ATTAINING THE DEMOGRAPHIC BONUS IN INDONESIA

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ABSTRACT

Indonesia is experiencing the demographic bonus when the proportion of a working-age population is higher than a non-working-age population. This bonus will achieve its peak in 2030, then the proportion will decrease gradually. After that, Indonesia will face the demographic burden. Demographic bonus is very important to be utilized since it gives an opportunity to boost economic growth. However, after this bonus happens, the problems will arise in the demographic burden period. This paper will analyze demographic phenomena and offer several policies that can be taken by the government to attain the bonus and to lessen the bad impact of the burden using literature review analysis. According to the results of this paper, the government should focus on decreasing an unemployment rate, providing social infrastructure, and educating people.

ABSTRAK

Saat ini Indonesia tengah mengalami bonus demografi, dimana proporsi penduduk usia kerja lebih tinggi daripada penduduk nonusia kerja. Bonus ini akan mencapai puncaknya di tahun 2030, selanjutnya proporsi ini akan mulai menurun hingga akhirnya Indonesia akan menghadapi beban demografi. Bonus demografi ini harus bisa dimanfaatkan untuk mendorong pertumbuhan ekonomi. Demikian juga kita perlu waspada saat beban demografi mulai muncul. Tulisan ini akan mengulas fenomena demografi tersebut sekaligus menawarkan berbagai opsi kebijakan pemerintah untuk mengoptimalkan bonus demografi sekaligus mengurangi dampak beban demografi melaui pendekatan studi literatur. Hasil bahasan tulisan ini menunjukkan bahwa Pemerintah harus menurunkan angka pengangguran, menyediakan infrastruktur sosial, menjalankan program migrasi internal, serta mendidik sumber daya manusia.

1. INTRODUCTION

The population is dynamic in terms of number and growth. There are three factors causing the change in population: natality, mortality, and migration. Every country in the world has different population growth along its history. The variety of population growth occurs in recent years as well. According to the data of the World bank (2018), the world population growth was 1.1%. The highest population growth by region was in Sub-Saharan Africa (2.7%) while the growth in South Asian, North America, and Europe was 1.2%, 0.7%, and 0.2% respectively. Last year, the growth of Indonesian people was 1.1%. Although every nation has a different rate of population growth, the pattern is quite similar. The number of populations constanly increasing over the period, yet the growth rate decreases and eventually achieves a low stable level. This pattern is called the demographic transition. The demographic transition can lead to a demographic bonus when the proportion of a working-age population (15 to 64 years old) is larger than youth and old-age dependents. Perkins, Radelet, Lindauer, and Block (2013) argued that the demographic bonus happens when children born in high birth rate era grow and be the large working-age population while at that time the birth rate decline so the proportion of working-age to all population is in a large amount.

The demographic bonus has positive impacts in an economy. It can boost economic growth and increase the wealth of society. The economy of a country can be analogized to a household. When the number of workers in this household is more than the number of non-workers, it causes big size pie and each member can enjoy a larger slice. By analogy with this household, a country in the demographic bonus era has more resources to produce more output, boost its economy, and increase its prosperity by raising income per capita. However, there is a potential threat after the demographic bonus ends. According to Todaro and Smith (2015) when working-age is falling, many resources should be allocated to old people and it will be a problem for many countries. The period when the demographic bonus ends and the declining of the proportion of working-age population causing economic problems is called demographic onus or demographic burden. Japan is an obvious example of a country experiencing this problem and most of the Europe countries will experience this problem in the upcoming years (Ogawa, Kondo, & Matsukura, 2005; Gaag & Beer, 2015). Based on its demographic transition, Indonesia is experiencing the demographic bonus and achieve its peak in 2030. This is an excellent opportunity for Indonesia to boost its economy and catch up economy of developed countries. However, the government of Indonesia should be cautious of the demographic burden that potentially occurs after the demographic bonus period. This paper will discuss how to attain the demographic bonus in Indonesia by maximizing its benefit to support the economy and preparing to lessen the bad effect of demographic burden.

2. LITERATURE REVIEW

2.1. Demographic Transition

Demographic transition refers to the phases of population growth from stagnant (high natality rate and high mortality rate), high growth (high natality rate and low mortality rate), to stable growth (both low natality and mortality rate). Todaro and Smith (2015) argued that there are stages of this transition. *Stage 1* occurred before economic modernization. At this stage, the population growth rate is very slow due to high natality and high mortality as well. At *Stage 2* population growth increases significantly. This is because the death rate declines steeply as a result of an improvement of income, better health, and advancement in medicine. This improvement makes people have a higher life expectancy from 40 years to more than 60 years. Finally, at *stage 3,* which is influenced by modernization and economic development, the decreasing in the death rate is followed by decreasing in birth rate causing the growth rate stable in a low level.

2.2. Demographic Bonus, Demographic Burden, and Economic Development

The population in a country can be separated into two categories: a working-age and a nonworking-age population. The working-age population is people that are assumed having capabilities to work and earn money. They are people whose ages are more than 15 years and below 64 years. When the proportion of working age-population is far more than a half of the total population is called the demographic bonus. While, if the condition is in the contrary, it is called the demographic burden.

The demographic bonus and demographic burden are related to economic output and the development of a country. Mankiw (2016) argued that the economic output of a country is a function of capital and labor. In his model, the more capital and labor in the economy, the more economic output that can be produced.

In the demographic bonus period, the labor in an economy is abundant and the output of an economy is shared to a few people. While in the demographic burden, the number of labor is fewer compared with the amount of populations consuming the economic output. Therefore, the demographic bonus can boost economic growth and increase the prosperity of a country. In contrast, the economic burden will cause the increase of economic problem and the decrease of economic growth.

3. RESEARCH METHOD

The research method used in this paper is a literature study using the following approaches: analyzing, interpreting, and proposing solutions based on data and literature. In the beginning, this paper will describe the demographic condition in Indonesia and discuss the experience of that bonus in other countries. In the end, this paper will discuss policies that can be applied to attain this bonus and to lessen the bad

impact of the demographic burden. The data used in this paper is secondary data that is provided by the

based on their ages can be seen in the following pyramid graph (Figure 1).

Figure 1. Population Pyramid of Indonesia
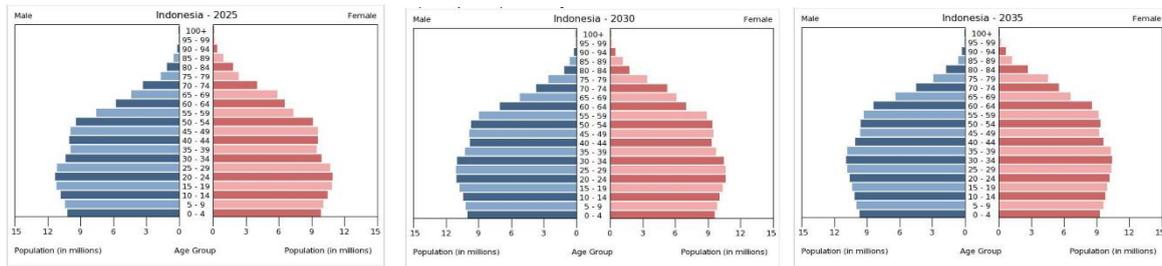
Source : The US Census Bureau

United States Census Bureau and Badan Pusat Statistik.

4. RESULT AND DISCUSSION

4.1. Demographic Transition and Demographic Bonus in Indonesia

Indonesia is one of the countries with the largest population in the world. According to The United States Census Bureau (2019), the population of Indonesia is about 265 million, the fourth largest population country after China, India, and the United States. Similar to the other countries, the population of Indonesia increases over the years, but the growth rate gradually decreases. According to the population census conducted Badan Pusat Statistik (Indonesia Statistic Bureau) (2015), during the period 1971 to 1980 the population growth rate was 2.31% then decreased to 1.38% during the period 2010 to 2015. There are several factors caused this demographic transition. The development of contraception and the increase of living cost to raise children made the parents tend to have fewer children. Moreover, Indonesia applied a program called Keluarga Berencana that suggested parents having only 2 children. The government of Indonesia claimed this program succeeded to decrease Total Fertility Rate (TFR) from 5.6 children per woman in 1970 to 2.6 children per woman nowadays.

The transition from high birthrate, 3 to 5 decades ago, to relatively low birthrate the years later results the productive-age people in Indonesia share in large proportion compared with unproductive-age people especially young people. According to the population census conducted in 2010 and its projection until 2035, the population ages 15-64 years will share more than a half of total population. In 2010, this cohort shared 66.5% of the total population. This number had been continuously increasing and reached 67.3 in 2015 and will reach 67.7 in 2020. This proportion is predicted at the highest point in 2025, 2030, and 2035 when the proportions of the working-age populations are 67.9%, 68.1%, and reverses back to 67.9%. That is why it can be concluded that now Indonesia is experiencing the demographic bonus and it will achieve its peak in 2030. The distribution of population in 2025, 2030, and 2035

From the Figure 1, we can see that over those years, the proportion of the working-age population (15-64 years old) is significantly larger than the other class. The year 2030 is predicted to be the peak of demographic bonus in Indonesia. After that year, the demographic bonus starts to decline. For instance, cohort 60-64 years (still productive) in a pyramid year 2030 will shift to cohort 65-69 years (unproductive), cohort 10-14 in 2030 will be working-age in cohort 15-19 in 2035, and a new generation, who are in low birth rate, will fulfill cohort 0-4 years. If this process continues, in total, the proportion of the working-age population will decrease in 2035 and Indonesia will start to get the demographic burden.

4.2. Experience from Other Countries

The demographic transition, demographic bonus, and demographic burden occurred in all countries in the world, but they do not experience in some period. The countries that experience earlier economic modernization will experience earlier demographic transition, attain earlier demographic bonus, and meet earlier demographic burden as well. For instance, many countries in Europe, the United States, and Japan have experienced the demographic bonuses and are facing the ageing population now. Therefore, the experience, relevant policy, and the finding of many studies from the other countries can be applied in Indonesia to maximize this demographic bonus and lessen the negative impact of demographic burden.

Japan is a concrete example of a country that has experienced the demographic bonus and it is facing demographic onus now. Ogawa, Kondo, and Matsukura (2005) detailed the demographic transition of Japan from a positive condition of demographic, called bonus, to a negative condition, called onus. They divide the era from 1950 to current into two conditions, demographic bonus era and demographic onus era. The first era occurred in late 1950 until early 1970 when Japan had phenomenal growth caused by shifting from childrearing to physical capital accumulation. Then the growth gradually decreases, and Japan is facing the demographic onus problem. Ogawa, Kondo, and

Matsukura used the models constructed by Nihon University Population Research Institute (NUPRI) to estimate the condition after demographic onus in 2025. According to this model, social and economic condition of Japan will be bad and gloomy when the economic growth only 0.2%.

Another clear evident of demographic bonus and demographic is what happened in countries in Europe. European countries have undergone modernization in politic, social, and economy since in the Industrial Revolution, in the late 18th century and in the beginning of 19th century. From that, the second stage of demographic transition began. Gaag and Beer (2015) studied the population transition in Europe from demographic dividend to the demographic burden that will decrease economic growth. After gaining the bonus from demographic transition, in 2020 almost all countries in Europe will experience demographic burden when working-age people share declines continuously. In the Europe case, the effect of demographic burden varied among regions of which a rural area will be more affected. They also found that a "Europe 2020 strategy" in which one of the its parameters is increasing employment rate, will compensate the negative impact of demographic burden.

Some researchers have studied the demographic phenomena and suggested policies that can be taken by government to maximize the bonus or minimize the burden. Beside increasing employment rate like is suggested by Gaag and Beer (2015), there are other scopes of policies that can be taken by the government; one of them is to provide social infrastructure. Using his country case, Mishra (2007) claimed that India had a bottleneck caused the economic growth did not achieve the expected level. That bottleneck is lack of social infrastructure facilities such as education, health, housing, and civic amenities. Using descriptive analysis, he argued that those facilities will boost the quality of life, increase labor productivity, and transform human capital as a precious asset than a liability. Therefore, to maximize the benefit of the demographic dividend, the government should focus on providing those social infrastructure facilities.

Another policy that can be applied by the government to maximize demographic bonus is by internal migration since the distribution of working-age is not equally distributed across the country. Peng and Cheng (2005) studied the impact of migration to maximizing the benefit of the demographic bonus. Using a case study in Shanghai, they concluded that a favorable working-age share population does not always mean the bonus will be gained. There are several factors that are preconditions for utilizing demographic bonuses such as employment situation and investment strategies. Moreover, they also claimed that those preconditions are not distributed equally among rural and urban areas. For instance, rural area has a good proportion of working-age population but experiences a lack of economic opportunities. On the other hand, an urban area experiences the opposite. To solve this problem, Peg and Cheng offered an internal migration.

The most important policy offered by researchers to maximize demographic bonus and lessen demographic bonus is by education. Cuaresma and Anderson (2014) studied the factors determining the economic growth of countries in the world. They used data from 105 countries over the period 1980-2005. The control variables used in their research are capital per capita, labor, number of population, previous growth, labor participation, proportion of a working-age population, and years of education. Putting all those variables, Cuaresma and Anderson concluded improvement in educational attainment, proxied by years of schooling, is the key to explain the labor productivity. Moreover, Renteria, Souto, Meija-Guevara, and Patxot (2016) discussed the effect of education on demographic dividend using comparison analysis between Mexico and Spain. According to their results, Mexico and Spain experienced the demographic bonus since 1970 and 1980 and will end in 2020. Moreover, they argued that adding education to the demographic dividend will decrease a negative effect in the demographic burden era and delay the start of negative growth. Then they suggested the government to not only focus on population aging but also how to increase education quality.

4.3. Current Conditions and Relevant Policies in Indonesia

Unemployment is one of the economic problem not only in developing countries but also in developed countries. This problem is caused by the excess of working-age people compared with the job opportunities in the labor market. Badan Pusat Statistik (Indonesia Statistic Bureau) uses an open unemployment concept to calculate the number of unemployment rate in Indonesia. Based on this concept, a person is categorized as unemployment if he or she is in a working-age population and does not have an occupation because of inability, still looking for a job, or still preparing his or her job. According to this concept, the unemployment rate in Indonesia fluctuates over the years. In 2011, the unemployment rate in Indonesia is 7.48% then gradually decreases to 5.33% in 2017 and eventually achieve 5.01% in 2019 (BPS, 2019). The high rate of unemployment causes many problems not only in the economy but also in the social matter. In an economic view, the unemployment will prohibit fast economic growth rate, make income per capita to be lower, and reduce welfare in general. In the social view, an unemployment will make unconducive politic and increase criminality.

The government of Indonesia should focus to provide job opportunities to utilize the demographic bonus and reduce the negative effect of demographic bonus which is relevant with Gaag and Beer (2015)

finding that improving an employment rate can lessen the bad impact of demographic burden. One thing that can be applied by the Government of Indonesia is accelerating foreign and domestic investment, especially in the labor-intensive industries. To attract investors, the easier to get the business license and the tax incentive can be applied by the government. Furthermore, the government can support an informal sector especially a micro business and an entrepreneur since 57% labors in Indonesia is still centered in the informal sector (BPS, 2019). The microfinance program and entrepreneurship training can be applied to support these sectors.

The government of Indonesia is focusing in developing its infrastructure to support economic growth. This effort can be seen in the allocation of the infrastructure fund Rp 415 trillion or about 17% of total spending allocation in 2019 (Indonesia Budget, 2019). This huge allocation is great to utilize demographic bonus since it is relevant to Mishra finding that providing social infrastructure can eliminate the bottleneck of economic growth. However, in the Global Competitiveness Index 2018, Indonesia is in 71th rank of 140 countries based on infrastructure pillars. This is not a good position and is worst ranking compared in 2015 (in 62nd rank), 2016 (in 60th rank), and 2017 (in 52th rank). Therefore, the government should keep allocating a big portion of its budget to this infrastructure, but the way of allocation must be better. In addition, the government should fight corruptions occurred in this field since according to Indonesia Corruption Watch (ICW), at least 30% of corruption case is related to the infrastructure project. Therefore, law enforcement, rigid monitoring, and supporting to corruption eradication agency are necessary. Furthermore, the government also should focus on the distribution of infrastructure not only centered in Java, but also main islands in Indonesia.

The population distribution in Indonesia is not equally distributed. Most of the population is centered in Java, Bali, and Sumatera. Data from Indonesia Statistic Bureau show that more than 80% of the total population live in those regions, but the area of those regions is only 32% of Indonesian area. The economic concentration is also similar to this population distribution. Therefore, many resources and opportunities in other regions are not utilized yet. The unequal economic also happens between rural and urban areas. The government should develop the economy of the rural area and the regions outside Java, Bali, and Sumatera by developing industry sector, agriculture modernization, and providing sufficient infrastructure. The next step is mobilization people and from populous regions to those regions. This migration concept to utilize demographic bonus is relevant to the finding of Peng and Cheng using case study in Shanghai, China.

The education is essential to attain demographic bonus and to lessen demographic burden (Cuaresma & Anderson, 2014; Renteria, Souto, Meija-Guevara, & Patxot, 2016). The Government of Indonesia is on the track to increase the quality of human resources in Indonesia. Indonesia law state that at least 20% of the national budget must be allocated in the education, and the government is consistence to this law. In 2019, the government allocated Rp 492.5 trillion to education. However, according to the United Nations Development Program (UNDP), Indonesia is in the 116th rank of all countries in the world in human development indicator. One of the criteria that worsen the position of Indonesia is an education. According to this report, expected years of schooling of Indonesia people is 12.8 years and the mean of years of schooling is only 8.0 years.

To pursue this lag from other countries, the government should apply some policies. Firstly, keeping the consistency to fulfill the law that allocation in education at least 20%. Secondly, the government can set a minimum years-of-schooling from 9 years to 12 years. Thirdly, the government should develop not only formal education but also informal education such as a job training. Fourthly, the education of the regions outside Java, Sumatera, and Bali should be improved by providing education infrastructures. Finally, the government must utilize the Internet to improve the quality of human resources since it provides unlimited knowledge from the entire world.

5. CONCLUSION

Indonesia is experiencing the demographic bonus and will achieve the culmination in 2030 the proportion of the working-age population is higher than both youth and elderly population. This condition will have benefit in the economy, since it can boost the economic growth and increase the national prosperity. However, after getting this bonus, like other countries, Indonesia will experience the demographic burden when the portion of the working-age population decreases, and will be a potential problem. To prepare the demographic bonus and anticipate demographic burden, the Indonesia government should increase an employment rate, provide social infrastructure, set internal migration policy, and increase human capital through education. To increase an employment rate, the government should conduct a friendly business environment to the investors, and support an informal sector by giving microfinance and adequate training. In terms of providing infrastructure, the government should not only provide various infrastructures but also equate its distribution across the country. Moreover, to extend job opportunities, the government should develop outside regions and rural regions then apply internal migration, so the demographic bonus can be better utilized. In addition, the government of Indonesia should increase the quality of the citizen by providing education infrastructure, equate the quality of education among countries, set minimum years of schooling, and utilize an internet to educate people.

The monitoring and evaluation of those programs are very important. The most important reason of this monitoring and evaluation is to prevent corruption that potentially occurs in the future. Furthermore, the monitoring of the program is very important to serve alternative plans if problems appear during implementation. The last but not least, all elements in Indonesia, the government, scholars, businessmen, investors, and citizen must cooperate and engage closely to succeed in maximizing the demographic bonus opportunity.

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