

A LITERATURE REVIEW : HUMAN CAPITAL IN EDUCATION TO ECONOMIC GROWTH

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ABSTRACT

Economic growth is one of the economic indicators used to measure a country's economic development. One of the most important factors for economic growth is human capital. In human capital, it is explained that education is an important investment in human resources. Through education, a person will have superior knowledge and skills at work, be adaptable, be able to learn new tasks and skills more easily, and be able to use more advanced technology and equipment. Thus, education in human capital can contribute significantly to income and work productivity. The purpose of this study is to examine the effect of human capital in education on economic growth. The research method is carried out by studying the literature on theories and articles on human capital in education and economic growth. The results of the study show that human capital in education influences economic growth, so the role of the government is needed to continue to invest in human capital in education.

Keywords: human capital, education, economic growth, human resources

1. Introduction

Economic growth is an important economic indicator to measure a country's economic development. Meanwhile, economic growth occurs because the factors of production are always increasing both in quantity and quality, population growth will increase the workforce, investment will increase capital goods, and technological developments will increase production efficiency. (Shinta, 2020). Economic growth will always be accompanied by the development of science and technology. Today, the development of science and technology is getting faster and more sophisticated. Human Resources (HR) who have quality knowledge and skills are able to master this technological sophistication. (Santoso et al., 2020).

Economic growth is a real process of long-term per capita output growth that occurs when there is a tendency to increase output, in which the level of prosperity of a nation is determined by the level of economic growth. According to Adam Smith's classical theory of economic growth (Saragih, 2022), the process of output growth is related to population growth or human resources. However, in reality, based on BPS data for 2021, the unemployment rate in Indonesia is still quite high. Figure 1 shows that the unemployment rate in Indonesia in 2021 will reach 14.42%. One of the causes of the high unemployment rate is the lack of quality human resources, so it is necessary to increase human resource education.

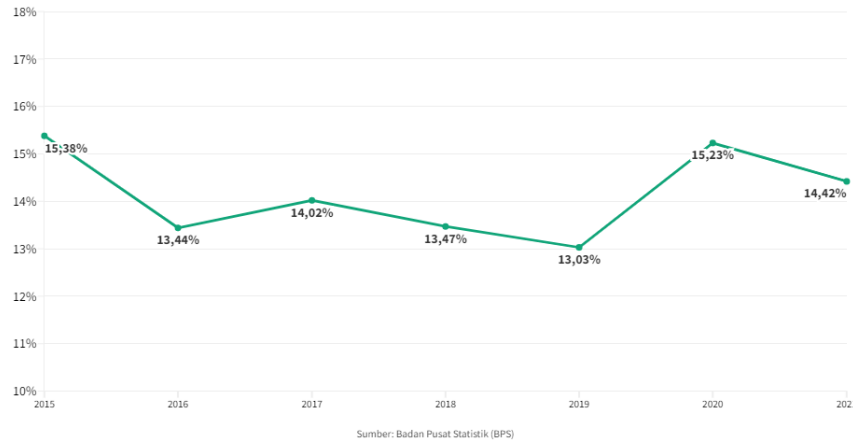


Figure 1. Development of Indonesia's Unemployment Rate in 2015-2021

The quality of human resources plays an important role in the country's economic growth (Santoso et al., 2020), This means that the development of human resources is very important and necessary (Nizar & Nazir, 2020). HR is no longer seen as just a resource, but an important asset for economic continuity and development. The change of human resources into human assets is referred to as human capital (*human capital-HC*) (Susan, 2019). Pelinescu (2015) reveals from various literatures that one of the most important factors of economic growth is human capital (Olawumi, 2019).

Human capital has an important influence on economic growth through two mechanisms. First, in terms of quantity, the accumulation of human capital is a fundamental production factor that will become a source of output growth. Second, in quality, the accumulation of human capital through increased productivity and technological advances will create efficiency so that it contributes to economic growth (Haryono et al., 2021). Human capital determines the ability of an economy to manage other factors of production, which are further required for innovation (Osiobe, 2019). It can be interpreted that increased human capital in areas such as science, education and management leads to increased innovation, social welfare, equity, increased productivity, increased levels of participation, all of which contribute to economic growth. This is reinforced by the results of research (Haryono et al., 2021) which shows that human capital has a significant effect on economic growth.

Human capital is all the characteristics that exist in humans, including knowledge, skills, and personality that is manifested in the ability to do work so as to produce economic value. *Human capital* in principle is *the man that can make the place develop and grow* which can be assumed that *human capital* is part of HR management, but the management and development of human capabilities as a resource is more focused on increasing knowledge and skills that can support the development of an organization or company (Endri, 2010).

Improving the quality of human capital can be done through the education aspect (Kholifaturrohmah et al., 2022). Education and training are the most important investments in human resources (Becker, 1993). Widiensyah (2017) argues that investment in education is investment by way of allocating costs for the implementation of education and taking advantage of human resources generated through education. Human capital analysis assumes that schools can increase income and productivity through knowledge, skills and ability to analyze problems

(Becker, 1993). Development of human resources through education, health, skills and social infrastructure will in turn increase productivity and increase GDP per capita (Nizar & Nazir, 2020). It can be concluded that human capital contributes significantly to employment (Sima et al., 2020). Menurut Becker (1993) economies in Japan, Taiwan, and Asia demonstrate the importance of human capital in economic growth. This study seeks to examine the role of education in human capital on economic growth.

2. Literature Review

2.1 Human Capital

Human capital or skilled labor was first used in the 1960s and 1970s (Osiobe, 2019). The theory of human capital is the now widely accepted idea that education, training, and other forms of learning are investments that pay off in the future. (Deming, 2022). Human capital investment theories are often based on some empirical evidence that educated and skilled individuals almost always tend to be more productive than others. (Prasetyo & Kistanti, 2020). Hastuti & Dewi (2019) explained that human capital is an investment business of human capital in the form of training, education, and knowledge. (Nezhnikova, 2020) also explained that human capital is an asset capable of providing income in the future. (Chattopadhyay, 2012) explains the development of human capital is at the heart of educational economics and is a critical concept in growth theory as well as a broadly participatory form.

2.1.1 Efforts in Human Capital

There are four efforts that can be made to invest in human capitala (Becker, 1993) among others:

a. Training

The first effort that can be done is training. There are two types of training, namely special training and general training. General training, namely training that can be carried out and is needed by all companies. General training is general skills training, such as computer skills training, organizational management skills, financial management, and so on.

b. Education

Becker defines a school as an institution that focuses on training, as opposed to a company that offers both work and training. In some schools, some offer special education and skills. But there are also those that offer education and training as diverse as universities. It is through this education that humans are able to have the skills and qualities that will later become human resources who have them *human capital in education*.

c. Other Knowledge

An information about the ability of a company to pay employees and the quality of the company is one of the human capital investments.

d. Increase the productive wages of employees

The employee wage increase policy is expected to be able to improve the mental and physical health of human resources by using employee salaries to ensure employee health. One important aspect of human capital investment is improving the emotional and physical health of employees.

2.2 Economic growth

The development of human capital on economic growth is related to two theories, namely the classical economic growth theory (*classical theory of economic growth*) and the new theory of economic growth (*the new theory of economic growth*) (Olawumi, 2019). It is also supported by neo-classical growth theory (*the neo classical models of growth*) and endogenous growth theory (*endogenous growth models*) (Osiobe, 2019; Olawumi, 2019). The neo-classical growth model assumes that the accumulation of capital (savings) in an economy and how people use this capital are critical to economic growth. In contrast to the Solow growth model which states that long-term growth is achieved through capital accumulation, skilled labour, population growth, and technological advances (Osiobe, 2019). Endogenous theory also suggests increasing economic growth through knowledge transfer, capital formation, skills acquisition and workforce training (Olawumi, 2019).

Economic growth is an indicator in achieving the development of economic conditions in a region so that it has an impact on increasing people's welfare (Mbarek & Feki, 2013). To find out the economic conditions in a region experiencing growth, one of which is gross domestic product data (PDB) (Syari et al., 2017). Rofii & Ardyan (2017) states that economic growth is the development of activities in the economy that causes the goods and services produced in society to increase and the prosperity of society to increase. The simplest economic growth can be interpreted as an increase in output or an increase in aggregate national income in a certain period of time, for example one year. Based on the explanation of the theory above, it can be interpreted that economic growth is an activity in the economy which in principle produces goods and services, as well as being a benchmark for the condition of a country.

The theoretical framework of economic growth is suitable for analyzing the impact of human capital on the economy. Education has a direct impact on HR which can be measured by the Human Development Index (*HDI*) and has an impact on income distribution (Gini Index) (Osiobe, 2019)

3. Research Methodology

This research is a literature study. (Ramdhani et al., 2014) Literature review is an activity on scientific articles, books, and other sources that are relevant to a particular problem, research area, or theory, and as such, provides a description, summary, and critical evaluation of those works. Literature review is designed to produce an overview of the sources of information that are owned, explored when examining a particular topic. The literature study method is a method by collecting both national and international literature. The initial stage of the literature review method was to collect journal articles and obtained 32 articles using the identified keyword "human capital" but the relevance of the articles had not yet been explored. Of the number of articles there are 28 articles that are relevant and used in the analysis.

4. Results and Discussion

4.1 The Influence of HC on Economic Growth

Research result Wang & Liu (2016) shows that human capital education has a significant positive effect on economic growth. The positive impact of higher education on economic growth is very significant, but primary and secondary education do not have a significant impact on

economic growth. This is possible because workers with higher education can better master new technologies and have more innovative abilities, which are very much needed at this time. Therefore, the government should further increase the participation of secondary education graduates to continue on to higher education in order to avoid entering the labor market too early. This will increase the proportion of the workforce with tertiary education which will ultimately promote economic development. This is also in line with human capital theory which assumes that formal education is the most important instrument in producing high productivity (Widiensyah, 2017).

Research result Nurmilah (2016) shows that foreign investment and human capital have a positive effect on economic growth. In his research, the aspect of human capital is proxied by the length of school variable while economic growth is proxied through the Gross Regional Domestic Product (GDP). These findings confirm the new growth theory which emphasizes the importance of improving the quality of human capital in increasing work productivity.

In line with Hastuti & Dewi (2019) that investment in human capital is expected to improve one's performance and productivity, through increasing one's performance and productivity, it is also hoped that it can improve the quality of work as a whole.

Research Shinta (2020) shows that educated human resources who have qualified expertise or skills will increase economic growth.

Individuals are able to get other benefits from efforts to increase the amount of education obtained, but if individuals invest less in education, these individuals will also not get other benefits. This is more likely to occur as a result of a person's failure or lack of education, for various reasons (lack of finance, ability), in making an investment to produce results. Any gains from this growth effect are well-documented social gains from early education programs (Dickens et al., 2006).

Krueger & Lindahl (2001) explained that the micro and macro literature both emphasized the role of education in future growth. The macroeconomic evidence of externalities in terms of technological progress from investment in higher education seems to us more fragile, resulting from imposing constant coefficients and linearity constraints that are rejected by the data.

Breton (2013) argues that educated workers increase national income directly because schooling increases their marginal productivity. They increase national income indirectly by increasing the marginal productivity of physical capital and other labour. Countries that have highly educated individuals can minimize the low quality of poor individuals, but countries that are less educated will have lower quality individuals at a much greater level. In all countries, the positive impact of increased human capital on physical capital productivity is necessary to offset diminishing returns to investment in physical capital and make increased investment in physical capital financially viable in the growth process. Empirical results show that investment in schools is subject to diminishing returns but that the marginal returns at the national level are still quite large in highly educated countries, over 10% in 2005. In low educated countries, the marginal returns are much lower big. is larger, more than 50%, but because most of these effects are indirect, magnitude is generally not appreciated. Achieving these returns requires public investment in education because direct returns to educated individuals are not sufficient to overcome the high costs of private financing. The results also show that investment in post-secondary education has no additional effect on national income beyond the effect of investment in education in general. The implication is that governments can allocate their limited funds to primary and secondary schools for the poor without suffering a loss in GDP growth.

According to the World Bank, in 2000, the world's financial education average was 4.4% of GDP; the average from high-income countries is 5.3%; India's average is also at 4.1%. However, in 2012, in China, financial education funds were still below 4% of GDP. This shows that the country's educational investment increase is still in a relatively backward stage, and directly leads to human capital, especially the lack of innovative talent, which will further affect economic development and stability. Therefore, to encourage education development, all levels of government must increase the percentage of education funds in financial disbursement, optimize the structure of education spending and improve the efficiency of the use of funds. (Wang & Liu, 2016)

Human capital in education is human capital that is obtained or obtained through education, with education, humans will have superior capital in being competitive. Educated human resources will find it easier to follow technological developments, adapt to changes and have superior skills. This will contribute to economic growth in a country.

Based on the relevant research results, it can be said that human capital in education is a fundamental or important thing in economic growth. Through human capital in education, humans will have quality or working capital and skills so that later they are able to compete and contribute to economic growth. Educated human resources will be able to work productively, which in turn will result in superior productivity for economic growth. It is through superior productivity that economic growth can continue to grow and increase (Temple, 2001).

5. Conclusion

Based on the results of several studies, including those conducted by Wang & Liu (2016), Chattopadhyay (2012), Dickens et al., (2006), Shinta (2020), Psacharopoulos & Patrinos, (2018), Krueger & Lindahl (2001), (Breton, 2013) in principle states that human capital education and economic growth all show a significant positive correlation. The higher the education an individual takes, the higher the level of income.

Economic growth is a process of long-term per capita output growth that occurs when there is a tendency to increase output, economic growth will always coexist with science and technology. In the knowledge-based economy era, the key to international competition is high quality human resources. HR is an important asset for economic growth, in human resources there is a need for superior human capital or human capital to keep abreast of existing developments and growth.

Human capital can be obtained from education which is often referred to as human capital in education. Human capital in education has a positive influence on economic growth in a country. Human capital in education is able to make human resources superior, creative and possess high knowledge. Based on the explanation in the discussion, it can be said that human capital in an education is important in a country's economic growth. Human capital in education provides a boost in economic growth which can be assumed that human capital in education is important to maintain and continue to develop economic growth in a country.

The government is expected to be able to invest in human capital through education by continuing to encourage and facilitate the community to pursue basic, secondary and tertiary education, both in terms of infrastructure and financial support. The community needs awareness to continue studying.

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