeks to maximize growth while conducting increasing research to anticipate the maximum investment limit. The question mark criterion necessitates a focus on the advantages one has and exercising increased discretion in investing in the areas beyond the bounds of advantage which leads to vulnerability to slumping into the Dog position. Dog position is the most unfavorable position, yet it is not a position to succumb. Dog position is a position where rethinking and searching for solutions to cope with the adversity and rise up.

In development planning, of course, each country has varied extent of industrial and agricultural effect on GDP growth. In order to map out the country's economy, it is of necessity to do it by measuring the effect of industry and agriculture on the economy to discover in which direction the concentration of development will be implemented. Table 5 depicts the the effect of Industry and agriculture on GDP growth and the elderly burden that Economic Population Participation has to bear.

Based on the Impact Matrix Agriculture and Industry, of the six countries studied, the industrial sector is seen to have a greater effect than the agricultural sector in 2017. Japan is the country with the greatest elderly burden to bear that requires constantly increased investment in the industry sector in order to take in the unemployed and thus mitigate the heavy elderly burden.

Table 5
Agriculture and Industry Impact Matrix and Elderly Burden Result

Countries	Agriculture Impact	Industry Impact	Elderly Burden
Japan	Unknown	5.6 %	34%
China	1.6%	2%	16%
Brunei	Unknown	1%	9%
Iran	3%	4%	13%
Cambodia	0.5%	0.79%	6%
Russian	0.09%	Unknown	21%

Source: World Bank 2018, Processed

Table 6
Average Population Growth, Unemployment and Labor Force

Negara	APG	UE	LF
Japan	0.6%	2.8%	66.503.545
China	1.3%	4.68%	786.738.207
Brunei	2.9%	7%	221.398
Iran	2.3%	13.1%	27.344.920
Cambodia	1.8%	22%	9.309.226
Russian	0.3%	5.2%	75.638.703
Average	1.6%	9%	160.959.333

Source: World Bank 2018, Processed

CONCLUSION

Countries with a high growth rate of GDP per population tend to undergo a declining productivity as what has occurred in Brunei that is marked by the elderly burden of only 9% and below average unemployment of only 7% but GDP growth is negative 13%. The possible cause of Japan's economic slowdown is the heavy Elderly Burden which is very high at 36%. Hence, it can be concluded that demographic factors greatly influence GDP and worth consideration incoming up with sustainable development planning. Despite declining agriculture and industry experienced China sees a very high growth rate of GDP by 50%. This signifies that China receives cash in flow from China's FDI abroad that even though domestic agriculture and industry are declining, China has the ability to obtain GDP from cash in flow. Iran and Russia are in the alarming economic state which is vividly depicted in the BCG Matrix.

REFERENCES

Bruno Hildebrand. *Die Nationalökonomie der Gegenwart und Zukunft*. 1848. Frankfurt : Schäffer Poeschel.

C. Wayne Smith, J. Tom Cothren. *Cotton: Origin, History, Technology, and Production*. 1999. Canada : John Wiley & Sons.

Giorgio Riello. *Cotton: The Fabric that Made the Modern World*. 2013. Cambridge : Cambridge University Press

Duncan K. Foley. *Understanding Capital: Marx's Economic Theory*. 1986, Cambridge : Harvard University Press

Gaunette Sinclair-Maragh. Demographic analysis of residents' support for tourism development in Jamaica. *Journal of Destination Marketing & Management*. Volume 6, Issue 1, March 2017, Pages 5-12

Hollis Burnley Chenery, Samuel Bowles. *Studies in Development Planning*. 1971. Cambridge : Harvard University Press

James Wolfe. *The Industrial Revolution*. 2016. New York : Britannical Educational Publishing

Jing You, Shaoyang Wang. Unemployment duration and job-match quality in urban China: The dynamic impact of 2008 Labor Contract Law. *Economic Modelling*. Volume 71, April 2018, Pages 220-233

Kevin Bales. *Disposable People: New Slavery in the Global Economy*. 1999. Berkeley : University of California Press

Md Juel Rana M.Phil, Srinivas Goli Ph.D. Does planning of births affect childhood undernutrition? Evidence from demo-

- graphic and health surveys of selected South Asian countries. *Nutrition*. Volume 47, March 2018, Pages 90-96.
- Milan Veterník, Marián Gogola. Examining of Correlation Between Demographic Development of Population and Their Travel Behaviour. *Procedia Engineering*. Volume 192, 2017, Pages 929-934
- Paul Bairoch, Maurice Levy-Leboyerd. *Disparities in Economic Development since the Industrial Revolution*. 1981. London : Macmillan Press
- Reidar Dale. *Development Planning Concepts and Tools for Planners, Managers and Facilitators*. 2006. New Delhi : Academic Foundation
- Shuaizhang Feng, Yingyao Hu, Robert Moffitt. Long run trends in unemployment and labor force participation in urban China. *Journal of Comparative Economics*. Volume 45, Issue 2, May 2017, Pages 304-324
- Sven Beckert. *Empire of Cotton: A Global History*. 2015. New York : Vintage Books
- Sudhir Andrews. *Human Resource Mgmt: Tb For Hospitality*. 2009. New Delhi : McGraw-Hill
- Thomas Southcliffe Ashton. *The industrial revolution, 1760-1830*. 1997. Oxford : Oxford University Press.
- Thomas Piketty. *Capital in the Twenty-First Century*. 2017. Cambridge : Harvard University Press
- Tomoo Marukawa. Regional unemployment disparities in China. *Economic Systems*. Volume 41, Issue 2, June 2017, Pages 203-214.
- W. Arthur Lewis. *Development Planning*. 1966. London : Routledge