The Urgency of Education in Economic Development and Human Resources: A Theoretical Perspective

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Abstract: Problems that hinder economic development and human resources in many cases, one of which is caused by the low quality and level of human education. While there is a doctrine that education does not increase human productivity. Therefore, this study wants to show the urgency of education on economic development and human resources from a theoretical perspective. Education must be seen as a long-term investment and a key prerequisite for growth and development in various sectors, especially the development of the economic and human sectors. A qualitative method with a descriptive approach was used to analyze the data. Research data is obtained from library materials by seriously studying various relevant literature such as books, scientific articles, and other supporting documents, which are considered to be important contributions to the research topic. Research finds that the quality of education affects economic development and human resources. Education has an important contribution to economic growth because of the availability of human resources produced by education itself. In conclusion, education is the key to economic development and human resources. This study suggests that in order to maximize the effect of education on economic development and human resources, it is necessary to consider certain rules that are important to follow, especially education must be directed to be able to answer the challenges of an increasingly complex era and be a solution to the problems faced by humans.

Keywords: Education; Economy; Human Resources

INTRODUCTION

There is a growing opinion that the development of the education sector is only a budget-consuming sector with no apparent benefits (especially economically). Such a view leads people to doubt and even distrust the development of the education sector as the foundation for development progress in all industries. This opinion is different from various studies which state that whether or not economic development increases (Antai & Anam, 2016) and human resources in a country, one of which is influenced by the important role and quality of education (Kruss, McGrath, Petersen, & Gastrow, 2015; Ashari, Syam, & Budiman, 2017; Fatai, 2016; Bucata & Rizescu, 2016). This is supported by preliminary studies that education is a pillar of economic and human resource development. Neamtu (2015) exemplifies Japan, a country that has lost its inherent natural resources, but understands that the future is
based on education, and investment in human resources so that in the end it becomes one of the most developed countries in the world. It is further said that before Japan created a thriving economic system, in some periods it had allocated more than one level of its budget for investment in human capital and educational consolidation (Neamtu, 2015).

In developed countries, education apart from being a consumptive aspect is also believed to be an investment in human capital and to be one of the main sectors of development. Therefore, the government’s attention to the development of this sector must be serious, for example, commitment to the budget in the education sector is not inferior to other sectors, so that the success of investment in the form of economic intervention or budget support referred to in education is correlated with progress in macro development, including economic development itself. In terms of human development, Ju (2019) said that education can provide an understanding of the basics of human resource development, and from an ethical perspective which is important for educated and professional circles. In fact, Kicheva-Kirova & Kirov (2015) said to maintain the stability of human resource development requires lifelong education or continuing education (Eid, 2017).

Thus, education is not always considered as consumption or financing. That is, the process of acquiring knowledge and skills through education is not a mere form of consumption, but is also an investment. It is time, education should be viewed as a long-term investment, whose contribution can be felt in the future. The concept of education as an investment has developed rapidly, and it is increasingly believed by every country that the development of the education sector is a key prerequisite for the growth of development sectors, especially economic development and human resources. Schultz (1961) then noted that the development of the education sector with people as its core focus has contributed directly to the economic growth of a country, by increasing the skills and production capabilities of the workforce. King, Montenegro, & Orazem (2015) said these findings and perspectives have stimulated the interest of a number of experts to research the economic value of education.

Based on the above background, this study focuses its study on the urgency of education for economic development and human resources. The main objective of this study is to show the urgency of education for economic development and human resources from a theoretical perspective. Education provides the foundation for development, the foundation on which most of our economic well-being and human qualities are built. This is the key to improving economic efficiency and human quality consistency. It is hoped that this study will provide us with an understanding through various theoretical perspectives that education is fundamental and important for economic development and
human resources so that the government as policymakers and policymakers regarding education pay more attention to how to make education more quality and advanced. In addition, it gives stigma and patterns of thought to various parties, including the government, planners, international institutions, researchers, and other modern thinkers, as well as implementers in the development of the education sector and human resources.

**RESEARCH METHODS**

Generally, there are two known methods, namely qualitative and quantitative research methods (Queirós, Faria, & Almeida, 2017). This study uses qualitative research methods, which are methods used to process data without using numbers or statistics (Queirós et al., 2017). This qualitative writing framework conveys data in narrative form, either in the form of words or quotes, texts, or other discourses (Taylor & Trujillo, 2001). In line with the previous statement, Bogdan dan Biklen (1997) argues that qualitative research is descriptive research, namely research in which data are collected in the form of words or pictures, not numbers.

This qualitative approach is carried out through exposure to experts regarding opinions or understanding of what phenomena are experienced by research subjects (Hammarberg, Kirkman, & De Lacey, 2016). Qualitative research is also referred to as a naturalistic research method because research is carried out in natural conditions (Angrosino, 2016). The reason for using a qualitative approach is because the data generated from this research is in the form of descriptive-analytical data. The data is obtained from documents or sources related to the object of study in this research.

The type of research used in this study is a type of library research, where researchers collect data in the form of books and journal articles relevant to the object of research or collect data in the form of literature. This type of library research or commonly called library research or literature study can also be interpreted as an activity to collect library data through reading, recording, and processing research materials (Allen, 2017). In other words, literature research is research conducted to solve a problem, which is based on a critical and in-depth review of the relevant literature material.

This study uses two data sources, namely, primary and secondary data sources. Primary data sources are the main data sources that are directly related to the object of research to be explored by researchers. Primary data sources that will be used by researchers in this study are sources that speak directly about education, economic development, and human resources. Then, theories of economic development and human resources are used. In addition,
secondary data sources are data sources that support primary data sources and are certainly relevant to the research discussion. Secondary data sources that will be used in this study include literature that discusses the same theme as the focus of this research.

In collecting data, researchers used documentation techniques. This means that data is collected from related documents, both in the form of books and journals as well as other scientific works (Kothari, 2004), which are related to the research topic. The related documents are taken from the data sources that have been discussed in the previous section.

Data analysis is the most important step in a study because it can provide an explanation that can really be used to answer the problems that have been formulated. Data analysis is the process of systematically searching and compiling data obtained from previously determined literature or documentation materials. The trick is to organize the data obtained into categories, break it down into units, synthesize, organize it into patterns, eliminate unrelated data, and draw conclusions. The purpose of data analysis in qualitative research, of which is to analyze the meaning behind the information and processes of a social phenomenon.

The data analysis technique used in this study is content analysis because the source of the data used in this study comes from documents or written data (Krippendorff, 2018). Researchers need to use analytical work, which begins with analyzing data using certain symbols, classifying data with certain criteria, and providing predictions with certain analytical techniques. In order to make data analysis easier to understand, the steps begin with data selection by looking at the literature and its interpretations related to various theories relevant to the research; the urgency of education for economic development and human resources; and performing overall data analysis. So, at the end of the study, the results of data analysis are used as a step-in drawing conclusion and as an answer to the research problems that have been raised.

RESULTS AND DISCUSSION

Education in Economic Development

Prior to the 19th century, systematic investment in human capital was not considered of particular importance in any country. Expenditures on schools, on-the-job training, and other similar forms of investment are quite small. This began to change radically during this century with the application of science to the development of new goods and more efficient methods of production, first in Great Britain, and then gradually in other countries. From the 20th century until now, education, skills, and knowledge acquisition have
become important determinants of the productivity of a person and a nation (Benos & Karagiannis, 2016). One might even call the 20th century the “Age of Human Capital” (Oliveira & Turčinková, 2019), in the sense that the main determinant of a country’s standard of living is how well it succeeds in developing and utilizing skills and knowledge, and promoting health and educating the majority residents (Annabi, 2017).

The last decade has seen a tremendous expansion in access to basic education across many countries, for example in Asia. Many countries are now on the threshold of further improvements in access to secondary and higher education, and of making spectacular improvements in the quality of education offered at all levels. As the number of students completing their primary education increases, their demand for higher education also increases. Educating children, including girls, and women is perhaps the single most effective investment a developing country can make, regardless of whether women work outside the home or not. This creates many positive remunerations for the family including better family health and nutrition, better birth spacing, lower infant and child mortality, and better child educational attainment. Countries in Asia, the Middle East, and others, for example, are increasingly integrated into the world market for manufactured goods (Bernhardt & Pollak, 2015). Their ability to compete in this market and in the globalized service market will depend on the human resource advantage they bring to the competition. Ensuring that all citizens are educated and numerate, that many have a range of problem-solving skills beyond the elementary level, and that some have world-class professional skills will require new curricula, better teacher programs, and academic methods that encourage higher-order cognitive skills.

Without a sizable investment in human capital, every country cannot achieve constant economic and human development (Macke & Genari, 2019). Previous studies have shown good results for various forms of human capital accumulation: basic education, research, training, learning on the job, and talent development. The distribution of education is important. Unequal education tends to have a negative impact on per capita income in most countries. Moreover, controlling the distribution of human capital and the use of appropriate functional form specifications consistent with the asset allocation model make a difference in the effect of average education on per capita income, while failure to do so leads to an insignificant and even negative effect of average education. Investment in human capital can have little impact on growth unless people can use education in a competitive and open market. The bigger and more competitive this market, the greater the prospects for using education and skills.
In the previous neoclassical model, Harberger (1998) said that education is not considered the main input for production and therefore is not included in the growth model. In the 1960s increasing empirical evidence prompted a revolution in human investment in economic thought (Bowman, 1966). The works of Schultz (1961) and Denison (1962) led to a series of growth accounting studies demonstrating the contribution of education to unexplained residuals in Western economic growth. Other studies such as those of Becker (1964) and Mincer (1974) looked at the impact of education on income or estimates of private returns.

First, education and productivity. Educational provisions in any country are one of the main determinants of the composition and growth of that country's output and exports and are an important element in the system's capacity to borrow foreign technology effectively. For example, health and nutrition, as well as primary and secondary education all increase worker productivity, rural and urban; secondary education, including vocational, facilitates the acquisition of managerial skills and capacities; higher education supports the development of basic science, the selection of appropriate technology as well as the adaptation and development of domestic technology; Secondary and higher education is also an important element in the development of key institutions, government, legal, and financial systems, among others, all essential for economic growth. Empirical evidence at both the micro and macro levels further clarifies this relationship. At the micro-level, many studies have shown that increased income is associated with additional years of educational work, with returns varying with higher education levels (Jackson, Johnson, & Persico, 2015). Returns to primary school tend to be greater than returns to secondary and higher education (Jensen, 2010).

In agriculture, evidence suggests a positive effect of education on productivity among farmers using modern technology, but a smaller impact, as expected, among those using traditional methods. In Thailand, farmers with four or more years of schooling are three times more likely to adopt fertilizer and other modern inputs than farmers with less education (Sorajjakool, 2017; Srisopaporn, Jourdain, Perret, & Shivakoti, 2015). Similarly, in Nepal, completion of at least seven years of schooling increases the productivity of wheat by more than a quarter and rice by 13% (Omoniyi, 2013; Ali, Naseem, & Farooq, 2011).

Education is also an important contributor to technological capability and technical change in the industry (Idris, Willya, Wekke, & Mokodenseho, 2020). Statistical analysis of the apparel and engineering industry in Sri Lanka, citing only one example, shows that the skill level and education of workers and
employers are positively related to the level of technical change of firms (Welmilla, 2020; Abeysekara, Wang, & Kuruppuarachchi, 2019).

However, education alone cannot change an economy. The quantity and quality of investment, domestic and foreign, together with the overall policy environment, form another important determinant of economic performance. But the level of human development also influences these factors. The quality of policymaking and investment decisions will inevitably be influenced by the education of policymakers and managers (Baba & Zadeh, 2012). In addition, the volume of domestic and foreign investment is likely to be greater when the supply of human resources in a system is greater.

For the macro-outlook, the 'new growth theory' aims to homogenize technical progress by incorporating some of the same effects, emphasizing education and learning as well as research and development. According to Lucas (1988), for example, the higher the education level of the workforce, the higher the overall productivity of capital because the more educated the more likely to innovate, and thus affect the productivity of everyone. In another model, similar externalities are generated as increased education of individuals not only increases their productivity but also of others with whom they interact (Winters, 2018). According to Perotti (1993) total productivity increases as the average level of education rises. The impact of education on the nature and growth of exports, which, in turn, affects aggregate growth rates, is another way in which human development affects macro performance (Curea & Ciora, 2015; Kilgour, 2015; Bravo-Ortega & de Gregorio, 2005). The education and skills of a developing country’s workforce influence the nature of its factoring and consequently the composition of its trade. It has been argued that even 'unskilled' workers in modern factories usually require literacy, numeracy, and discipline, which are acquired in primary and junior secondary schools (Omoniyi, 2013).

Second, education and income. There is also positive feedback from increased education to greater income equality, which, in turn, tends to support higher growth rates. As education becomes more widespread, low-income communities are better able to seek economic opportunities. For example, a study of the relationship between schooling, income inequality, and poverty in 18 Latin American countries in the 1980s found that a quarter of the variation in workers’ income was accounted for by variations in school attainment; it concluded that 'clearly education is the variable with the strongest impact on income equality' (Marteleto, Gelber, Hubert, & Salinas, 2012; Lustig, Lopez-Calva, Ortiz-Juarez, & Monga, 2016). Another study suggested that a one percent increase in the workforce with at least secondary education would increase the income share of the bottom 40 and 60 percent by between 6 and 15
percent, respectively (Bourguignon & Morrisson, 1990). An investigation of the determinants of income distribution in 36 countries found secondary school enrollment rates to be significant (Bourguignon, 1996).

Education can affect per capita income growth through its impact on the denominator, namely population growth. For example, a study of a dozen African countries in the mid-1980s showed a negative correlation between girls' schooling and fertility in almost all countries, with primary education having a negative impact in about half the countries and no significant effect in the other half, while secondary education always reduces fertility (Kravdal, 2002). The three successful countries in terms of fertility decline, Kenya, Botswana, and Zimbabwe have the highest levels of female education and the lowest child mortality rates (Ainsworth, Beegle, & Nyamete, 1996).

**Education and Human Resource Development**

In discussing education and human resource development, it is closely related to two things, namely education as human capital, and education as a human investment.

*First, education as human capital.* Human capital is a concept that first appeared in classical economics in 1776, then 19th-century famous Economists through their various works, including L. Valras, N. Senior, G. McLeod, J. Rikardo, J. Makulox, J. S. Mill, I. Fon Tunen, A. Marshal, and others developed these classical economic ideas by enriching economic thought and its methodological concepts (Navruz-Zoda & Shomiev, 2017). Etymologically, capital is defined as a factor of production that is used to make a good/service without consuming it throughout the production process. Initially, humans in the definition of human capital are a form of capital as machines, technology, and the like, have roles and responsibilities in all economic activities; production, transactions, and consumption. However, this theory in its development changes the concept of human capital into three; First, human capital is inherent in individuals, namely the abilities that exist in humans as explained by Pasban & Nojedeh (2016) defining human capital as knowledge, competence, creativity, attitudes, and so on. Second, human capital is knowledge and skills obtained from educational activities; schools, training, and courses (Burgess, 2021). This view assumes that human capital is not obtained from human experiences but from certain processes. Third, production-oriented human capital, which is the basic source of economic productivity (Agbettor, 2016), and investment to increase human productivity (Deleidi, Paternesi Meloni, Salvati, & Tosi, 2021). While Frank & Bemanke (2007) define social capital as a combination of education, training, experience, skills, habits, health,
abilities, and human initiative, which have implications for increasing human productivity.

According to Schultz (1961), human capital is important in increasing the economic productivity of a country. This increase can be achieved through the following ways: (1) humans have functioned as labor based on quantitative numbers that the more people (labor) the higher the productivity; (2) investment is the main way to increase/get social capital. The training and education obtained will increase human capacity and skills, so that productivity will increase. This last method no longer prioritizes the quantity of the number of workers. Meanwhile, Todaro & Smith (2020) said that human capital can be measured, one of which is through education. Education includes training, courses, and the like, and added value for a human being is that the higher a person's level of education and the more training and courses that are followed, the human abilities and skills will be high as well. Education is also closely related to the health sector, meaning that higher education will not be achieved without a strong and healthy body. On the other hand, higher education can affect the level of awareness and human health. If this can be managed properly, then human productivity will increase (Iqbal, Awan, & Tayyab, 2018; Eggoh, Houeninvo, & Sossou, 2015).

Second, education as human investment. Human investment in the field of human resources is the sacrifice of something that can be measured by the value of money in the hope of giving good results in the future. The result obtained in the future is a higher level of income to be able to achieve a higher level of consumption as well. This investment is related to human capital (Koppensteiner & Menezes, 2021; Wiswall & Zafar, 2021). That is, through investment, human capital is increased. This is reasonable to get because basically, humans are people who have high quality both physically, conscientiously, and intellectually, so that in general they can have social, economic, cultural, political, and so on values. Simply put, quality humans are formed by personal qualities that come from innate talent and through the process of education, training, courses, and so on (Mokodenseh & Puspitaningrum, 2022). Human abilities can be comprehensively categorized into several categories called multi-intelligence (Statti & Torres, 2020), namely: verbal-linguistic intelligence; mathematical-logical intelligence (Nurannisa, Asfar, Asfar, & Syaifullah, 2021), spatial intelligence (Velázquez & Méndez, 2021); physical-kinesthetic intelligence (Mismara & Edlibib, 2020); musical intelligence (Liebman, 2020); interpersonal intelligence (Van Dyne, Ang, & Tan, 2017); and intrapersonal intelligence (Sholikhati, Mardiyana, & Saputro, 2017).

The purpose of human investment is to increase the above multi-intelligence, the results of which are largely determined by personal qualities,
both innate qualities, and human efforts. Human investment requires measurements to show investment efficiency, one of which is the IRR (Internal Rate of Return) method to measure direct and indirect costs of investment. The implementation of IRR can be explained, namely: first, as a benchmark for making decisions about whether someone will continue their education or not. Second, the IRR calculation can explain the work situation, for example, related to the unemployment rate among educated workers. Third, IRR can be used to predict the additional need for personnel from each type and level of education in the future. Fourth, IRR calculations can be used in the preparation of education policies and workforce planning. Fifth, the calculation of IRR in the social sector to determine whether certain educational programs are effective or not.

Investment means investment or money. Capital or money invested aims to gain profit, either in the form of money or capital or in the form of goods or services. The term investment represents the current allocation of resources. Thus, investment in education has a long period of time to know the results and the results are not in the form of profits, but benefits for individuals who receive education and for the state.

As an investment function, Komaruddin (1991) argues that education makes a significant contribution to increasing the level of life, human quality, and national income, especially in terms of; first, being willing to consider new ideas and expectations and accept new attitudes and processes without sacrificing himself; second, the education system prepares the right foundation for development and research results (the inherent guarantee for the sustainable growth of modern society). Educational investment can maintain the integrity of and constantly increase the supply of knowledge and the discovery of new methods and techniques on an ongoing basis; third, if in every economic sector we get all the factors needed by society except for skilled labor, then investment in the education sector will increase per capita income in that sector, unless the social structure that lives in the community is not profitable; fourth, the education system creates and sustains a supply of human skills in the labor market. In addition, it is also able to accommodate and adapt in relation to the changing needs of the workforce and the changing modern technological society.

Investment in education focuses on humans as a resource that will become capital with respect to activities that affect actual income in the future through the placement of resources in the form of humans. Human capital here refers to labor as a production factor that connects non-economic aspects of education to other economic aspects which have two essential characteristics, namely the quality of labor as a productive input that cannot be shared and used
separately. Finally, the ability of the workforce cannot be transferred to other people.

CONCLUSION

Education in all respects is one of the fundamental factors of development. No country can achieve sustainable economic and human development without substantial investment through education. Education enriches people's understanding of themselves and the world. This improves their quality of life and leads to broad social benefits for individuals and society, even for the progress of the nation and state. Education increases people's productivity and creativity and encourages entrepreneurship and technological progress. Moreover, it plays a very important role in securing economic and social progress, as well as improving income distribution. Thus, education is indispensable for economic development and human resources. No economic and human resource development is possible without a good education. Therefore, a balanced education system is needed to encourage economic development and human resources.

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