Human Capital Relation with Welfare in Indonesia and Asean Countries

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Article Info	Abstract
	The quality of human capital strongly determines the economic development of a country. Human capital can be shaped by the level of education and public health. This research analyzes the development and competition of human capital of Indonesia and other 5 ASEAN countries from 1985-2016. The problem of this study is whether human capital can be a significant determinant of economic welfare (per capita income) in ASEAN countries. The research used a regression analysis of panel data (all countries) and multiple linear regression (for each country). The independent variables are life expectancy, population growth rate, working-age population, and infant mortality rate per 1,000 live births. The results show that in general, all independent variables have a significant effect on GDP per capita. Nevertheless, an analysis in each country shows different levels and direction of influence. The quality of the human capital of Indonesia is still at the middle level among ASEAN countries. Therefore a variety of efforts to improve the quality of human capital needs to be done by the government and the people of Indonesia to win the competition between ASEAN countries.

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INTRODUCTION

The ASEAN Economic Community (AEC) has been running for more than three years since the end of 2015. The AEC was formed to achieve ASEAN economic integration, namely the achievement of a safe ASEAN region with a higher level of development and integrated dynamics, the eradication of the ASEAN community from poverty, as well as economic growth to achieve equitable and sustainable prosperity. Referring to the development blueprint, MEA has four main characteristics, namely a single market and production base, a highly competitive economic zone, an area with equitable economic development, and an area that is fully integrated with the global economy.

Table 1. Population and Economic Potential of ASEAN

Country	Population 2018 (000)	Per capita income (PPP)-2018	Human Development Index (IPM)
Brunei Darussalam	421.3	28,985.8 (2)	0.853 (2)
Cambodia	15,717.7	1,421.3 (9)	0.582 (9)
Indonesia	261,890.9	3,871.6 (5)	0.694 (6)
Laos	6,752.8	2,530.8 (7)	0.601 (8)
Malaysia	32,049.7	9,898.7 (3)	0.802 (3)
Myanmar	53,388.0	1,228.9 (10)	0.578 (10)
Philippines	104,921.4	2,991.5 (6)	0.699 (5)
Singapore	5,612.3	57,722.2 (1)	0.932 (1)
Thailand	67,653.2	6,735.9 (4)	0.755 (4)
Vietnam	93,671.6	2,389.6 (8)	0.694 (7)
ASEAN	642,078.9	11,777.63 (av)	0.719 (av)

Source: ASEAN Statistic, 2018; UNDP, 2018.

Table 1 shows the total population of all ASEAN countries in 2018 amounted to an estimated 642 million which is equivalent to 8.4% of the total world population. Of course, this is a very large number and has an enormous economic potential. The table above also shows the linear relationship between GDP per capita and the quality of human development, the higher the income, the higher the quality of human beings. The relatively stable level of economic growth in ASEAN countries, as well as increased public purchasing power, has made ASEAN develop as the fourth largest market in the world, after the European Union, the United States, and China.

Indonesia remains the largest population with a population of 261 million which is equivalent to 40% of the ASEAN population. However, in terms of welfare level (measured by GDP per capita), Indonesia only ranked 5th with 3,871.6 US $, far behind from Singapore in the first position with 57,722.2 US $. Similarly, in terms of the quality of human development (HDI), Indonesia is also in the 6th position of the 10 ASEAN countries with a value of 0.694 under Singapore, Brunei, Malaysia, Thailand, and the Philippines. In another measure, table 2 shows the Human Capital Index (HCI), where Indonesia's position is much lower, lagging far behind Singapore, Malaysia, even the Philippines, and Vietnam. The Indonesian human capital index score is 39 points from Singapore, which is the highest scores among ASEAN countries. Indonesia is only slightly better off from Cambodia, Laos, and Myanmar. Of course, this is very sad, considering that Indonesia is the largest country in ASEAN in terms of population and economy.

Table 2. The 2018 Human Capital Index Ranking

World Rank	Country	Score
1	Singapore	88
48	Vietnam	67
57	Malaysia	62
68	Thailand	60
82	Philippines	55
87	Indonesia	49
99	Cambodia	49
112	Laos	45
107	Myanmar	47

Source: World Bank 2018.

In the era of the ASEAN Economic Community (AEC), Indonesia and nine other ASEAN members faced very tight competition in the economic field. AEC is a very vital forum for

the progress of ASEAN countries in realizing prosperity so that its existence must be addressed positively. Therefore, it is expected that countries in the Southeast Asia region can compete and put ASEAN into the largest market in the world. It is hoped that the formation of a single market will encourage countries in ASEAN to achieve stability and steady economic progress in facing global competition. Although the existence of the AEC is still pro and contra to date, the debate tends to question the readiness of member countries to deal with the new economic climate in the Southeast Asian region. The most critical readiness is from the side of human resources to compete with other ASEAN member countries.

In supporting the objectives of the AEC, there are at least four main focuses carried out in this era of free markets as described below. As a dynamic society, we should be able to see more of the positive impact of the free markets of Southeast Asia. It focuses on four things, namely: AEC as a single market in the Southeast Asia region which functions as a unit market and production base. The creation of market unity and production base will eliminate restrictions on the flow of goods, investments, capital, services, and professional personnel between countries in Southeast Asia, The MEA is oriented to form economic zones that have high competitiveness with policies, consumer protection, and various kinds of agreements to create fair economic conditions, they are growing of Micro, Small and Medium Enterprises (MSMEs) that have high competitiveness and are supported by the ease in obtaining capital, AEC is integrated with the global economy so that the market reach achieved by countries in Southeast Asia is far more optimal. Thus, participating countries are challenged to compete strictly with each other. The free market must be aware of its condition so that it can continue to develop capabilities in the following competition in any field. Many opportunities can be taken from AEC as outlined below.

Hermawan Kartajaya, Founder & Chairman of MarkPlus, Inc. giving four ASEAN potentials in the eyes of the world: *first*, "Big & Grow." Located in the heart of the Asia Pacific and located on the main trade route, ASEAN has at least contributed the US $ 5.3 billion of world trade by sea every year. ASEAN became the third largest trading partner of the United States and became the largest Asian investment destination for the country. ASEAN is also a European investment destination with growth reaching 24.3%. J.P Morgan predicts that ASEAN is the fourth largest market in the world, after the European Union, the United States, and China in 2030, supported by the growth of skilled labor, attractive geographical locations, and a large number of untapped natural resources. ASEAN integration is the key to accelerating the growth of this region. ASEAN economic growth also shows a positive signal when compared to global economic growth. The average ASEAN economy grew 5% over the past 15 years, higher than global economic growth of 3.9%. With a very large population, ASEAN is also a potential market for foreign trade partners, such as Australia, India, China, the United States, and the European Union.

Second, a peaceful region. Compared to the unity of other countries such as the European Union, ASEAN is relatively safer from the issues of politics, security and economic stability. The European Union (EU) suffered a split after Britain decided to leave the European Union through Brexit. EU member countries indeed feel the impact of the UK referendum out of Europe. Britain is expected to close its banking offices in the European country and move them to non-EU countries. European economic growth also declined. The ISIS terrorist extremist movement indeed threatens the world, including Southeast Asia, especially Indonesia, Malaysia, and the Philippines. Since 2016, Indonesia is among the countries in Southeast Asia that have received the most terrorist attacks. More than 160 attacks have occurred in this country. Therefore, in the annual ASEAN Political-Security Community (APSC) Council Meeting, ASEAN countries are struggling to improve their ability to detect terrorism and narrow the space for terrorism.

Third, unity in diversity. Although ASEAN has a variety of different languages, ASEAN holds the spirit of the University in

Diversity. ASEAN is quite active in organizing youth programs that unite ASEAN youth. *Four*, the hub for plus. ASEAN is not only beneficial for its members. Its strategic location makes ASEAN a hub or hub to various regions, such as China, Australia, India, and New Zealand. As a hub, companies that expand into Southeast Asia can have the opportunity to widen expansion into other regions. One of the missions was contained in the ASEAN Plus Three (APT) which began in December 1997 by cooperating with China, Japan, and South Korea. In the APT, ASEAN wants to increase market coverage in the region, while at the same time carrying out bilateral cooperation between the various parties. ASEAN has also signed cooperation with South Korea through the approval of the ASEAN-Korea FTA (AKFTA) Third Protocol to Amend Trade in Goods which was signed in 2015. The collaboration discussed the possibility of a trade volume target of US $ 200 billion in volume between ASEAN and Korea in 2020.

Along with the integration of the ASEAN market into one, broader and easier access to work in ASEAN countries is increasingly open. Educated and certified workers from Indonesia are free to choose and get jobs in other ASEAN member countries, and vice versa, both in the formal and informal sectors. This qualification is one of the opportunities and challenges that must be faced by Indonesian human resources. According to M. Nasir (Minister of Research, Technology, and Higher Education of Indonesia), the economic development gap that causes the quality of human resources is not evenly distributed which results in a gap between western Indonesia and the eastern part of the country needs to be resolved immediately with an integrated education and economic policy package (Nasir, 2016).

It is the challenge of competition for Indonesian human capital among ASEAN countries that need to be addressed and followed up with the right policies. It is very crucial for Indonesian human resource to be able to compete with other ASEAN countries, as one of the main elements in driving economic growth. Various theories of economic growth were placed

human capital equal to financial capital, technology and the availability of raw materials for production. Both formal and informal business sectors still need quality human capital.

Empirically, enough research has revealed the vital role of human capital for the country's economic growth. Johansson (2015) examines the role of human capital in economic growth in Sub-Saharan African countries in 1988-2011. By using independent variables of education level, foreign investment, internet usage, population growth rate, life expectancy, and also savings rate, Johansson found that only the level of education, foreign investment, and life expectancy had a significant effect on GDP per capita.

Johansson's research results were supported by the findings of Ying and Liu (2016) which examine the influence of aspects of education and human capital on economic growth. Ying and Liu classify human capital into two aspects, education (elementary, middle and high) and health (life expectancy). Research conducted in 55 countries and using data from 1960-2000 shows the results that aspects of education (especially higher education) and life expectancy have a positive effect on economic growth.

Several similar studies were also carried out by Wei (2008), Alatas and Cakir (2016), Cura (2016) and Zhou (2018). Sieng and Yussof (2015) focused their research on Malaysia and selected ASEAN countries. The results of this study indicate that Malaysia's human capital is relatively superior to other middle-income countries, but they acknowledge the lags with high-income countries (such as Singapore and Brunei). According to them, Malaysia needs to improve the quality of their human capital through the education and health sectors to reach the level of developed countries.

Most of the research above exploits education variables (education level and education budget) and their effects on economic growth, GDP and GDP per capita. Chhetri (2017) tries to develop and expand the scope of human capital in terms of health by including variables of life expectancy, population growth

rate and the population of working age (15-64 years) while continuing to include education (literacy) and investment in technology. The findings of this study indicate that overall variables have a significant effect on per capita income in various developed and developing countries in 2010-2015.

This study tries to develop research conducted by Chhetri and apply it to the context of ASEAN countries, both together (simultaneously/panel) and individually (partial). It is hoped that the results of this study can provide an overview of human capital competition among ASEAN countries as well as the influence of various variables on human capital on welfare represented by per capita income.

RESEARCH METHODS

As stated earlier, this research develops the model compiled by Chhetri (2017) and focuses on health aspects as a form of human capital. The independent variables used are life expectancy, population growth rate, and the number of working-age population (15-64 year). In order to complete the health aspect, this study adds a variable of infant mortality rate per 1,000 live births such as research conducted by Alataş and Çakir (2016). The welfare level is represented by per capita income. By using a panel data regression analysis and multiple linear regression analysis tools, the regression equation model compiled is as follows:

PCI = f (LE, PG, WAP, IMR)
Where:
PCI   : per capita income (US $ PPP)
LE   : life expectancy (years)
PG   : population growth rate (%)
WAP : working-age population / 15-64 year
        (%)
IMR   : infant mortality per 1,000 live births

The object of this research is selected countries in ASEAN with several considerations, namely the availability of complete data and not extremely high-income countries (Singapore and

Brunei). Therefore, six countries were chosen, 1. Indonesia, 2. Malaysia, 3. Myanmar, 4. Philippines, 5. Thailand, and 6. Vietnam. These six selected countries are deemed capable enough to represent all ASEAN countries because from the side of the population it has covered more than 90% of ASEAN countries.

Data were obtained from the World Development Indicator (WDI) published by the World Bank. The annual data used in this study period was from 1985-2016 (32 observations), because of the limitation of the data. In order to obtain more comprehensive results, this research will be conducted using two methods of analysis. First, panel data regression analysis from the 6 ASEAN countries together with the data from 1985-2016. According to Kuncoro (2001), panel data is a combination of time-series data with cross-section data. Second, multiple linear regression analysis (ordinary least square, OLS) for each ASEAN country (6 countries) with data from 1985-2016.

RESULTS AND DISCUSSION

Before describing the results of the regression analysis, a descriptive analysis of each variable will be presented first. This analysis needs to be done in order to obtain an overview of the development of each variable historically in the last 32 years, and how it compares with other countries in ASEAN. This data will show the progress of the development results in each country.

Table 3 shows that at the ASEAN level, Indonesia's per capita income is relatively in the middle position below Malaysia and Thailand. For the last 32 years, per capita income of Indonesian people increased 5.62 times, higher than the increase of per capita income in the Philippines (4.13 times) and Malaysia (5.32 times). This result shows that the Indonesian government has developed the economy successfully. Nevertheless, the Government's economic performance cannot be called incredible because at the same time other ASEAN countries also increased by almost the same level. Indonesia was only able to go beyond

the Philippines in increasing income per capita over the last 30 years. However, the increase per capita income of Indonesia is still lower than Thailand (6.99 times), Vietnam (8.33 times), Myanmar (14.26 times) along the period. The success of economic development and improvement after the severe economic crisis in 1997/1998 made Indonesia able to catch up with its income. The level of economic competition in the ASEAN countries believed to be increasingly strict in the time to come.

Table 3. Per Capita Income of 6 ASEAN Countries (US$ PPP)

Country	1985	2016	Increasing (times)
Indonesia	1,874.0 (4)	10,537 (3)	5.62
Malaysia	4,803.5 (1)	25,552 (1)	5.32
Myanmar	386.6 (6)	5,514 (6)	14.26
Philippines	2,016.2 (3)	8,325 (4)	4.13
Thailand	2,422.8 (2)	16,959 (2)	6.99
Vietnam	715.1 (5)	5,957 (5)	8.33

Source: data processed.

Table 4 describes the development and comparison of the human capital indicator of 6 Selected ASEAN Countries in 2016. In terms of

life expectancy, Indonesia (69.19) is still lagging behind Vietnam, Thailand, and Malaysia, which ranks first and second. As an indicator of the quality of human capital, high life expectancy is expected to increase productivity and income. However, Myanmar is also noteworthy given the highest increase in life expectancy in the last 32 years. The high life expectancy is not always linear with the level of income, but the quality of life and health is thought to be a more decisive factor.

The highest population growth rate was achieved by the Philippines (1.56), while Indonesia was ranked third. In general, the whole country experienced a decline in population growth rates. Population growth has diverse implications. On the one hand, high population growth can be a source of human capital in economic development. However, high population growth can be a burden for the country's economy if it is not productive. The term capital dilution appears, namely high population growth will reduce per capita income. Indonesia should be able to use the population as one of the power to drive economic growth in the future.

Table 4. Development and Comparison of Human Capital Indicator of 6 Selected ASEAN Countries in 2016

Country	Life Expectancy		Population Growth		Working Age Populations		Infant Mortality	
	Year	rank	%	rank	%	rank	Per 1,000 birth	rank
Indonesia	69.19	3	1.14	3	67.15	4	22.20	5
Malaysia	75.30	2	1.50	2	69.30	3	7.10	1
Myanmar	66.61	5	0.91	5	67.12	5	40.10	6
Philippines	69.09	4	1.56	1	63.35	6	21.50	4
Thailand	75.30	2	0.30	6	71.39	1	10.05	2
Vietnam	76.25	1	1.06	4	70.00	2	17.30	3

Source: data processed

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The working age population is the backbone of a nation's economy because on their shoulders economic development is based. The more the working age population will increase the productivity and income of the community. In this variable, in 2016 Indonesia ranked 4th

after Thailand, Vietnam, and Malaysia. Vietnam is the country with the highest increase in working-age; of course, this will potentially make Vietnam experience a higher productivity increase than other countries. The Government of Indonesia must continue to think about and

improve the provision of new jobs in order to absorb more workforce so that unemployment can be reduced significantly.

One measure of the level of public health is the infant mortality rate per 1,000 live births. Until 2016, Indonesia was one of the countries with the highest infant mortality rates among other ASEAN countries. Indonesia is only better than Myanmar with 22.2 deaths per 1,000 live births, far behind from Malaysia in the first position with only 7.1 deaths per 1,000 live births. The fact is indeed a serious concern from the government to improve it even though in the last 32 years the Indonesian government has been able to reduce the infant mortality rate very significant.

Panel regression has three alternative model choices: (1) Common Effect Model: (2) Fixed Effect Model; and (3) Random Effect Model. To determine the best model of the three alternative models, several tests must be done as follows:

Chow Test, This method is used to determine the best model between fixed effects with common effects. The hypothesis used is as follows:

H0: Common Effect method

H1: Fixed effect method

H0 is accepted if the probability value of the common effect is more than the 0.05 significance level. Conversely, H1 is accepted if the probability of the common effect is less than the 0.05 significance level. Based on the results of the chow test, it is known that the value of the common probability effect of 0.0000 is smaller than the confidence level of 0.05. It can be concluded that the fixed effect approach is better than the common effect approach.

Hausman test is used to determine the best model between fixed effect models and random effects. The Hausman test is carried out with the following hypothesis:

H0: Random effect model

H1: Fixed effect model

The conditions are, if the probability is a random Cross-section> 0.05 then H0 is accepted, but if the probability of a Cross-section is random <0.05 then H0 is rejected. Based on the test

results it is known that the probability effect value of the fixed effect model is 0.0000 less than the 0.05 probability. It can be concluded that the fixed effect approach is better than the random effect approach.

Based on table 5 , it is known that simultaneously, all models built can be accepted (with a probability value of F statistic <0.05). Besides that, the high value of Adj. R-squared which is more than 0.86 (panel model) and more than 0.95 (OLS model) shows that the overall independent variables chosen can explain the dependent variable variation very much.

Panel data regression results show that the overall independent variable has a significant positive effect on per capita income, except for population growth variable (PG) which has a negative effect. The result means that high population growth will reduce people's income. Similar conditions occur in Thailand and Vietnam but in contrast to the conditions in Indonesia and Myanmar which have a positive effect. Only Malaysia shows that there is no influence of population growth on GDP per capita. This result is in line with various previous studies that show results that are still not consistent.

According to the basic idea to the theory of Simon-Steinmann Economic Growth Model, proposed by Julian Simon and Gunter Steinmann is that the higher the total population, the greater the level of technological growth yielding the higher the per capita income. An idea derived from Boserup, which Simon refers to as the —Population Push model, and distinguishes between current knowledge and knowledge being applied for production. Underlying the population push model of technological development is the added idea that technology can and does develop independent of population growth (learning-by-doing) and therefore technology builds upon itself, reconciling the pull and push models of technological progress.

So even in the case of a static population, there will be some level of technological advancement, albeit slower than in situations of the growing population. It is just necessity

remains the mother too, and is the primary force behind, the invention (Nwosu, Dike, and Okwara, 2014: 2325). Empirical findings in Indonesia and Myanmar, in line with the theory, but not for the other ASEAN countries. The high growth of population will potentially increase unemployment if the Government is not incapable of providing sufficient employment.

Life expectancy (LE) variables in all countries have a significant positive effect on GDP per capita, except in the Philippines and Thailand. The level of significance of this

variable for Indonesia is very high because it is significant at $\alpha = 1\%$, so it is important for the government to continue to improve the quality of public health in order to encourage productivity and welfare of the community. The community health insurance program needs to be improved so that the quality of public health continues to increase. A public institution like Health Care and Social Security Agency (BPJS Kesehatan) must be able to provide services that span the entire people of Indonesia.

Table 5. Comparison of Panel Data and OLS Regression Results

	Constant	LE	PG	WAP	IMR	Adj. R-squared	Prob. (F-stat)
Panel	-149064.9	1976.25	-1769.62	207.10	278.49	0.8643	0.0000
	(-7.02)***	(6.33)***	(-1.98)**	(119.55)*	(6.35)***		
Indonesia	-516836,1	8912,34	8275,336	-1677,12	661,07	0,9899	0.0000
	(-6.46)***	(10.53)***	(4.04)***	(-5.07)***	(4.68)***		
Malaysia	-349408,6	4454,73	-1496,89	525,87	990,63	0,9932	0.0000
	(-10.53)***	(7.17)***	(-1.59)	(2.24)**	(7.77)***		
Myanmar	-2240,06	1128,55	1153,87	-953,38	-121,50	0,9720	0.0000
	(-0.08)	(2.40)**	(2.88)***	(-7.21)***	(-1.73)*		
Philippines	-61307,66	132,66	1360,53	881,12	56,88	0,9721	0.0000
	(-1.90)*	(0.27)	(1.92)*	(8.92)***	(0.86)		
Thailand	83050,64	882,47	-834,59	-1720,49	-884,08	0,9950	0.0000
	(4.61)***	(10.04)*	(-1.90)***	(-10.17)	(-11.58)***		
Vietnam	-178960,4	2252,42	-945,10	82,19	507,43	0,9932	0.0000
	(-14.23)***	(12.88)***	(-2.80)***	(3.45)***	(9.62)***		

Source: data processed. Signs *), **), ***) shows the level of significance at α 10%, 5% and 1%.

Since the development of the new growth theory in the late 1980s made by some authors like Romer; Lucas; Barro; Aghion and Howitt, it is disassembled that human capital plays a crucial role in economic growth in a country. One of the essential important components of the capital is good health. Improving the health and life expectancy, allow the accumulation of knowledge and skill. People in good health live longer and are much more likely to invest in education. They are therefore more productive and contribute to the national income, job creation. Conversely, people in poor health have a low ability to learn and adapt to technological

innovations within and therefore are less productive. The findings of this research are line with theory and previous research such as that done by Ngangue and Manfred (2015).

Variables of the working age population (WAP) for the model in Indonesia have a significant negative effect on GDP per capita, which of course is contrary to the results of panel data regression. The result is possible because there is still a high level of unemployment in Indonesia so that a large number of people in productive age will become a burden to reduce community income per capita. According to the data of World Bank, in January 2017, the

unemployment rate in Indonesia (5.3%) is higher than other ASEAN countries such as Thailand (1.2%), Singapore (2.2%), or Malaysia (3.5%).

A large number of the population of Indonesia is indeed becoming a burden for economic development. A large number of people will cause a large number of the population in working age. Indonesia's economic growth rate of about 5% is indeed not enough to be able to absorb the entire available workforce. It takes a revolution in economic policy so that it could push economic growth to more than 8% as China and India.

The last variable, that is, the infant mortality rate (IMR) per 1,000 live births shows the results that should not be. This variable has a positive and significant effect on people's income. Results in several countries show different findings, in Myanmar and Thailand showing a negative influence, while in the Philippines there was no significant effect. Providing quality and affordable healthcare is one of the most critical problems facing many nations. The increasing costs of care affect both government and business.

Furthermore, it affects the rapid spread of disease to vulnerable populations. The different research findings between countries show that the health aspects, in particular, the level of infant mortality is still unresolved well in various ASEAN countries. The Government needs to give more attention to this problem seriously.

In general, the results of this study strengthen and are in line with findings from research conducted by Chhetri (2017). The quality of human capital is not only determined by the aspect of education, but also by the level of public health. The better the level of public health, it will be able to increase work productivity which in turn will improve community welfare which is realized by the variable per capita income. The development of human capital, both in terms of education and health must be able to touch the formal and informal sector workers to create harmonization that encourages the improvement of people's welfare.

It must be realized that the low quality of human capital occurs a lot in countries that have been colonized (Todaro & Smith, 2015: 80-90). Almost all ASEAN countries have experienced colonialism and suffer from it. However, after a long period of independence, each country tried to improve the quality of human capital to achieve better economic growth and prosperity.
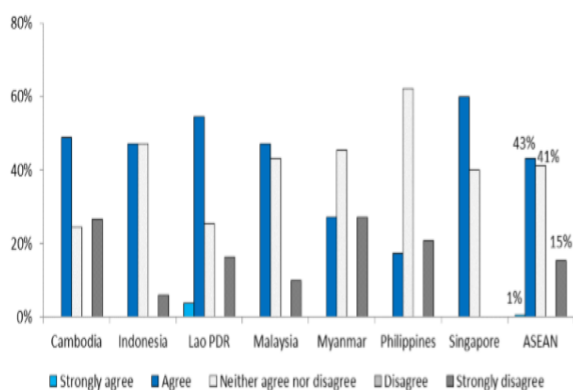
Mankiw reminded the government of the importance of investment in development, not only in physical capital but also in human capital which includes education and health (Mankiw, 2010: 232-233). This idea criticizes the Solow model which often focuses on increasing physical capital and paying less attention to human capital. It is essential for the government to increase the knowledge and skills that workers acquire through education, from early childhood programs such as head start to on-the-job training for adults in the labor force. Similarly, government policies to improve the quality of public health are also essential.

In the context of the implementation of the ASEAN Economic Community (AEC), the readiness of all parties is needed. The AEC is the foundation that is expected to strengthen and maximize the objectives of economic integration in the ASEAN region and open opportunities for member countries. With the existence of the AEC, it is also expected to improve the quality of cooperation in economic matters in ASEAN in a more meaningful direction. In this case, what Indonesia needs to do is how Indonesia as part of the ASEAN community seeks to prepare themselves for quality and take advantage of opportunities in the AEC. Indonesian human resources must be able to improve capabilities to compete with other ASEAN member countries so that the fear of losing competitiveness in their own country due to the implementation of AEC does not occur. The improvement needs to be done because other ASEAN countries such as Thailand, Malaysia, the Philippines, Laos, and Myanmar also continue to improve their quality in terms of the economy in order to face the AEC.

These results are in line with the survey conducted by the International Labor

Organization (ILO) about employers on skills and competitiveness (ILO, 2014). This survey included 240 professionals from enterprises and business associations spanning all ten ASEAN countries. Most of the respondents were from Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, and Singapore. Three-quarters of those surveyed worked in manufacturing, finance, insurance, technology, communications, mining, agriculture, and service activities. More than 80% of these employers represented either privately owned domestic enterprises or wholly owned foreign enterprises. Most participants worked for mature establishments with an average operational age of 22 years. Most organizations surveyed were reasonably large, with 41% employing over 300 workers and 32% engaging between 50 and 300 employees.

On average, 44% of the respondents from across ASEAN indicated they expect their enterprise to become more competitive after AEC integration. Only 15% of all respondents felt that AEC integration would not enhance competitiveness. Many respondents (41%, on average) expressed uncertainty about whether implementation of the AEC will enhance or diminish competitiveness.

agreeing nor disagreeing. More than 25% of the respondents from both Cambodia and Myanmar strongly disagreed that their enterprises, following integration, will be more competitive. In general, the diverse range of responses and lack of uniformity across the region indicate much uncertainty amid mixed feedback.

The increase of the competition, of course, should be addressed positively by strengthening and improve readiness to deal with it. Various aspects of the business competition between companies should need to be improved, so as not to lose the local entrepreneurs competing. The players should be such local business players, do not just be a spectator.

On average, concerning the mobility of all categories (high, semi and low skilled), 32% of respondents stated that labor mobility would have no impact on their enterprises. Meanwhile, 54% assumed that there would be a positive or very positive impact, while only 14% expected a negative or very negative impact. Respondents agreed that the mobility of the high-skilled pool of laborers would have the most significant impact.

Figure 2. Impact of greater high-skilled labor mobility on enterprises
Source: ILO, 2014: 35.

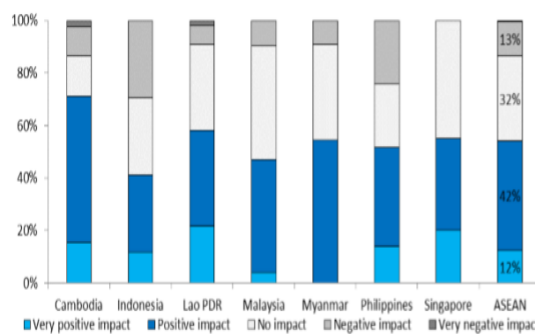**Figure 1.** AEC Impact on Enterprise Competitiveness
Source: ILO, 2014: 35.

At 60%, most Singapore respondents felt that AEC integration would increase competitiveness. The Philippines indicated much uncertainty, with 62% of respondents neither

Concerning high-skilled labor mobility, 56% of the respondents felt there would be a positive or very positive impact from the higher mobility of this segment of the workforce, while just 13% felt the impact would be harmful or very negative. About 90% of respondents from Cambodia, Lao People's Democratic Republic, and Myanmar felt this factor would have either a

positive or no impact on their businesses, with 10% believing any negative impact will result from high-skilled labor mobility. A quarter of the respondents from the Philippines and 29% from Indonesia assume this will hurt businesses. A respondent from Indonesia expressed hope for a strategic plan in anticipation of the unfavorable post-2015 impact of mobility among high-skilled workers on enterprises in ASEAN countries.

The Indonesian government must be responsive and move quickly at the same time preparing themselves, especially in strengthens of human capital to anticipate everything related to the enactment of the AEC. The intended government line is not only the Central Government with existing Ministries and Non-Ministerial Institutions but also the spearhead of the implementation of the AEC is the Regional Government, both Provincial and District/City Governments throughout Indonesia. Local governments must prepare themselves well so that in time they will not only become "spectators" or even just become "market objects" in the implementation of the ASEAN Economic Community.

The people of Indonesia also has a vital role in efforts to strengthen Indonesia's human capital in order to face competition among ASEAN countries. The Indonesian citizen must have a professional work culture, a healthy culture of life, as well as various types of culture that are positive in encouraging progress. The higher the quality of the Indonesian people, the greater the chance for prosperity. This kind of awareness must be possessed by all Indonesian people in order to achieve the nation's goal.

Refers to the comparison of the economic, health and demographics aspects among the 6 ASEAN countries, in general, Indonesia is in the third position, under Thailand and Malaysia. However, some other countries continue to improve the condition of their human capital to pursue the failed, like Vietnam, Myanmar, and the Philippines. Therefore, the government and the people of Indonesia must be aware of this tight competition, then continued trying to increase it in order to achieve sustainable development.

The following things can be taken to fix the quality of human resources in Indonesia in order to compete in the ASEAN economic community (MEA):

First, improvements to the education system. Improvements to the education system include the equalization of education in each region, educational infrastructure, the quality of curriculum and educators, as well as the distribution of the number of educators that evenly. With a better quality of education, Indonesia will establish qualified human resource and high competitive power. *Second*, skills training. Data on Human Development Index (HDI) shows that 90% of Indonesia workers never follow training. This amount is large enough compared to skilled labor in other countries such as Malaysia and Singapore. Skills training can support the ability of labor when competing with foreign labor. The community must actively attend training, whether Government or private institutions is provided.

Third, mastering technology. Human resources in Indonesia should be able in mastering the technology to support the productivity of work. Technology (especially the internet) is beneficial in expanding market share to the rest of the world. Also, the use of technology will make the work more effective and efficient and timely. Therefore, it is high time the Government conducts periodic training of human resources in Indonesia against technology to realize high-quality human resources. *Fourth*, certification of competence. Certification of competence required to equate the ability of national workers in regional markets.

Fifth, physical and spiritual health aspect. Another factor to be aware of is health. With a high level of human health, the productivity of work produced will be high as well. Healthy human physical and spiritual will have more motivation to work. To realize it can be done such as the procurement of free health screenings, routine health checks, dissemination of anti-drugs, spiritual and motivational seminars. *Sixth*, the entrepreneurial spirit. According to the World Economic Forum, entrepreneurship is a fundamental driving force for the progress of

society and economy of a country. Entrepreneurship is the ability of the creative and innovative basis to seek chances of success. The concept of self-employment should be applied to the young generation to be self-sustaining and creating jobs so it can suppress the unemployment figures in Indonesia.

CONCLUSION

Indonesian human capital has experienced a significant increase in the last three decades. However, within ASEAN, it still lags behind Malaysia and Thailand from the six countries in this study. In general, the quality of public health in the six selected ASEAN countries does not experience a gap that is too far.

The overall independent variables include life expectancy (LE), population growth rate (PG) and the working-age population/15-64 years (WAP), and the infant mortality rate per 1,000 live births (IMR) in ASEAN countries has a significant effect against GDP per capita of the community. However, the population growth variable has a negative effect, in contrast to the conditions in Indonesia where the variable number of working age population hurts people's income. Government investment in education and health sector is significant to increase public prosperity.

The development of the quality of public health in ASEAN countries shows an increasingly good level, as well as competition for HR among these countries. Therefore, Indonesia needs to pay more attention to health aspects in order to improve the quality of human capital in the community which ultimately aims to improve the welfare of its workers, both in the formal and informal sectors.

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