Human Development Index: Enhancing Indonesian Competitiveness in ASEAN Economic Community (AEC)

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Abstract - This study aims to determine the magnitude of Indonesian Human Development Index (HDI) and other Southeast Asian countries, and explain its relationship with competitiveness in the ASEAN Economic Community (AEC). This research is an empirical study using secondary data from various relevant sources. The study conducted in 10 countries in Southeast Asia namely, Brunei, Cambodia, Indonesia, Lao, Malaysia, Myanmar, the Phillipines, Singapore, Thailand and Vietnam PDR.

The result of this study indicates that the HDI Indonesia, including the medium category is the lowest in the ASEAN-6 (Brunei, Indonesia, Malaysia, Phillipines, Singapore, and Thailand). It is revealed that the cause is the low index of knowledge. Thus, only 33.1 percent is classified as educated skilled labor. This situation results in lower competitiveness of Indonesia compared with the other countries in Southeast Asia, especially the ASEAN-6. If it is not prevented, it will have an impact on other aspects. As a consequence, it will lower Indonesia’s competitiveness in the future. One solution for Indonesia is to improve the educational sector.

Keywords - ASEAN Economic Community (AEC), Competitiveness, Human Development Index, Skilled labor.

I. INTRODUCTION

AEC has been established, in order to enhance the economic growth of Southeast Asian countries on the competition of Asian countries (besides ASEAN) and the world. Implementation will be in 2015, with the aim of making ASEAN as a single market for the flow of goods, services, investment, skilled labor, and free capital flows in ASEAN. As a result of this economic integration, competitiveness among fellow countries in Southeast Asia will be enhanced. This leads to increasingly stringent competition of Indonesian products among ASEAN countries.

Indonesia has the potential to get advantages because it has the largest population in Southeast Asia, and the economic growth remains solid in the global crisis [1]. The implementation of the AEC will expand job opportunities for Indonesian workers, the total labor force amounted to 132.72 million in 2012. There are opportunities of the potential for Small and Medium Enterprises (SMEs) which amount to approximately 55.2 million units. A great hope will ensure sustainable economic growth in the household, either as groups of workers, consumers, or producers.

On the other side, the implementation of the AEC will have an impact on the household as a SMEs with regards to capital and access to banking, weak business management, and low labor productivity. In the aspect of employment, the implementation of the AEC becomes a challenge for Indonesia because most of the labor force and relatively unskilled labor,
and productivity are low, so it is feared that they will be occupied by foreign workers. Thus, the presence of AEC for Indonesia on one side, the people will have a wide selection of goods and services, but on the other side, it is a challenge for unskilled labor and low SMEs product competitiveness [2].

World Economic Forum released data from the Global Competitiveness Index 2011-2012 that Indonesia's competitiveness is far below Singapore and Malaysia [3]. Bank Indonesia research results also demonstrate the competitiveness of the Indonesian economy still lags behind Malaysia, Singapore, and Thailand [4]. INKOWAPI (2013) [5] argued that the readiness of human resource is the keyword in free competition in the Southeast Asian region. Similarly Jakobus Busno (2013) [6] states HR is a true source of advantage and becomes one of the main determinants of competitiveness.

The quality of human resources can be measured by the human development index as it can be used to measure the success of efforts to build the quality of life of a country. This measurement is performed to classify a country into developed countries, developing countries, or underdeveloped countries. This paper aims to determine the size of Indonesia's human development index, and to connect it with competitiveness on the AEC in 2015.

II. HUMAN DEVELOPMENT INDEX

United Nation Development Program (UNDP) defines human development as a process to define and expand his options. To meet human needs through the development process from various aspects such as, the construction of relevant facilities and infrastructure. The purpose of development is to enhance and customize the environment to achieve human welfare [7]. The purpose can not be separated from the achievement of its objectives, quantity and quality of human will be required so it is related to human development.

Human Development Report (HDR) [8] has published the human development index, and defined the well-being more broadly to measure the success of a country in an effort to establish the quality of human life. Measurements were made by comparing the three components, among others, (1) life expectancy, (2) educational attainment, and (3) income into a composite human development index [9]. These three components are unified into a single index that is calculated by a simple average, namely life expectancy index, education index, and income index. Measurement applies to all countries around the world; it is used to classify a country in the developed countries, developing countries, and underdeveloped countries.

Life Expectancy at birth is an indicator projection measured from the people's welfare. Index of life expectancy can be calculated by using two types of data namely the child was born alive and the child was still alive. Based on the provisions of UNDP, the upper limit is 85 years old and the lower limit is 25 years. The education component is measured by two indicators, among others, literacy rate, and the mean school years. Literacy rate is the average of the population aged over 15 years and the ability to read and write the letters of the Latin alphabet and others. Indicators mean school years is the average number of years spent by population aged over 15 years old. It is calculated with data on levels/classes are being/have passed and the highest education level [9]. Calculations for both these indicators, \( \frac{1}{3} \) for the mean school years and \( \frac{2}{3} \) for literacy rate. By agreement of member countries, a maximum limit of 100 and a minimum limit of zero are set. One hundred percent describes the entire population aged 15 years and over can read and write, and zero for the opposite condition.

Components of decent standard of living is measured using indicators of average real consumption which was adjusted. To measure this component, UNDP [10] uses the adjusted indicator of real GDP per capita,
because of the difficulty to get another better indicator for the purposes of comparison between countries.

III. INDONESIAN COMPETITIVENESS

World Economic Forum of competitiveness defined as the set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the level of prosperity that can be reached by an economy. The productivity level also determines the rates of return obtained by investments in an economy, the which in turn are the fundamental drivers of its growth rates. In other words, a more competitive economy is one that likely to grow faster over time [11]. From another point of view, competitiveness is the ability of a country's high growth of Gross Domestic Product (GDP) per capita. The competitiveness of a country can be determined by the industry’s ability to innovate.

Indonesia's competitiveness is declining among ASEAN countries. According to the World Economic Forum (2003-2004), in 1999 Indonesia’s competitiveness ranked 37th; in 2000 it dropped to 44th; in 2001 it ranked 49th; in 2002 it ranked 69th; and in 2003 it ranked 72th [12]. The Global Competitiveness Report in 2005/2006 [13] reported Indonesia's competitiveness for growth competitiveness index it ranked 74th out of 117 countries and 59th positions of the 116 countries for business competitiveness. In the last few years the competitiveness of Indonesia has increased drastically; in 2008 it ranked 55th; rising to 50th in 2012; and 38th in 2013 [14]. Indonesia has been able to outperform four of the five BRICS countries (Brazil, India, Russia, and South Africa), but in Southeast Asia it was defeated by Brunei Darussalam, Malaysia, Singapore, and Thailand.

IV. Research Methods

This study was conducted in ten countries in Southeast Asia, namely Brunei, Cambodia, Indonesia, Lao, Malaysia, Myanmar, the Phillipines, Singapore and Thailand PDR. This study has two objectives, the first quantifies HDI of each country, and then grouped into the country is developed countries, developing countries, or underdeveloped countries. The second objective was to determine the relationship between HDI by competitiveness, with using Correlation Spearman.

The data used in this study is secondary data. To calculate the HDI, the data is from the UNDP (Life Expectation, Mean Years of Schooling, and GDP per capita in PPP $), while data on Literacy Rate is from UNESCO Institute for Statistics (UIS). Data on competitiveness from score of The Global Competitiveness Index of the World Economic Forum.

Each component of the HDI is the ratio of the difference between the actual value of the indicator to the minimum value to the maximum value and minimum value for each indicator. If $X_i$, $i = 1,2,3$ are the indicators of each component of the HDI, each indicator can be calculated by the following formula.

$$ Indeks X_i = \frac{X_{(i)} - X_{(i)\min}}{X_{(i)\max} - X_{(i)\min}} $$

For the wealth component, the goalpost for minimum income is $100 and the maximum is $40,000 (PPP $); it can be calculated by the following formula [15]:

$$ GDP = \frac{\log (GDP_{pc}) - \log(100)}{\log 40000 - \log 100} $$

The following formula is used for calculating the HDI [16]:

$$ HDI_i = \frac{1}{3} \sum_{j=1}^{3} \left( \frac{X_{ij} - \text{Min} F_j}{\text{Max} F_j - \text{Min} F_j} \right) $$
Overall, the rank in the HDI classification is divided into four groups, namely, (1) the low category, ranging from 0-50, (2) intermediate category, ranging from 51-79, (3) the high category, ranging from 80-89, and (4) very high category, ranging from 90-100 (in percent) [17]. It should be noted that the HDI measures the relative level of human development relative, not the absolute.

V. RESULTS AND DISCUSSION

The results of this study show the development of Indonesia and HDI indicators in 2000 and 2012. Figure 1 shows the HDI of Indonesia increased slowly from 2000 at 63.95 to 70.62 in 2012; it is in the intermediate category. Indonesian HDI has developed within the last 12 years; there is an increase of 6.76, or 10.59 percent, an average of 0.88 percent per year. Indonesian HDI is still far behind Singapore and Brunei Darussalam. There are included in the category of very high HDI.

Figure 1: Trend of Indonesia and this HDI Indicators for 2000 to 2012. (UNDP and UNESCO Institute for Statistics-UIS, the data is processed.)

Figure 2 shows the HDI development of ASEAN. Indonesia's position is only above Cambodia, Myanmar, and Lao PDR. This is due to the HDI indicators that are below average. Specifically on education indicators, Indonesia is only slightly above Cambodia, Myanmar, and Lao PDR. Indonesian skilled labor of high school and university graduates [18], only amounted to 33.1 percent. The rest, 66.9 percent are primary and secondary school graduates or relatively unskilled labor. Indonesia is worried about the condition in post-AEC; Indonesia will be occupied by skilled labor from neighboring countries.

The results of processing the data in Table 1 show the correlation between HDI with Competitiveness of 86.30 percent with a significant level of 0.001. This reveals the relationship between HDI and Competitiveness are very close, meaning that a country's competitiveness is determined by the HDI. Some developed countries have the highest competitiveness such as the United States, the Netherlands, Germany, New Zealand, Sweden, Switzerland, and Japan, with a very high human development index. While in Southeast Asia, Singapore has the highest competitiveness; it is classified into very high HDI.

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Figure 2: Development of ASEAN countries HDI, 2000 - 2012. (UNDP and UNESCO Institute for Statistics-UIS, the data is processed.)
In terms of human capital factors of production, there is a quite high inequality in the ASEAN region. It is seen from the HDI, of which Singapore outperformed other 9 ASEAN members, while Indonesia only outperformed Cambodia, Myanmar, and Lao PDR. This condition is consistent with several other HR data such as literacy rates and school enrollment rate were relatively low, and the low expenditure portion of state spending on education and health [19].

The free market for labor causes high labor mobility both for overseas labor and Indonesian workers who work and want to work abroad [20]. Indonesia's position is relatively not so good compared to those of other ASEAN countries (Singapore, Malaysia, and Thailand). However, it takes a relatively short time for Indonesia to catch up, if Indonesia can afford to make substantial changes in terms of improving human and physical capital [21]. The competitiveness of Indonesian workers can be improved through changes in the education and training sector [22].

VI. CONCLUSION
The realization of the AEC will widely open labor for the ASEAN community in search of work without any restrictions. The citizens of ASEAN countries with skilled labor will be free to get the job unhindered by the destination country. Since Indonesia has minimal skilled labor, it is feared it will be the entry of foreign workers. Therefore, the quality of Indonesian workers must be improved to build the competitiveness of individual (human capital) in order to have a skill that is not inferior to that of other of ASEAN countries.

Indonesia's competitiveness is the lowest among the ASEAN-6 because Indonesian HDI under Singapore, Malaysia, Brunei, Thailand, and the Phillipines. The components of Indonesian HDI are below average, especially indicators of knowledge. Indonesian HDI can only outperform Cambodia, Myanmar, and Lao PDR. Indonesia must have an individual competitiveness by improving the educational factor to increase the amount of labor skills.

REFERENCES
(Arranged in the order of citation in the same fashion as the case of Footnotes.)

[8] UNDP, ibid, p.13
[17] UNDP, Modified