JSP JURNAL ILMU SOSIAL DAN ILMU POLITIK

Jurnal Ilmu Sosial dan Ilmu Politik
Volume 18, Nomor 2, November 2014 (97-114)
ISSN 1410-4946

Indonesian Human Resources Readiness in term of Facing the ASEAN Economic Community[1]

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Abstract

This article explains about the dilemma which will be faced by Indonesia when the the Mutual Recognition Arrangement (MRA) is implemented in the ASEAN Economic Community (AEC) by the end of 2015. The data which will be used to describe the existing condition of the human resources competitiveness in Indonesia in this article is the secondary data, such as Human Development Index (HDI); World Knowledge Competitiveness Index (WKCI); Global Knowledge Competitiveness Index (GKCI); Global Talent Competitiveness Index (GTCI); Global Innovation Index (GII); and The Networked Readiness Index. Where upon, these indices will be used as the guidance to compare the human resources quality in Indonesia with Singapore, Malaysia, Thailand, and the other ASEAN countries.Based on the data analysis, these indices show that Indonesian human resources are still far left behind in terms of competition with the other three ASEAN countries. It is feared that the weak competitiveness of human resources in Indonesia may cause the influx of the foreign skilled workers in more significant numberas a consequence of the implementation of MRA.

Keywords:

Mutual Recognition Arrangement; ASEAN Economic Community; human resources; competitiveness.

Abstrak

Tulisan ini menjelaskan seperti apa dilema yang akan dihadapi oleh Indonesia ketika *Mutual Recognition Arrangement* (MRA) diimplementasikan dalam Masyarakat Ekonomi ASEAN (MEA) pada akhir 2015 mendatang. Data yang digunakan untuk menjelaskan kondisi daya saing sumber daya manusia Indonesia dalam tulisan ini adalah data sekunder, yaitu *Human Development Index* (HDI)*; World Knowledge Competitiveness Index* (WKCI)*; Global Knowledge Competitiveness Index* (GKCI)*; Global Talent Competitiveness Index* (GTCI)*; Global Innovation Index* (GII); dan *The Networked Readiness Index.* Indeks tersebut dijadikan sebagai pedoman untuk membandingkan kualitas SDM Indonesia dengan negara-negara ASEAN seperti Singapura, Malaysia, dan Thailand. Berdasarkan analisis data,

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indeks tersebut menunjukkan bahwa SDM Indonesia kalah bersaing dengan ketiga negara ASEAN tersebut. Lemahnya daya saing ini menyebabkan adanya kekawatiran akan masuknya tenaga kerja asing berbakat dalam jumlah yang lebih signifikan setelah implementasi MRA.

Kata Kunci:

Mutual Recognition Arrangement; Masyarakat Ekonomi ASEAN; sumber daya manusia; daya saing.

Introduction

The Association of Southeast Asian Nations (ASEAN) has evolved remarkably since its inception in 1967. Geopolitically, the group has expanded from five member nations comprising Indonesia, Malaysia, Philippines, Singapore and Thailand to include Brunei (1984), Vietnam (1995), Lao PDR (1997), Myanmar (1997) and Cambodia (1999).

ASEAN has set a goal to integrate its member countries' economics further and faster as a way to enhance the region's competitiveness. In the 9th ASEAN Summit that was conducted in Bali (2003), ASEAN Leaders agreed to establish an ASEAN Economic Community (AEC). ASEAN Economic Community (AEC) as a legal framework for ASEAN norms, rules and values is established in the ASEAN Charter that was signed in 2007 and came into force the following year. The AEC has several clear targets to be achieved by ASEAN members for the ASEAN Community, and it must be obeyed by all of ASEAN member countries. As a continuation, in 2009 ASEAN has adopted the ASEAN Political-Security Community and ASEAN Socio-Cultural Community Blueprints to achieve an ASEAN Community by 2015.

The AEC is a form that comprises four keys interrelated and mutually reinforcing characteristics: (i) a single market and production base, (ii) a competitive economic region, (iii) equitable economic development, and (iv) integration into the global economy. This paper will only explain specifically about the AEC characteristic as a single market and production base, which is the liberalization of skilled labor. In 2015, ASEAN begins to impose the ASEAN Economic Community agreed by all ASEAN member countries at the 13th ASEAN Summit in Singapore in 2007. The Implementation of the AEC will make ASEAN trade liberalization even broader, not only will it impact the traffic of goods and capital but also the traffic of skilled labor.

Regarding the implementation of the AEC on labor mobility, Indonesia will be affected by the influx of labor from ASEAN countries as set out in the MRA. In general, MRA is an agreement which has a relation with the employment field to recognize educational qualifications, professional qualifications and experience. MRA is used to facilitate the movement of labor force between ASEAN countries, particularly in the context of market integration while maintaining the specificity of each country. This deal is also used to exchange information on best practices in standards and qualifications. With the MRA agreement, the countries will gain several advantages: cost reduction, market access certainty, increased competitiveness, and trade flow more freely. Indonesia also has the opportunity to send certified workforces in service sector to seize the employment opportunities in the ASEAN countries to another.

ASEAN has set the quality standards that must be met by their current workforce which will be working in the AEC. One of the challenges facing Indonesia today is the lack of professional workforce that is capable to meet the professional standards which will be implemented in ASEAN.

The standard which has been discussed in this article is referred to the minimum

expertise limit of the skilled employment, competence, and professionalism that are required from an employee who is working in ASEAN. The establishment of the standard of the workforce is framed by each associations in 8 job sectors which soon will be liberalized. In the future, these associations will set up a default standard for migrant workers who expect to work in ASEAN member countries. The pioneer of this minimum standard for workforce is currently being prepared by the labor associations in ASEAN. As an example, tourism professional will be facilitated by association of tourism professionals in ASEAN regarding the mobility of tourism professionals, while improving the quality of tourism services in the region. The MRA would provide a framework of equivalence for certification procedures and qualifications. The idea is to develop 32 different job titles under the tourism professional umbrella, ranging from front-office duties to food production and hotel management, and certification would be based on five levels (three levels of certificate and two diploma levels) (ILO: 2014).

With the lack of professional workforce, the various job vacancies in Indonesia would be an easy target for professional job seekers from other ASEAN countries, such as Singapore, Malaysia, and Thailand (Keliat, et al: 2013). According to the report provided by World Bank, there is a significant discrepancy on the quality of skilled labor in Indonesia. It is mentioned that the largest gaps are on the application of English in the working field (44%), computer operating skill (36%), behavioral skill (30%), critical-thinking skill (33%), and basic skill (13%) (Keliat: 2013). Meanwhile, other data shows that the competitiveness index of Indonesia is lower than some countries in ASEAN (Huggins, et all: 2008). Indonesia is in the 83th position in the world knowledge competitiveness index. It looks very apprehensive compared with Singapore and Malaysia, which get the 6th and 56th position in the world, but contrary Indonesia has lower position compared to Philippines and Thailand which get the 58th and 64th position.

Therefore, this paper will discuss about how prepared the workforce in Indonesia in relation to the competitiveness of the human resources. In order to describe the issue, this paper will utilize secondary data. The analysis which will be done is a descriptive analysis to see the comparison between the competitiveness of workforces in Indonesia and the other ASEAN member countries. One of the urgencies of this paper is related to the current condition which has shown the increasing number of foreign workforce in Indonesia. It will be illustrated through the data below:

Table 1.
Foreign Labor to Indonesia Based on the Country Origin

Country/Year	2010	2011	2012
Asia non ASEAN	30682	44269	49909
ASEAN	15714	11876	12216
United States	5358	6192	6303
European Union	4708	5455	5980
Europe	3962	4121	4423
Africa	614	702	732
Australia	3421	3827	3640
Oceania	653	718	735

Source: Statistika Mobilitas Penduduk, BPS, 2013

According to the data in the Table 1, it can be seen that there are three main aspects to be concerned: *first*, the dynamics of the foreign workers who came to Indonesia has been increased generally; *second*, in the period of two years, there are constant increases in the number of foreign workers, which are dominated by the migrants from Asia (non-ASEAN countries), United States, European Union, Africa, and Oceania; *third*, the amount of foreign workers from the ASEAN member countries was considerably decreasing since

2011—compared to the data in 2010, yet there was also a slight increase in 2012, from 11,876 workers into 12,216 workers. There will be a significant increase on the incoming flow of foreign workers to Indonesia as soon as the establishment of the AEC in the end of 2015, with the ease of transactions in trade, investigation, services, tourism, and development program.

Table 2.
Foreign Labor Based on Job Position

Position/Year	2010	2011	2012
Professional	25912	34716	37441
Commissioner	497	734	909
Directors	4933	6503	7468
Manager	10499	12477	13569
Supervisor	6392	4731	4978
Technician	9646	5253	4339
Consultant	7233	12746	15236

Source: Statistika Mobilitas Penduduk, BPS, 2013

Table 2 gives us information on how the migrants could take control on strategic positions in several roles in Indonesia. In three years of period, there was an increase on the number of migrants that fill in the strategic positions (such as directors, managers, professionals, commissioners, and consultants), of which technically could only be occupied by professional workers. Meanwhile, there was a decrease on the number of foreign workers only for the low-medium level positions in organizational level of the company, such as supervisors and technicians. According to General Director of Development of Industrial Relations, Ministry of Employment of The Republic of Indonesia, most foreign skilled workforce are occupying professional-level positions such as advisor/consultant, manager, director, supervisor, technician, and commissioner. While, up until last year, employment in the trade and service sectors were highly targeted by these expatriates. Followed by industrial and agricultural sectors (JPNN: 2014).

Indonesia is now only able to suffice less than 20 percent of the required number of skilled labor. The current number of workforce in managerial level is considerably not adequate. Such situation is deemed as apprehensive because Indonesia has to recruit foreign manager. The lack of skilled workforce has been occurred in the last 10 years. If AEC would be implemented without any readiness, the competitiveness of Indonesia is scared to fall down even more. The competitiveness rate of Indonesia in 2012 was placed in the 44th position (Radius: 2013).

Table 3.
Foreign Labor Based on Business Sector

Sector/Year	2010	2011	2012
Agriculture	2806	2576	2683
Mining	5970	6626	7031
Industry	1635	20862	23918
Electricity, water, and gas	7230	5509	6050
Property	7214	8374	8146
Trade	10677	13541	15245
Warehouse transport & Computing	3490	4611	7572
Finance	1045	1688	921
Others	10294	13406	12374
Intangible-limit Activities	61	-	-

Source: Statistika Mobilitas Penduduk, BPS, 2013

It indicates that Indonesia's professional workers have not ready yet to compete in the labor market which has the medium-high competitiveness level in the companies. In general, the increase on the number of foreign workers who come to Indonesia is considered as a threat, especially for those who occupy the strategic positions. As a result of the fact, Indonesian workers will be excluded from the competitive market and will also be displaced from the non-strategic positions in the companies. The impact that could be seen is that there are few companies in Indonesia which could personally attract the migrants, whereas Indonesia is appointed to be the market base of affordable labor.

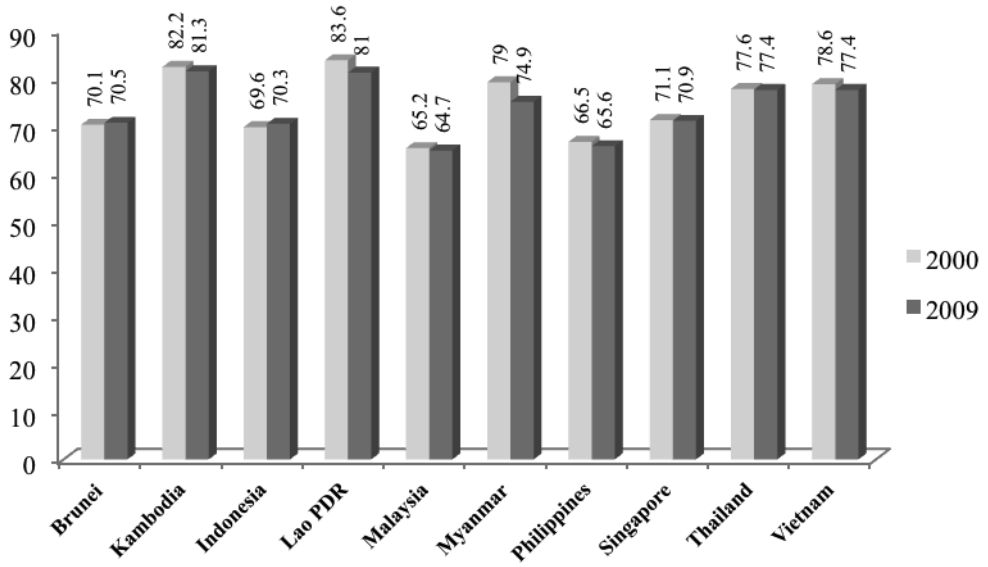
From the data, we can imply that there was a quite significant increase on the number of foreign workers in several sectors: industrial, trade, property, and warehouse transport. These strategic sectors will still be the target to be occupied by the foreign workers. It is not apart from the economic activities in Indonesia which mainly supported by mining, industrial, service, and trade sectors. The data shows the current situation which has been faced by Indonesia's human resources, with these data and analysis, Indonesian government is expected to create a strategic policy which will improve the quality of human resources in Indonesia to be in charge in those strategic sectors. Otherwise, it can be assured that there will be more foreign workers who will occupy Indonesia's national strategic economy wheelers. According to the table, in the period of three years, it was only agricultural and finance sectors which experienced a deceleration of the incoming flow of foreign labor in Indonesia. It could be seen as a positive sign that these sectors have already been occupied by domestic professional workers. This will also benefit the academia to provide new discourses that will emerge specific discussions and studies to create a strategy as an early anticipation towards this issue. It is considered as a general information for academia, yet it could be specified into some certain studies. For instance, the discrepancy of human competitiveness in the Western and Eastern Indonesia which is expected as an input for a better policy than if these studies are being generally discussed.

If there is no acceleration in improving the quality of human resources in Indonesia to fill into those sectors, it can be assured that there will be more foreign labor who will be occupying those sectors which are the national strategic economy supporters. According to the table, in the period of three years, only agricultural and finance sectors which experienced a deceleration of the incoming flow of foreign labor in Indonesia. It could be seen as a positive sign that these sectors have already been occupied by domestic professional workers.

Ironically, it can be seen that besides the large number of professional foreign workers that come to Indonesia, this country is one of ASEAN member countries which has the low participation of workforce. A structural problem such as the imbalance between *job creator* and *job seeker* has caused the national workforce with the minimum competitiveness has not been absorbed in the labor market. The fact that all of the vacancies requires very high employment standard will be easily be occupied by professional talents from the outside of the country. Such condition then reflects on how the development of competitiveness of the workers in Indonesia, both formally and informally has been a structural barrier for domestic labor to enter the global labor market. We can conclude that the increasing number of foreign workforce who come to Indonesia which are occupying the strategic positions and potential business shows one of the indications of the inferior competitiveness of domestic workers.

Graphic 1 depicts about the labor force participation in Indonesia is considerably low compared to the other ASEAN member countries. Meanwhile, based on the data shown in the table 4, Indonesia has the high

Graphic 1.
Labor Force Participation Rates in ASEAN 2000 and 2009



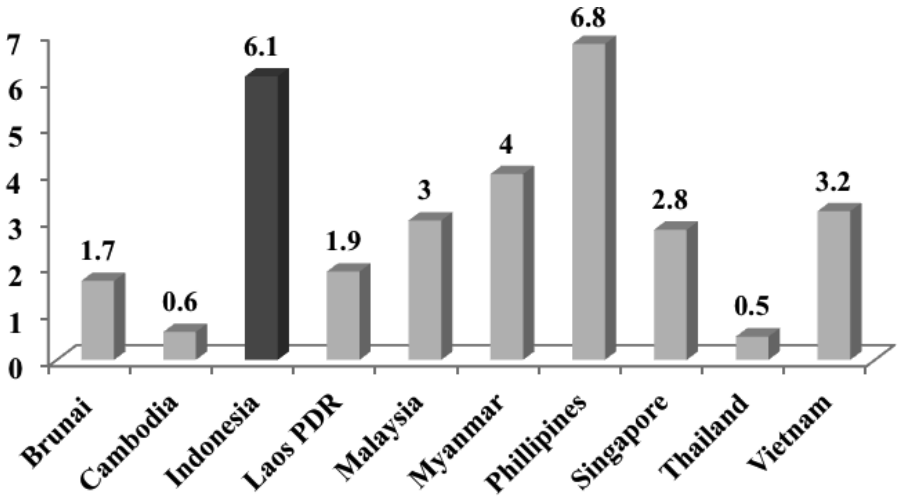
Source: Asean Competitiveness Report, 2010

unemployment rate in the region, it even ranked 2nd among the ASEAN member countries. Within almost ten years, there had been a slight increase on the participation by only 0,6%. With the low participation of the labor force, in relation with the high unemployment rate can lead Indonesia into a crucial circumstance. Why is it crucial? Because it indicates that there was a mismatch between the labor force and the labor force opportunity. Theoretically, the mismatch in the employment could be detected as a cause of the "knowledge" and "skill" which has failed to meet the qualifications of the labor force opportunity.

Skills are also a critical asset for individual workers and firms in a rapidly changing and globalized world. When individuals have substantially more skills than required for their jobs, those individuals, as well as enterprises and economies, are prevented from reaping benefits of their skills investment such as higher wages, productivity growth and innovation. But for today's 45 million unemployed workers in advanced countries and more than 200 million jobless individuals around the world, lack of suitable job opportunities is the main concern. Employers often attribute their difficulties in recruiting to a lack of appropriately qualified candidates.

This journal has stated that in several developing countries, the economic growth is equal to the number of unskilled and poorly educated workforce. In fact, it has been found that the policy of the education enhancement is significantly not accompanied with the increase number of available employment which requires good-skilled workforce. This condition has become one of the main factors of the mismatch in the qualifications (Klosters, Davos. 2014). In Indonesia, it can be seen through this circumstance, how the number of well-educated unemployment is increasing even more. According to the data provided by *Badan Pusat Statistik* (BPS) in 2012, the number of unemployment has reached about 645.866 persons (8,79%), and there was a slight decrease to 619.288 persons (8,36%) in 2013, yet it rose up to 688.660 persons (9,5%) in 2014 out of the total number of the unemployment in Indonesia. It is somehow ironic that these universities graduates who are expected to develop the competitiveness of the global

Graphic 2.
Unemployment Rate ASEAN Countries 2012



Source: http://www.asean.org/news/item/selected-key-indicators

economy, still have to face the obstacle related to their relevance of the competence with the demand of the labor market domestically or internationally. The impact that unemployment in Indonesia is higher than eight countries, as see Graphic 2.

According to the crucial condition that has been explained by the previous data, the only important thing to recognize or to detect is on how prepared the workforce in Indonesia based on its competitiveness of human resources. The competitiveness of human resources that will be further analyzed in this paper is the indicators that define the human resources quality. Even though the indicators are not able to describe in detail, those indicators are considerably representative enough to depict the general condition of the issue. At least, through the index we are able to understand the position of human resources quality in Indonesia compared to the other ASEAN member countries.

Theoretical Discourse

The theory will be discussed into 2 section. First, it start with the globalization and human resources. It describe the human resources in the globalization context and its impact. Second, the impact of globalization on human resources is competition. This second section will discuss about the indicators of human competitiveness.

Competition of the Human Resources in the Globalization Era

Globalization is a term which has various meanings and interpretations. The term is often being used to refer some conditions, such as: the establishment of a global collaboration area; to describe a process of social, economic, and political dynamics towards the formation of *a single society* (Stearn, 2010:1) or an illustration of an era of the existence of a new order in which the barriers are built by the modern society about the various kinds of boundary: where physical, social, political economy, and ideology are collapsed and became insignificant: "*…the existence of global economic, political, cultural, and environmental interconnections and flows that make many of the currently existing borders and boundaries irrelevant"* (Steger, 2003:7). The disintegration of those boundaries is supported by an observation which has done by Inda and

Rosaldo (2002:2), as follows: "*It is of a world where borders and boundaries have become increasingly porous, allowing more and more peoples, and cultures to be cast into intents and immediate contact with each other*".

It is clear that the globalization has a many dimensions, which are social, economic, culture, and politics. But we will only concentrate purely on the economic manifestations of globalization. According to Bhorat and Lundall (2004), there are five key economic markers of globalization.

1. The growth in trade flows between economics around the globe;
2. The proliferation of ICTs, captured more specifically as a technological change;
3. The rapid growth in cross-border capital flows;
4. Intensive tariff liberalization, accompanied by formation of number of regional trade blocs and;
5. The significant structural changes in domestic economies away from primary production toward service industry output.

Globalization has also made the factor of production becomes increasingly mobile across the national borders. Human capital also cannot escape this trend, both the mobility in physical, and the mobility in knowledge through the technology. The physical mobility is the flow of the human capital between countries.

This theoretical framework is trying to explain the phenomenon of the human resources migration, especially the labor in the ASEAN countries, when the barrier of economic policy is opened on behalf of the community. In the context of the AEC, the phenomenon of labor migration between countries becomes a necessity because of the opportunities to increase economic activity among ASEAN member countries. The manpower as a part of the production has been a subject of the talent to play an important role in the company (Solow,in Herbst and Rok: 2013). This phenomenon can already be seen when the ASEAN countries began to receive direct investment from Multinational Companies were then entered the professional migrants from one country to another company or country that has a high competitiveness (detik.com: 2014).[6]The system of the AEC, which includes the liberalization of labor, is creating the labor mobility between ASEAN countries even greater. However, in the ASEAN region, there are differences, especially related to the quality of human resources.

Conceptually, there are two perspectives, which are the *optimistic view* and *pessimistic view* about the impact of the liberalization of labor to the skilled labor and unskilled labor (Kuptsch and Pang: 2006).The optimistic view explains that if there are more talented and skilled people in developing countries, it will encourage the country to increase its competitiveness. Meanwhile, the pessimistic view assumes that the developed countries will always be easy to recruit skilled and talented workers because they can afford the high salary for the workers. This kind of phenomenon can cause the migration of skilled labor, which is commonly known as *brain drain* phenomenon. Khamene and Saroukhani (2011) used four keywords: *absence*, *diaspora*, *prospect*, and *return* to describe about the reason on the occurrence of the brain drain of professional workforce (Herbst and Rok, 2013).

Absence, it is about the condition of a professional worker who has not had a decent carrying capacity to develop both the capacity and the skills nationally, so that the worker has to migrate abroad to fulfill the needs. *Diaspora*, is related to the kinship networking of someone when migrating abroad so that there would be a place that will accommodate

[6] It was recorded that by the period of 2009-2012, the Foreign Direct Investment (FDI) in ASEAN has increased significantly from US $47 billion to US $118 billion. Last year, the FDI to ASEAN has risen to US$ 125 billion.

him/herself. *Prospect*, is a condition when there are an opportunity and guarantee which are provided by the government or national private institution abroad to develop his/her professional carrier.*Return* is when someone owns a chance to return back to the source country after leaving it for a while to do the professional activity.

The implementation of the Mutual Recognition Arrangement (MRA) will facilitate the liberation of labor market. It has created two critical conditions in Indonesia, first is about *brain drain* phenomenon which is a situation when Indonesia's skilled labor would rather work abroad, because of the fact that their destination country is able to offer them a better life guarantee. The other condition is that the competitiveness rate in Indonesia is rather low, therefore it will increase the incoming flow of the foreign skilled labor.

The ability of Indonesia to accelerate the human resources development, compared to Malaysia, Singapore, and Brunei is considerably low. It will be a tough challenge for the *skilled worker* in Indonesia to survive. It can be exemplified from several indicators, such as the *Human Development Index* (HDI), *World Knowledge Competitiveness Index* (WKCI), *Global Talent Competitiveness Index* (GTCI), *Global Innovation Index* (GII) and some others. The implication of the liberalization of workforce as a result of the implementation of the MRA, and added by the similarity in cultural aspects will even simplify the migration process of Indonesia's citizens to other ASEAN countries. Then the stable economic, social and political situations in Singapore, Malaysia and Brunei will ensure and encourage Indonesia's *high-skilled workers* to choose and later move to those countries. The imbalance between the income and facilities among the countries will be the main factors to cause the *brain drain* from Indonesia to easily decide to live abroad and work at a company for long periods of time.

The exodus of talented people or skilled labor will be a very significant implication in detaining the development of the nation. The best talent who should encourage productivity, technological development, innovation, growth, national income is devoted for other nations (Herbst and Rok, 2013). This phenomenon could be a bad precedent when the state should lose the best talent that can contribute energy, thoughts, and materials for the progress of the nation. This condition becomes a reality which often emerges in the developing countries when the government policy is not able to significantly increase the acceleration of competitiveness, which is as the result of the Government's policies on education, and research.

The Competitiveness Performance of Human Resources

In this section, the author will explain more on how the condition of Indonesia's human resources in order to join in the AEC next year. This data is the key to be used by the Government as the guidance to respond the AEC in the decision-making process to accentuate the development of the human resources, especially on their knowledge, skill, mastery of technology, network-building, and employability skill which are expected to be more integrated with the demand of the global labor market. The scheme of the global economic community that will not be implemented as a base of the mobility of goods and services, but to osculate the convenience on human mobility in the form of *brain drain* and also migration of the workforce in South-East Asia region. This analysis is expected to provide the argument on what kind of agenda related to the human resources development which has to be implemented by our government to work up our human resources competitiveness. This momentum is supposed to boost up the enthusiasm of the stakeholders (government, private sectors, and higher education) to support

the development of the human resources competitiveness as a solution to escape from the *lower-middle income trap* by maximizing the profit-reap from the economic relation which is getting more fenceless. (Felipe et all, 2012).

1. Human Development Index (HDI)

The basic index to measure the quality of human resources is Human Development Index (HDI). The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: *health*, which is assessed by life expectancy at birth component of the HDI is calculated using a minimum value of 20 years and maximum value of 85 years; the *education* component of the HDI is measured by mean of years of schooling for adults aged 25 years and expected years of schooling for children of school entering age. Finally, the *standard of living* dimension is measured by gross national income per capita, of which the goal post for minimum income is $100 (PPP). The HDI is the geometric mean of normalized indices for each of the three dimensions (Malik, et all: 2014).

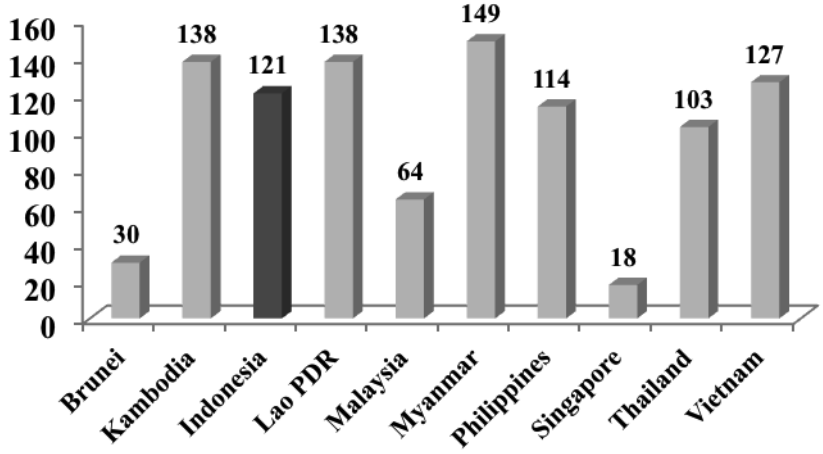
However, in the paradigm of competitiveness, HDI is not enough to describe the exact measurements, because the scope of HDI only comprises the human basic needs. It means the variable in HDI is not able to measure the competitiveness.

We can assume from the Graphic 3 that in HDI, Indonesia's position is extremely apprehensive, compared to the countries such as Singapore, Brunei and Malaysia which are placed in the top positions. It indicates that the government capacity to push the quality of development to improve the standard of living, education, income, and health becomes a necessity. Since HDI is the basic index to measure the human resources' quality, if the HDI of one country is low, then how could it be able to compete with other countries?

2. World Knowledge Competitiveness Index (WKCI)

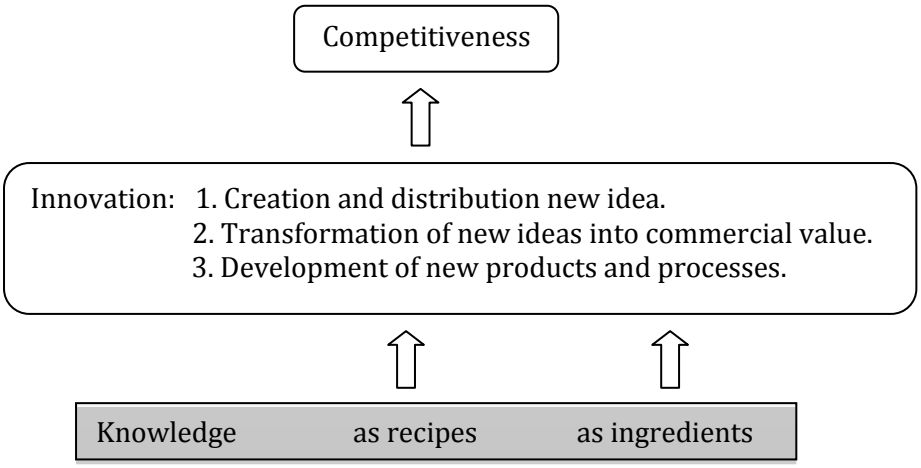
Huggin and Izushi (2007) analyze a region based on the knowledge of the societies. The knowledge will be used to analyze the competitiveness of the region such as San Fransisco, Boston, Hartford, Stockholm, Paris, Mumbai, Sanghai ect, later will be related to the economic factors in the region, thus it is further related to the economic factor in the region, that is known as *knowledge-based economy*. It

Graphic 3.
Human Development Index 2013



Source: http://hdr.undp.org/en/data

Figure 2.
World Knowledge Competitiveness Index



is the capacity and capability to create and innovate new ideas, thoughts, processes and products, and to imply these into economic value and wealth. Huggin and Izushi analyze the knowledge-based economy in regional, as shown in the figure 2.

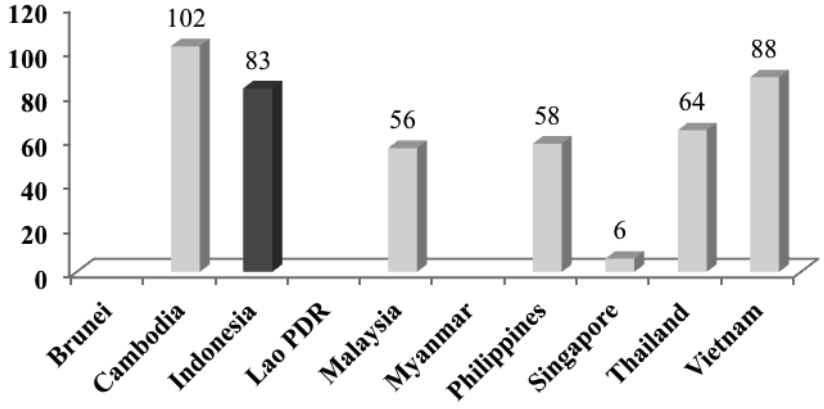
Figure 2 illustrates about the competitiveness as an outcome of a region's ability to innovate in order to achieve, or maintain an advantageous position over other regions in a number of key industrial sectors (Huggins et all: 2008). The knowledge-based economy competes on value and innovation, rather than costs alone. As regions make the transition to knowledge economies, we would expect increases in the number and proportion of knowledge-based businesses and employment. In general terms, higher levels of R&D activity most often define knowledge-based sectors. Consequently, knowledge-based sectors have a higher potential for innovation, as a result of research and development.

Graphic 4 explains about the position of Indonesia's competitiveness on the global knowledge in the ASEAN level. It is important to describe how performance of the government in developing the skill of the human capital. The data is able to explain the comparison of the achievements which are possessed by the ASEAN countries. The lower that the number appears will indicate a high rank on the global knowledge development.

Graphic 4, describes about the position of Indonesia, which is in the 83rd position, far behind Singapore (6), Malaysia (56), Philippines (58), and Thailand (64). There has not been significant progress on the efforts made by the Indonesian government in developing the global knowledge, compared to the other ASEAN member countries. The human resource development, especially in education, is not that much oriented to strengthen the creation, transformation of ideas for community problem solving, and development of technology products to meet market needs.

The orientation that has been built into the current education system in Indonesia is very inward-looking with low education standard. It can be exemplified by the fact that Indonesia is placed in the 64th out of 65 countries for its education quality in the Organization for Economic Cooperation and Development's Program for International Student Assessment (PISA). PISA studied about the performance of Indonesian students in math, reading, and sciences, and they got the average point at 384 as the result. Compared to students in other

Graphic 4 .
Global Knowledge Competitiveness Index 2008



Source: http://www.cforic.org/downloads.php

South-East Asian country, that is Singapore, the students can get up to 555 as their average point (Tempo: 2014). According to this data, Indonesia still needs to improve its quality in education as it is the escalator of one nation's economy, unless it will be difficult for Indonesia to compete with the system of global labor market competition.

3. Global Talent Competitiveness Index (GTCI)

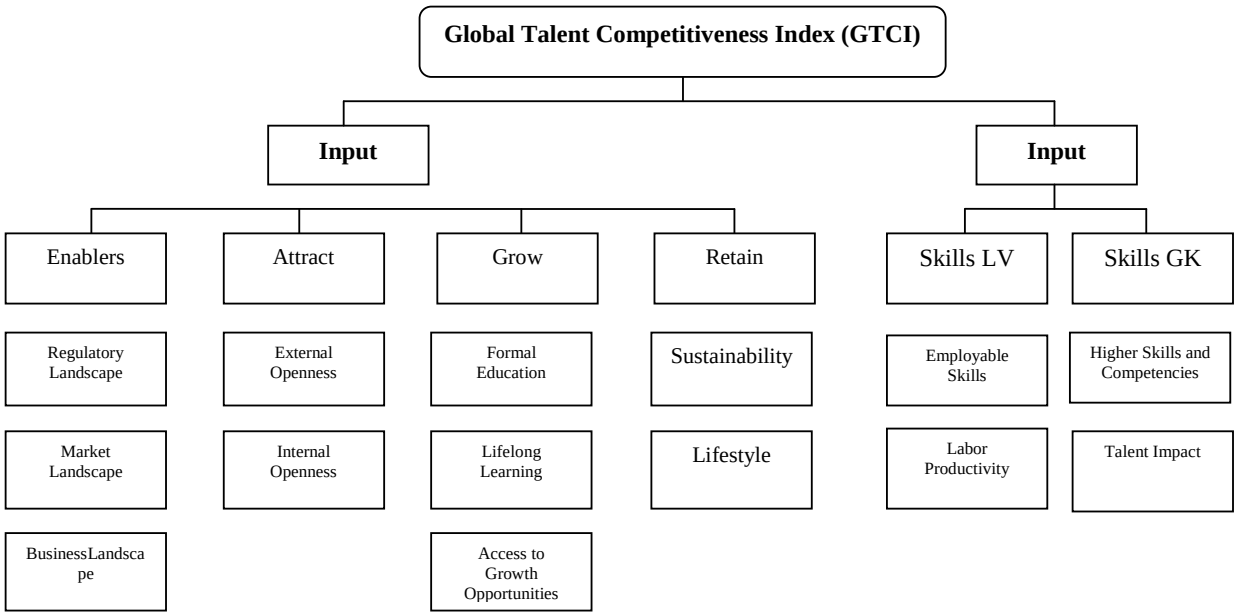
Another indicator to measure the competitive advantage of human resources is Global Talent Competitiveness Index (GTCI). Nowadays, countries are competing globally to grow better talents, to attract the talents they need, and to retain those that bring them competitiveness, innovation and growth. In the context of national competitiveness, attracting talent should be viewed in terms of the growth of the talent pool – external attraction involving encouraging appropriate immigration, and internal attraction focused on removing the barriers to enter the talent pool for groups such as those with an underprivileged background, women and elderly. Growing talent has traditionally meant education but should be broadened to include apprenticeships, training and continuous education, as well as the access to experience or grow opportunities.

The GTCI attempts to offer an approach to talent competitiveness issues that is comprehensive, action-oriented, analytical and practical. The GTCI is a composite index, relying on a simple but robust input-output model composed of six pillars. Figure 3 describe the component of GTCI.

The GTCI is an *input-output* model that combines an assessment of what countries do to produce and acquire talents (input) and the kind of skills that are available to them (output). On the output side, the GTCI differentiates between two levels of talent, which can be broadly thought of as mid-level and high-level skills. Mid-level skills, labelled Labor and Vocational Skills (or LV skills) describe skills acquired through vocational training and skills relevant to technical roles in the workforce. The economic impact of LV skills is measured by labor productivity and by the relationship between pay and productivity.

High-level skills, labelled in the GTCI as Global Knowledge Skills (or GK skills) deal with knowledge workers in professional, managerial or leadership roles; their impact is

Figure 3.



Source: The Global Talent Competitiveness Index 2013

evaluated by indicators related to innovation and entrepreneurship. With its focus on talent, we do not measure a third type of human capital, unskilled labor, although discussions will sometimes embrace lower-level skill. Together, LV skills and GK skills constitute the two output pillars of the GTCI. We can see the position of Indonesia in ASEAN such GTCI comparison Table 4 below.

Table 4.
Global Talent Competitiveness Index 2013

Country	Score (0-100)	Ranking (number of countries: 103)
Singapore	61,41	6
Japan	52,82	21
Korea	48,55	28
China	38,80	40
Philipines	30,16	68
Thailand	28,12	75
Vietnam	27,24	80
Indonesia	23,75	90
Cambodia	17,53	98

Source: Global Talent Competitiveness Index 2013

It can be implied from the table 4 that Singapore has reached the 6th rank of the 103 countries, and automatically put in the 1st rank in ASEAN region. Meanwhile, Indonesia ranked 90th and was placed on the 5th position among the other six ASEAN countries on the list. It indicates that Indonesia has been left far behind in developing more competitive talent. This condition is such an irony where then the strategic positions in the company are mostly occupied by foreign workers. When the GTCI in Indonesia is considered low, it will not fulfill the standard qualifications for industrial sectors. Because nowadays, industrial sectors require high-talented human resources, the impact on the contribution of Indonesian labor force participation will be very low. Therefore, it may encourage an increasing number of incoming flow of the foreign skilled labor to Indonesia.

4. Global Innovation Index (GII)

Globalization has altered the mobility of people across geographic. Mobility has been redefined. Ideas, know-how, and innovative and entrepreneurial people routinely cross borders and generate value locally and globally;

projects involve people collaborating across different continents, all of whom are living outside their respective countries of birth. The engine of this global and mobile world is talent (Lanvin and Evans (ed):2014).

Therefore, the competitive predominance is also determined by the ability of one nation to innovate in various aspects. According to the publication of Global Innovation Index, there are three arguments that form the basis of the importance of measuring the level of innovation in a country are, as follows (Dutta, Lanvin, and Wunsch-Vincent (ed), 2014).

First, innovation is important for driving economic progress and competitiveness for both developed and developing economies. Many governments are putting innovation at the center of their growth strategies. Second, the definition of innovation has been broadened it is no longer restricted to research and development laboratories and to publish scientific papers. Innovation is more general and horizontal in nature, and includes social innovations and business model innovations as well as technical ones. Last but not least, recognizing and celebrating innovation in emerging markets is seen as critical for inspiring people especially the next generation of entrepreneurs and innovators.

The GII helps to create tools in which innovations in a country are under continual evaluation, and it provides a rich database for refining innovation policies. It relies on two sub-indices, first is the Input Sub-Index, which consists of five input pillars capture elements of the national economics that enable innovative activities: (1) Institutions, (2) Human capital and research, (3) Infrastructure, (4) Market sophistication, and (5) Business sophistication. Meanwhile, the Output Sub-Index consists of Innovation outputs which are the results of innovative activities within the economy. There are two output pillars: (1) Knowledge and technology outputs and (2) Creative outputs. And the overall GII score is the simple average of the Input and Output Sub-Indices. Whereupon the Innovation Efficiency Ratio is the ratio of the Output Sub-Index over the Input Sub- Index. It shows how much innovation output a given country is getting for its inputs.

The comparison between the GII value in some neighbor countries of Indonesia could be seen in the Table 5.

Table 5.
Global Innovation Index ASEAN+4 2014

Countries	GII Score	Ranking (number of countries: 143)	Efficiency Ratio
Singapore	59,24	7	0,61
Korea	55,27	16	0,78
Japan	52,41	21	0,69
China	46,57	29	1,03
Malaysia	45,60	33	0,74
Thailand	39,28	48	0,76
Vietnam	34,89	71	0,95
Indonesia	31,81	87	0,96
Phillipines	29,87	100	0,81
Cambodia	28,66	106	0,74
Myanmar	19,64	140	0,71

Source: https://www.globalinnovationindex.org/content.aspx?page=data-analysis

According to the GII table above, it is clear that the competitiveness level in Singapore is the highest in the Southeast Asia region, moreover Singapore was placed in a higher rank in GII compared to NICs in Asia, such as Korea and Japan. Meanwhile, Malaysia ranked second following Singapore in Southeast Asia region. The problem why Indonesia's index is considerably weak compared to other countries is situated on its low supporting capacity development and incentive.

The weak supporting capacity development of human capital can be observed through the number of rough participation in higher education in 2013 which has reached 23,06%. While the net enrollment rate of higher education is at 18,08 % (BPS, 2014), which is even lower than the rough participation rate.

Another basic factor that cause the Indonesia's index weak is the low budget which allocated for R&D in 2014, that is only 0,09% of the total GDP. It explains why Indonesia is way left behind from other countries in East Asia region such as Japan, China, and Korea which have allocated R&D budget up to 3% of their GDP, as well as some ASEAN member countries (Singapore, Malaysia, and Thailand) that allocate 1% of their GDP for R&D budget (World Bank, 2014). Indonesia's R&D budget is 80% still dominated by Government's investment, so that the private roles in this country is somehow still considerably weak.

If it was tracked, such condition cannot be separated by the absence of *innovation ecosystem* construction in Indonesia. Actors such as public institutions, industry, academia, and government are still not able to create the synergy and *triple helix* cooperation that is oriented to the integrated competitiveness system in R&D activities, funding, incubation, mentoring, infrastructure, markets, and businesses.

5. The Networked Readiness Index

One of the indices which has been developed by the World Economic Forum (WEF) to assess the competitiveness level of a country is to see on its use of the Information and Communication Technology (ICT), either to support the public or business interests. The ICT has become the collateral of the information and the new decision making for the policy makers, concerning their interests in observing the outgrowth of the economic issues. It has been an instrument to facilitate the access of the information flow related on services, investment scene, strategic market, fiscal conditions, economic projects, policy making, and others. This urgency leads WEF to expand the Networking Readiness index, to find out on the achievements of a country by utilizing the ICT. The following data is about the achievement index on the Networking Readiness in ASEAN +2 countries in the year of 2012.

Tabel 6.
Networking Readiness in ASEAN+2 2012

Countries	Networked Readiness Index
Singapore	2
Malaysia	29
Brunei Darussalam	54
Thailand	77
Indonesia	80
Vietnam	83
Phillipines	86
Cambodia	108
Timor-Leste	132
China	51
India	69

Sumber: WEF (2012) dalam http://www.bappenas.go.id/blog/indeks-kesiapan-berjejaring-indonesia-2012/

Table 6 gives us information on the progress of the ASEAN +2 countries based on the sophisticated information and communication technology which has been optimized by the government for the economic development, competitiveness reinforcement, the use of ICT in daily activity, and the socio-economic impact that could be obtained. It is believed that the use of the ICT will influence the economic condition, especially the GDP per capita in a country(Arifianto, 2013).[7] With an index which includes: *environment*; *readiness*; *usage;* and *impact*;in ASEAN +2 level, Indonesia has reached the 7th place following Thailand, India, Brunei, China, Malaysia, and Singapore. In the global level Singapore and Malaysia could

[7] World Bank Research on 120 countries, in the period of 1980-2006, concluded that 10 percent increase in broadband penetration could increase the GDP per capita by 1,38 percent in the developing countries and 1,21 percent in the developed countries. Moreover, a research by McKinsey Global Institute has revealed that the contribution of the internet for the GDP in the developed countries reached by 3,4 percent, and 2,9 percent to the world level.

manage to get in the top 30 position.

It can somehow describe on how Singapore, a tiny country with its limited natural resources, is able to perform its total GDP per capita which is much way surpassing Indonesia's GDP. The government of Singapore is capable to improve its environment, competitiveness, the use of ICT in strengthening economic competitiveness, human resources, and industry, so that the Singaporeans can reap much benefits through Singapore's GDP per capita which is the highest one in ASEAN region.[8]

The fragility in developing the competitiveness of human resources can be observed through the condition of investment in the higher education which has been possessed by Indonesia. Higher education is indeed the main factor to upgrade the innovation on capability, skill, competence, and social interaction.

Indonesian government is still not as aware as the other ASEAN +4 member countries to see the necessity in supporting the higher education in this country, especially for the university to prepare their students in facing the competition within the AEC. This can be seen through the inexistence of higher education *roadmap* to be oriented to anticipate the compliance enforcement of the professional standards and its implications in the future regarding the *talent* migration among the ASEAN member countries. The universities in Indonesia have not been encouraged to develop curriculum system for vocational school, undergraduate program, professional school, and graduate school in order to improve the competence, skill, and networks particularly in some area studies that create 8 professional sectors which are currently being liberalized within the practices of AEC.

It is also exacerbated by the lack of initiation from DGHE (Directorate General of Higher Education, Ministry of Education and Culture of the Republic of Indonesia) to integrate and link the universities with companies, civil society, and the government either domestic or abroad, to strengthen the *basic skill employment* in companies, empowerment, advocacy, policy development, research, and downstream products. This kind of integration is required to sustain the activities related to *knowledge producer* in universities which are now more dominated by government's role, thus in the future, these alternative actors are able to support higher education where people can develop their competitiveness.

The ASEAN Studies Center which is lacking of support in every university could be the starting point of those aforementioned actors to elaborate their research in the cross-scientific sphere to study about the problem, obstacle, challenge, and opportunity in the policymaking. It is the time for government to address the AEC as an effort to eliminate bureaucratization (Irianto: 2012) and the regime of banality (Nugroho:2011) in order to improve Indonesia's education quality in the global level.

Conclusion

Indonesia has to concern on the agreement on the implementation of the AEC in the end of 2015 to prepare the competitiveness, particularly on its human resources. The MRA Scheme which will be implemented may give different the opportunity for each country. The countries with high competitiveness will derive great benefit. According to the analysis of the secondary data of the indices, it can be seen how far the Indonesia's talent is left behind compared to the neighbors, such as Singapore, Malaysia, and Thailand. The action which has to be mitigated through this scheme is to anticipate the incoming flow of foreign professional workers that potentially occupy the strategic positions either in national or multinational companies in Indonesia. If it is not prevented by the policy to reinforce the

[8] Gross National Income per capita of Indonesia isUS$ 4.700, Thailand US$ 10.000, Malaysia US$ 15.000, and Singapore US$ 50.000.

human resources competitiveness in Indonesia, it is highly possible that the momentum of the economic revival which has been predicted by McKinsey in 2030 will be away from the role of Indonesia's national labor force.

It cannot be denied that the requirement of the professional migrant workers for short-term program is really difficult to be avoided. Yet it is important to provide human resources who are experts in certain fields to contribute in developing the competitiveness in Indonesia. This kind of strategy is prepared to switch the dependency towards foreign human resources in some companies which has required standard that cannot be met by Indonesia's human resources. The capability in managing and developing talent and innovation *ecosystem* has become the essential factor for one nation to develop even more. The ability to compete and create the competitiveness is the key element of a country without having to follow the path which is covered all the time by the developed countries (Chang:2003).

The state is required to develop the progress orientation in accordance with the character of its own national cultures (Harisson dan Huntington: 2006). The strategies undertaken in the development of human resources can be done through developing the system of the formal and informal education (internships, courses, trainings) throughout life (*life long learning*) in the village, and town to meet the global knowledge and labor & vocational skills standards which are required by the company; strengthening the network and accessibility of the information system for Indonesian talent to join the competition in the labor market of the AEC; diminishing the detention for the susceptible groups of citizens to get the same access in the migration process, and to compete in the labor market; and assuring the incentive system, environmental amenities and the life worthy for the talents who have dedicated professionalism of the organization.

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