

Human capital and economic growth in Indonesia

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Abstract:

Issues of human capital have carried weight in important researches, It is considered to be a significant source of economic growth, this reflects the importance of human capital in achieving development, , through This paper, we will present the role of human capital as a factor promoting the level of growth by providing an overview of the notion of human capital and its importance in the economy, then clarify the relationship between human capital and economic growth in Indonesia.

Keywords: human capital; growth; economic growth.

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1. INTRODUCTION

The past two centuries were characterized by widespread and intense changes in human living conditions, the process of human capital accumulation accelerated as more and more people acquired the ability to innovate, and to use innovations.

National governments in the Member States are progressively getting involved in a human capital perspective; Academic debate and empirical research on human have a well established tradition at the international level, even if the consensus is far from being reached on univocal definitions of the concept, as well as on the modalities for assessing its respective impacts. On the other hand, the biological environment sharply changed. Lifetime duration, which had been virtually the same for thousands of years, increased sharply within just a few generations, Mortality significantly reduced and fertility behaviour changed profoundly, hygienic conditions improved as sanitation became more important and widespread, Economists have always had a great interest in understanding the reasons and the mechanics of these dramatic changes. The interest in human capital and economic growth at the political level is lively, a number of European policies in the last few years have focused directly or indirectly – on this issue. The OECD and the World Bank have carried out pioneering work in this field and are producing a growing body of evidence.

This article gives an overview of the current state of knowledge on the situation of the relationships between human capital and economic growth in Indonesia.

To emphasize the dynamic aspects of these relationships, we will start first with the bases notion of human capital in the knowledge society, and then we will focus on Indonesia's human capital then its effects on economic growth in Indonesia.

Previous studies:

There are a number of studies that have explained the relationship between the Human capital and economic growth. Most of them confirmed that human capital is often seen as an important catalyst for economic growth.

(Anna Yulianita, Didik Susetyo, Syamsurijal A.K, Azwardi 2017)¹

This study examines conditional convergence using the Regional GDP variable per capita of initial government expenditure, domestic investment, inflation and the number of high school graduates as an important human capital, the results showed that conditional convergence has not occurred in 26 provinces in Indonesia so that all provinces are still experiencing divergences.

(latif adam, siwage dharma Negara 2015)² this study tried to assess the current state of human capital development in Indonesia with a particular focus on the education sector, and it found that Indonesia's economic and social policies, in various ways, have not been conducive to support the development of human capital.

(Purnastuti L., Suprayitno B., Sugiharsono, 2016)³ The purpose of this study is to investigate the role of regional government expenditure, workers' education level, and government expenditure for health and education sector in economic growth, the result showed that education contributes significantly to the improvement of labour productivity, and the population has positive impacts on various aspects of human development and labour productivity.

(Erich Gundlach, 1997)⁴ saw that many empirical studies lack a consistent theoretical foundation and there are measurement problems due to a very narrow concept of human capital focusing on formal education, so he tried to take other important determinants of human capital such as the quality of education, the experience of the work force and the health, nutritional status of the populations.

Natteri Siddharlhan, Krishnan Narayanan (2013)⁵, this study examined the role of human capital as captured by literacy rate in influencing manufacturing productivity for Indian manufacturing. The study estimated TFPG (total factor productivity growth) for nearly 90 industries for 15 major states in India for formal, informal and combined sectors using four-digit-level data. It found that literacy has a crucial role to play in the TFP growth of Indian industry

Ivol.s & Garry .j (2010)⁶ found that the development of human capital is the critical determinant of long term sustainability, by examining the linkages between population, economic development, employment, education, health, social equity, cultural value, energy intensity and sustainability in the context of evolving human.

Moses C., Timothy O. & Abiodun A. (2017)⁷, this study tried to examine the coordinating role of human capital among the three pillars of sustainable development in Nigeria from 1984 to 2014, the analyses showed that environmental degradation negatively affected human capital but increases with economic growth.

Previous studies have agreed on the key role of human capital in development despite the difference of approach and analysis tools used.

Our study is the complement of the previous studies; it focused on the analysis of the role played by human capital in the Indonesian economy.

2. Human capital in the knowledge society:

The British Department for International Development (DFID, 1999) addresses a patrimony in which there are five forms of capital for enhancing human well-being, namely physical (substance and goods), financial (property and money), natural (natural resources), human and social capital⁸. Hancock classifies all wealth under four forms: human, natural, social and economic capital⁹.

The term human capital originated with Theodore Schultz, an economist interested in the plight of the world's underdeveloped countries. He argued correctly that traditional economic concepts did not deal with this problem.

His claim was that improving the welfare of poor people did not depend on land, equipment, or energy, but rather on knowledge. He called this qualitative aspect of economics "human capital." Schultz, who won the Nobel Prize in 1979, offered this description¹⁰:

Consider all human abilities to be either innate or acquired.

Every person is born with a particular set of genes, which determines his innate ability. Attributes of acquired population quality, which are valuable and can be augmented by appropriate investment, will be treated as human capital.

Human capital in an organization is one of the organization's sources for obtaining a competitive advantage¹¹ (Ulrich & Lake, 1991), and its importance and contribution for creating knowledge in the organization are great¹² (Collis & Montgomery, 1995).

The human capital of employees has a high financial value and is accumulated via learning processes, which take a central role in the survival and growth of the organization.

Coleman (1988) states that changes create human capital as they make it easier for individuals to acquire new skills and abilities, enabling them to act differently.

Human capital has been identified as a critical aspect of business knowledge, and especially important to obtain different resources (Brush et al., 2001), as it makes access to extremely useful social relations easier, such as in obtaining specific resources, for which the value and importance of informal contacts is crucial (Glaeser et al., 2002; Brinlee et al., 2004).

The level of human capital within a country correlates with the country's performance in innovation. While innovation is an important part of knowledge society, measuring the human capital is actually an important part of knowledge society¹³.

According to the 2005 UN report, the Index of knowledge societies IKS is a summary measure of the performance that countries register in the three main dimensions: assets which are represented by a large pool of young and educated people; advancement (the degree to which a member state nurtures and advances its human and informational

resources) and foresightedness which is the degree to which a member state grows and develops along its path to a knowledge society¹⁴.

3. Indonesia’s human capital:

The most common measures of human capital is educational attainment. We rely on measures of adult education level, reading performance, mathematics and science performance.

➤ **Adult education level:**

This indicator looks at adult education level as defined by the highest level (tertiary) of education completed by the 25-64 year-old population.

The indicator is measured as a percentage of same age population.

Table 1: Adult education level

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
8.13	5.44	6.12	6.90	6.46	7.53	7.98	8.16	9.01	9.39	9.68	10.57	11.34	11.86

Source: <https://data.oecd.org/eduatt/adult-education-level.htm> (16/02/2019).

According to the table we see the average adult education level is continual rise between 2005 and 2017, even the growth rate has slowed probably due to supply constraints. In general, Indonesia people who are reached tertiary level education are reached only about 11% between 2005 and 2017.

One of the key factors constraining higher education enrolment in Indonesia is the difficult transition from senior high school to university.

There is a relatively high drop-out rate after senior high school as high school graduates tend to choose to enter labour market early¹⁵.

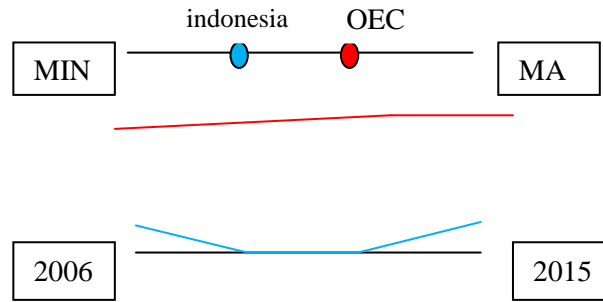
Indonesia’s universities are also largely isolated. They do not establish solid linkages with international higher learning network in research and development. They also have not strongly established strong linkages with business and industry Network. Their curriculum is rigid and incompatible with industry’s needs. As a result, the higher education produces graduates who are less able to meet the growing need for the more broad-based and flexible skills that the industry currently needs¹⁶.

➤ **average performance:**

the headline indicator for the three subject areas: science, mathematics and reading .

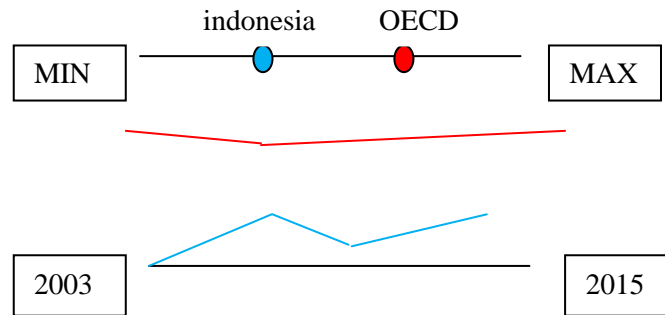
Average performance refers to all 15 years old students in a country regardless of the school type and grade attended.

Figure 2 : science



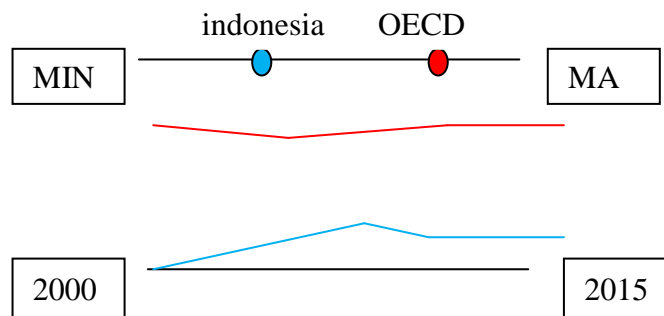
Source: <http://www.oecd.org/pisa/pisa-2015-indonesia>

Figure 3 : Mathematics



Source: <http://www.oecd.org/pisa/pisa-2015-indonesia>

Figure 4: Reading



Source: <http://www.oecd.org/pisa/pisa-2015-indonesia>

Indonesia's result in the OECD Program for International Student Assessment, or PISA 2015 report, shows some improvements in the skills of students.

From 72 countries and economies reviewed every three years, Indonesia ranks 62nd, a slight improvement compared to 2013. Indonesian students ranked the second lowest in the 2013 PISA ranking (71), worse than their ranking in 2009, when Indonesia ranked 57th.

The performance of Indonesian students (girls and boys) in science, mathematics and reading is one of the lowest among PISA-participating countries with an average ranking of 62 out of 69 countries. (Three of the 72 assessments involved city groupings: Buenos Aires (Argentina), Beijing-Shanghai-Jiangsu-Guangdong (China) and Hong Kong (China).).

If Indonesia can keep up that pace of improvement, its children born today have a realistic chance to match the science performance of their peers in the industrialised world by 2030, the year for which the United Nation's Sustainable Development Goals expect every student to benefit from quality education.

This impressive aggregate indicator has masked wide regional and systemic variations within the country. In Indonesia, disparities between provinces are quite large due to an unbalanced development strategy, which is biased toward Java. The Eastern part of Indonesia, including Nusa Tenggara Barat, Nusa Tenggara Timur, Maluku Utara, Maluku, West Papua, and Papua, has experienced wide development gap compared with that of Java. High disparities indicate that these regions need extra support from central government.

4. RESULTS AND DISCUSSION

Robust evidence supports the conviction that human capital plays a crucial role in fostering economic growth, as well as innovation and competitiveness in the so-called "new economy".

As a matter of fact, human capital can be seen as mutually reinforcing and producing beneficial effects on economic growth, as well as in other crucial areas such as social control, inclusion, health, governance, institutions, democratic empowerment.

On the basis of the relevant literature, it is plausible to assert that investment in human capital contributes significantly to productivity growth, and its role is particularly crucial in today's knowledge driven economy. Moreover, human capital plays a key role in fostering technological change and diffusion.

The impact of increased human capital on economic performance is particularly effective when this factor is combined with others, such as innovation, physical investment, especially in information and communication technology, work organisation and modern methods of management¹⁷.

Studies and statistics showed that Indonesia's human capital is augmented mainly by quantity rather than quality, that means its growth contribution is limited to being a factor of production rather than a source of technological upgrading.

In 2014, the per capita GDP in Indonesia was about one-quarter the average per capita GDP in OECD countries, one-eighth the per capita GDP in neighbouring Singapore, half the per capita GDP in Thailand, and 50% higher than the per capita GDP in Viet Nam. At the same time, the percentage of 35-44 year-olds in Indonesia who were tertiary-educated is more four times smaller than the average across OECD countries. These differences should be taken into account when comparing the academic performance of 15-year-olds in Indonesia with their counterparts in other countries. The growing number of PISA-participating countries and economies with a similar GDP per capita to Indonesia,

together with Indonesia's academic improvement, means that Indonesia's science performance is now above several school systems that participated in PISA 2015¹⁸.

PISA 2015 also students about their beliefs about the nature of science knowledge and the validity of scientific methods of enquiry (collectively known as epistemic beliefs). The results are showed that students in Indonesia were less likely than students across OECD countries to agree with current views about the nature of science, particularly those about how scientific ideas evolve. For instance, about six in ten students in Indonesia reported that ideas in science or science books sometimes change compared to eight in ten students across OECD countries.

Also according to PISA 2015 many 15 year olds students are undecided about their future, almost one in four students across OECD countries reported that they expect to work in an occupation that requires further science training beyond compulsory education, compared with around one in seven students (15%) in Indonesia.

In Indonesia, gender differences are more pronounced than across OECD countries. Some 22% of girls in Indonesia reported that they expect to pursue a career in science, compared to 9% of boys.

Over 9 in 10 Indonesian girls who expect to work in a science-related occupation envision themselves working as a health professional.

Compared to principals in other school systems, principals in Indonesia are more concerned about the quality and the lack of material resources at their schools. For instance, 33% of students in Indonesia attend schools whose principal considers that the capacity to provide instruction is hindered a lot by the lack of educational material, compared to 6% of students across OECD and 17% of students in Thailand¹⁹.

5. CONCLUSION

Empirical research investigating the interrelations among human capital and growth has flourished in recent years. Broadly speaking, the consensus emerging from these studies is that better educated individuals, enjoy a longer, happier and healthier life than their less educated and less socially integrated counterparts. While the overall message is that more education go hand in hand with economic growth.

Results of study:

- The return from investment in human capital in Indonesia is low level because its economy concentrates more on traditional forms of capital.
- The education system in Indonesia is no efficiency due to the absence of proper evaluation.
- Disparities between provinces are quite large in Indonesia due to an unbalanced development strategy.
- Primary and secondary education is the foundation of the Indonesian knowledge sector.
- Education is one of the most important means for reducing poverty and sustaining economic growth.

According to the results above, the following recommendations were suggested:

- The role of education is important to prepare the quality human capital needed to build a strong society and competitive economy.
- Primary and secondary schools have to equip students with the analytical and critical thinking skills required to become scientists.
- Have to inspire students to want to become researchers in any field.
- Indonesia needs to use existing resources (human capital) more efficiently to build strong economy.

6. Citations:

- ¹ Anna Yulianita, Didik Susetyo, Syamsurijal A.K, Azwardi (2017), human capital and economic convergence in indonesia , International Journal of Scientific and Research Publications, Volume 7, Issue 7.
- ² latif adam, siwage dharma Negara (2015), improving human capital through better education to support indonesia's economic development, economics and finance in Indonesia, vol 61, n° 02.
- ³ Purnastuti L., Suprayitno B., Sugiharsono (2016), does human capital investment matter for growth ? evidence from Indonesia during the fiscal decentralization era, vol 08 n°1.
- ⁴ Erich Gundlach (1997), Human capital and economic development : a macroeconomic assessment, Intereconomics January/February. website <https://link.springer.com/search/page/1?query=human+capital+and+development> (20/02/2019)
- ⁵ Natteri Siddharlhan, Krishnan Narayanan (2013), Human capital and development the Indian experience, springer, India .
- ⁶ Ivol.s & Garry .j (2010), human capital and sustainability, sustainability (2), website:www.mdpi.com/journal/sustainability
- ⁷ Moses C. , Timothy O. & Abiodun A. (2017), human capital and sustainable development in Nigeria : how can economic growth suffice environmental degradation ? discussion paper n°29.
- ⁸ DFID Livelihood (1997), White Paper on International Development. London: HMSO, 18.
- ⁹ Hancock, T.(1999), People, partnerships and human progress: building community capital, Health Promotion International, 16, 275–280.
- ¹⁰ Theodore W. Schultz (1981), *Investing in People: The Economics of Population Quality* (Berkeley, CA: University of California, p 21.
- ¹¹ Ulrich, D. & Lake, D.(1991), Organizational capability: Creating competitive advantage. *Academy of Management Executive*, 5(1), 77-92.
- ¹² Collis. D.J. & Montgomery, C.A.(1995), Competing on resources: Strategy in the 1990s. *Harvard business Review*, July-August, 118-128.
- ¹³ Elena pelinescu, Elisei craciun (2014), the human capital in the knowledge society: theoretical and empirical approach, manager, N 20, p 09.
- ¹⁴ Department of economic and social affairs (2005), understanding knowledge societies, united nations, newyork, p149.
- ¹⁵ Moeliodihardjo, BY (2013), Equity and Access in Higher Education, World Bank, Jakarta.
- ¹⁶ Di Gropello, E, Kruse, A, & Tandon, P (2011), Skills for the Labor Market in Indonesia: Trends in Demand, Gaps, and Supply, World Bank, Washington DC.
- ¹⁷ Meeting of the OECD council (2001)"The New Economy Beyond the Hype" final report on the OECD growth project . OECD.
- ¹⁸ Results from PISA 2015, <http://www.oecd.org/pisa/pisa-2015-indonesia.htm>(25/02/2019).
- ¹⁹ Idem.