

## Conference Paper

# Indonesian HEI Quality to Reach Success in AEC: Secondary Analysis of Higher Education Expansion Number Toward Productivity and Human Resources Development

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## Abstract

The expansion of higher education quantity is being the interesting phenomenon in Indonesia. Hundreds higher educations or programs were built. This study purposes are to find the relationships between higher education number expansion and higher education productivity toward human resources development. This study is using secondary analysis of quantitative data. The conclusion of this study is that the expansion of higher education gives the positive impact to the human development, but do not has significant correlation with productivity figures at the same year. Then the contribution of this study is that this study should be the reflection of Indonesia. Beside of the expansion of the higher education institution number, Indonesia should be concern on the the quality of higher education, because it may give more positive impact to higher education of Indonesia.

**Keywords:** ASEAN Economic Community, Expansion Number, Productivity, Higher Education, Human Resource Development

## 1. Introduction

Schofer and Meyer [1] said that there are the worldwide expansion of higher educational enrolments over the twentieth century. The expansion of higher education quantity is being the interesting phenomenon in Indonesia. Hundreds higher educations or programs were built. Statistical Yearbook of Indonesia shows that the number of higher education in Indonesia are just 1 633 and become 3 280 in 2014. The expansion of higher education number gives the big hope on the human resources development. The quality of educational system will be reflecting the graduates quality and readiness for required skills [2].

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Received: 2 April 2018  
Accepted: 17 April 2018  
Published: 23 May 2018

Publishing services provided by  
Knowledge E

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Selection and Peer-review under the responsibility of the 1st ICSEAS 2016 Conference Committee.

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Haghighatian and Ezati [3] studied about the effective factors on human resources productivity, and the result was that variables of knowledge and skill were both have direct and meaningful relationship with productivity [3]. Education is one of knowledge and skill sources. The main problems are: does the expansion of higher education number then increased the higher education productivity? Do the higher education expansion number and higher education productivity both related to the human resources development? This study purposes are to find the relationships between higher education number expansion and higher education productivity toward human resources development.

Human resources are very important to face the globalization. Globalization gives many effect to the economic, social, and politics on the global integration that out-comes the human well-being [4]. The readiness of human resources in the country is the most important things to face globalization. Higher educations which have a responsibility to prepare human resources of the country must ensure that the country can reach success in the Globalization.

Asian Economic Community (AEC) is the way of the Association of South East Asia Nations (ASEAN) to prepare facing the globalization. However AEC did not provide a choice to ASEAN countries to ready or not [5]. For that reason, the all component that are related to the country development, such as education, must boost themselves to improve their quality to reach a success in AEC.

Indonesia has the most higher education on the quantity, but Singapore is the best on the quality [6]. That represents that Indonesia needs to think again to allow the expansion of the higher education quantity if that does not give positive impact to higher education quality. This study focused to know how higher education expansion on the quantity affect the quality and human resources in Indonesia, and how to reach success in ASEAN Economic Community with the existing condition.

This study might be driven in other countries with the same phenomenon. Globalization affects the government policies about higher education in several countries, and that is affect to the higher education quantity and quality. Higher education quantity may also affect to the quality, but perhaps that is not. The quality of higher education in a nation reflects the human capital quality. This study is very important because human capital and education are related to the economic growth. Perhaps the production and the development levels of countries can be increased by the increasing of human capital education [7]. The quality and the inventiveness of human resources are the main factors underlying the essential differences between the states [8].

## 2. Methods

Both of efficiency and productivity are related with quality of higher education [9]. Productivity in this study is quantitative measurement of productivity that uses the productivity figures. Productivity figures is the comparison of the graduated students with the total number of students in higher education. By measuring input and output of higher education can show the efficiency of higher education [10].

This study was using secondary analysis of quantitative data. Secondary analysis is the reanalysis of data for the purpose of answering the original research question with better statistical techniques, or answering new questions with old data [11]. This study reanalysed the data that have been provided by the Indonesia Central Bureau of Statistic to answer new questions. Indonesia Central Bureau of Statistic provides raw data that can be used to answer research questions that be related. Data that had been collected were the data of the number of higher education institutions, the productivity figures of higher education, and the human development index of Indonesia during 15 yr (from 2000 to 2014). The productivity figures that have provided from Indonesia Central Bureau of Statistic were recently in 2014. The number of higher education institutions from 2000 until 2014 reflected the expansion of higher education number during 15 yr. The productivity figures of higher education are the comparison between the graduated student and the total number of the students of higher education institutions. The productivity figures showed the higher education productivity. UNDP (United Nations Development Program) described that Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions. The HDI was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone.

This research was using quantitative data and was analysed using SPSS program. The independent variable in this study was the number of higher education, and the dependent variable were productivity of higher education and human resources development. The data were analysed using bivariate correlation, dependent variable was analysed using bivariate correlation with each dependent variable. The correlation between variables in this study was nonlinear, so bivariate correlation was appropriate [12].

### 3. Result and Conclusion

From the data analysis, the expansion rate of higher education institutions number was found 121 per yr. This number is not the small number, if that is compared to the other countries that just have hundreds higher educations. However, this amount of higher education perhaps can answer the Indonesia citizen needs of tertiary education as we now that Indonesia has the largest population [13]. In 2014, there were 3 280 higher education institutions in Indonesia. In 2012, based on UNESCO's data, Indonesia had the biggest number of higher education institution in Asia. This number actually should be followed by the quality of higher education, so it can be the power of Indonesia to face the Globalization.

Table 1 shows the data of the higher education number, the productivity figure of higher education and the Human Development Index (HDI) of Indonesia from 2000 until 2014. This table can show the condition of the three variables from 2000 until 2014.

TABLE 1: The Data of HEI, Productivity Figure, and HDI [14].

Year	HEI Number	Productivity Figure	HDI
2000	1 633	16.54	68.4
2001	1 747	14.71	68.2
2002	1 944	15.43	65.8
2003	1 924	15.91	69.7
2004	2 428	18.00	68.7
2005	2 516	12.66	69.57
2006	2 838	12.03	70.1
2007	2 638	7.65	70.59
2008	2 680	7.43	71.15
2009	2 975	15.24	71.76
2010	3 011	15.10	72.27
2011	3 185	14.40	72.77
2012	3 170	13.14	73.29
2013	3 189	13.87	73.81
2014	3 280	13.78	68.9

The productivity figures of higher education are the comparison between the graduated student and the total number of the students of higher education institutions. These figures do not have a significant correlation with the expansion of the number of higher education and the HDI. The productivity figures mostly have the negative trends from 2000 until 2014. This trend shows that the comparison between the graduated student and the total student mostly decrease from 2000 until 2014. This also shows that the number of the enrolment rate is higher than the number of graduated rate. Perhaps, this phenomenon has caused the expansion of higher education number. The new higher education provides the more quotas for the new students, and this is one of the factors that has caused the expansion of enrolment rate. Graduated students depend on the old student and do not related with enrolment rate at the same year.

Until 2015, total higher education institution in Indonesia that are accredited were 163 institutions and the total number of higher education were 4 319 (data from The Ministry of Technology and Higher Education and National Accreditation Institution in Indonesia). Therefore, the percentage of higher educations that had been accredited were 3.8 %. The data analysis and this fact bring the same perception about higher education, that the expansion of higher education runs but the enhancement effort of higher education institutions quality is very low.

TABLE 2: Pearson Correlation between Higher Education Number and HDI.

		N	HDI
N	Pearson Correlation	1	.747**
	Sig. (2-tailed)		.001
	N	15	15
HDI	Pearson Correlation	.747**	1
	Sig. (2-tailed)	.001	
	N	15	15
**. Correlation is significant at the 0.01 level (2-tailed).			

The result of correlation analysis between higher education number and HDI are shown in Table 2. The expansion of higher education number has significant and positive correlation with HDI. Pearson correlation is 0.747 which means that the HDI will increase 0.747 pt if the higher education institution increase of 1 pt. UNDP (United Nations Development Program) was described that Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of

living. The increase of higher education institution number provides more quota of the new student which means that more quota for the more knowledgeable persons of the country. The more new students in higher education will affect the healthy awareness because of more knowledge that they get.

TABLE 3: The Human Development Index in Southeast Asia [15].

Country	2013 HDI Rank	2013 HDI Score	Annual HDI Growth (%)	
			1990–2000	2000–2013
Singapore	9	0.901	0.72	0.92
Brunei	30	0.852	0.46	0.27
Malaysia	62	0.773	1.12	0.58
Thailand	89	0.722	1.27	0.83
Indonesia	108	0.684	1.44	0.90
Phillipines	117	0.660	0.46	0.49
Vietnam	121	0.638	1.70	0.96
Timor Leste	128	0.620		2.25
Cambodia	138	0.584	1.47	1.75
Lao PDR	139	0.589	1.83	1.44
Myanmar	150	0.524	1.94	1.69

Table 3 shows the Indonesia HDI Index and the other countries in Southeast Asia. The readiness of human resources in the country is the most important things to face globalization. Asian Economic Community (AEC) did not provide a choice to ASEAN country to ready or not [5]. With this conditions of HDI and the higher education productivity and quality in Indonesia, can Indonesia compete with the other countries in Southeast Asia to reach a success in Asean Economic Community (AEC)?

Indonesia has many higher educations and it means that Indonesia has many weapons if Indonesia in the battlefield. Therefore the next step is to build up a strategy to use that because the strategy can lead to a good performance [16]. The strategy that is selected must be executable. Indonesia should choose the strategy that is able to optimize the performance, productivity, and quality of higher education in Indonesia.

The expansion of higher education gives the positive impact to the human development, but do not has significant correlation with productivity figures at the same year. Then the contribution of this study is that this study should be the reflection of Indonesia. Beside of the expansion of the higher education institution number,

Indonesia should be concern on the quality of higher education, because it may give more positive impact to higher education of Indonesia.

## 4. Conclusions

This study show that the quantity and quality did not has a linear correlation. The quantity and quality of the expansion of higher education related with nations policy. The unlinear correlation between quantity and quality of higher education gives us the general hypothesis that there is "something wrong" in our education system. This is may give chance to the next deep research to explore what happen with our higher education system.

Establishment of plans for expanding educational opportunities very important to the nations. Indonesia needs to plan the expansion number of higher education. Based on research Indonesia must determine the higher education needs per year, what is the strategic programs to face globalization, and establish the strategic development plans of the higher education that are integrated with all sector.

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