



## Exploring the Relationship Between Education and Economic Growth: A Critical Review Literature

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### Abstrak

Pendidikan dan pertumbuhan ekonomi saling terkait erat. Pendidikan meningkatkan keterampilan dan pengetahuan individu, yang dapat meningkatkan produktivitas dan mendorong pertumbuhan ekonomi. Di sisi lain, pertumbuhan ekonomi dapat meningkatkan akses ke pendidikan dan sumber daya lainnya yang diperlukan untuk meningkatkan kualitas pendidikan. Penelitian ini bertujuan untuk meninjau secara kritis literatur tentang hubungan antara pendidikan dan pertumbuhan ekonomi. Penelitian ini menggunakan metode tinjauan pustaka untuk menganalisis literatur yang relevan tentang topik ini. Literatur yang dianalisis termasuk studi empiris, teori ekonomi, dan makalah kebijakan. Temuan penelitian menunjukkan bahwa terdapat hubungan positif yang kuat antara pendidikan dan pertumbuhan ekonomi. Individu dengan tingkat pendidikan yang lebih tinggi umumnya memiliki pendapatan yang lebih tinggi dan lebih produktif. Negara-negara dengan tingkat pendidikan yang lebih tinggi juga cenderung memiliki pertumbuhan ekonomi yang lebih tinggi. Temuan penelitian ini memiliki implikasi penting bagi kebijakan pendidikan dan ekonomi. Peningkatan investasi dalam pendidikan dapat meningkatkan keterampilan dan pengetahuan individu, yang dapat mendorong pertumbuhan ekonomi dan meningkatkan kesejahteraan masyarakat.

**Kata Kunci:** Pendidikan, Pertumbuhan Ekonomi, Tinjauan Literatur, Keterampilan

### Abstract

*Education and economic growth are closely interrelated. Education enhances individual skills and knowledge, which can increase productivity and promote economic growth. On the other hand, economic growth can increase access to education and other resources needed to improve the quality of education. This study aims to critically review the literature on the relationship between education and economic growth. This study used a literature review method to analyze relevant literature on this topic. The literature analyzed included empirical studies, economic theory, and policy papers. Research findings show that there is a strong positive relationship between education and economic growth. Individuals with higher levels of education generally have higher incomes and are more productive. Countries with higher levels of education also tend to have higher economic growth. The study's findings have important implications for education and economic policy. Increased investment in education can improve individual skills and knowledge, which can promote economic growth and improve people's well-being.*

**Keywords:** Education, Economic Growth, Literature Review, Skills

### Introduction

Education plays an important role in boosting the economic growth of a country. With a good education, individuals have the ability to develop the necessary skills and knowledge in various fields, such as technology, business, and social sciences (Usman et al.,

2023). This allows them to contribute to economic growth by creating jobs, increasing productivity, and improving the quality of products and services. In addition, education also increases the awareness and ability of individuals to face changes and challenges that occur in the world of work, so that they can be

more effective in adapting and contributing to economic growth (Al-Smadi, 2023).

Education also has a direct impact on economic growth through improving the quality of human resources. With good education, human resources have the ability to develop the necessary skills and knowledge in various fields, so that they can contribute to economic growth by creating jobs, increasing productivity, and improving the quality of products and services (Dossou et al., 2023). In addition, education also increases the awareness and ability of individuals to face changes and challenges that occur in the world of work, so that they can be more effective in adapting and contributing to economic growth. In addition, education also produces a wider positive impact on society (Ansari et al., 2023). Higher levels of education are often associated with improved public health, decreased crime rates, and increased participation in political and social life. These factors create a stable and conducive environment for sustainable economic growth. Investment in education, therefore, not only improves the quality of life of individuals but also strengthens the economic foundation of a country (Mitić et al., 2023)

Education plays an important role in improving people's skills and knowledge. With a good education, individuals can develop the necessary skills and knowledge in various fields, such as technology, business, and social sciences. This allows them to contribute to economic growth and improve the quality of life (Raihan et al., 2023). In addition, education also increases the awareness and ability of individuals to deal with changes and challenges that occur in society, so that they can be more effective in adapting and contributing to the development of society. Education also allows society to adapt to technological and social changes that occur. With a good education, individuals can develop the skills and knowledge necessary to adapt to such changes (Shen & Zhao, 2023). This allows them to remain relevant and effective in society, as well as improve the quality of life and public awareness. Thus, education is very important in improving people's skills and knowledge, so that they can contribute to the development of society and improve the quality of life.

Educated individuals have a crucial role to play in driving productivity and innovation that contribute to economic growth. Through education, individuals acquire knowledge and

skills that enable them to work more efficiently and effectively (Mukarto, 2023). They can identify and take advantage of opportunities to improve work processes, reduce waste, and optimize resources. Education also equips individuals with critical thinking and problem-solving skills, which are essential in addressing complex challenges in the workplace. Thus, an educated workforce can significantly increase productivity, which in turn promotes faster and sustainable economic growth. (Raihan et al., 2023; Shen & Zhao, 2023)

In addition to increasing productivity, educated individuals are also key drivers of innovation. They have the ability to conduct research and development, create new products and services, and adopt advanced technologies that can improve the competitiveness of the company (Magazzino, 2024). These innovations not only drive the growth of the company but can also open up new markets and create jobs. In addition, educated individuals tend to be more flexible and adaptive to change, which allows them to lead innovative initiatives and better deal with global market dynamics. Therefore, investment in education is key to creating an environment that supports innovation, ultimately strengthening the economy as a whole.

Understanding the relationship between education and economic growth is critical to achieving sustainable development (Khasawneh et al., 2024). Quality education not only enhances individuals' ability to contribute productively to the economy, but also fosters the innovation needed to confront global challenges such as climate change, social inequality, and poverty (Ramzan et al., 2023). With the right investment in education, society can develop a skilled and knowledgeable workforce, capable of creating innovative solutions to complex problems. In addition, education also promotes awareness of the importance of sustainable practices, which ensure that economic growth does not come at the expense of the environment or the well-being of future generations (Balsalobre-Lorente et al., 2023). Therefore, the integration of education in economic development strategies is the key to achieving a balance between economic progress and environmental sustainability

Research on the relationship between education and economic growth has become a major focus in economics (Mojica-Perez et al., 2024). In recent years, these studies have shown

mixed results, with some studies showing that education has an important role in boosting economic growth, while others have found no significant association (Oklevik et al., 2022). However, in recent years, research has begun to find stronger evidence that education has an important role to play in boosting economic growth. Therefore, this study aims to critically review the literature on the relationship between education and economic growth.

## Method

This study uses a systematic literature review approach to identify and analyze relevant literature on the relationship between education and economic growth. The literature search process will utilize leading academic databases, such as Web of Science, Scopus, and ERIC. Keywords to use for the search include: "education," "economic growth," "human capital," "productivity," "literature review," and their relevant synonyms. In addition, reference lists of relevant studies will also be searched to identify additional relevant sources. To ensure the quality and relevance of the studies analyzed, inclusion and exclusion criteria will be applied. The studies to be analyzed must be published in a peer-reviewed academic journal within a certain period of time (for example, the last 10 years). Such studies should also focus explicitly on the relationship between education and economic growth, using empirical data or strong theoretical frameworks. Instead, studies that are descriptive, opinionated, or editorial in nature will be excluded.

After the selection process is complete, studies that meet the criteria will be critically analyzed. This includes evaluation of the research methodology used, the quality of the data analyzed, and the validity and limitations of the research findings. In addition, the study will synthesize findings from various studies to identify emerging patterns and trends related to the relationship between education and economic growth.

## Result and Discussion

### The Relationship Between Education and Economic Growth

Education plays an important role in boosting economic growth. In several studies, results have shown that education has a significant positive impact on economic growth

(Reza & Widodo, 2013). For example, research by Hanushek and Woessmann shows that education has an important role to play in enhancing economic growth, especially through the development of necessary skills and knowledge in various fields. Other studies have also shown that education has an important role in increasing economic growth. For example, research by Faizal Reza and Tri Widodo shows that employment education has a significant positive impact on economic growth. They found that every 1% increase in employment education would result in an increase in output of about 1.5% (Reza & Widodo, 2013).

In addition, research also shows that education has an important role in increasing economic growth at the provincial level. For example, research by Akhmad Bayhaqi shows that education has an important role in increasing economic growth in several provinces in Indonesia, such as East Java which has the highest economic growth and Bengkulu which has the lowest economic growth. Education plays an important role in increasing labor productivity, which is one of the main components of economic growth. Through education, individuals acquire skills and knowledge relevant for the job market. An educated workforce is able to work more efficiently, operate new technologies, and solve complex problems. With higher productivity, economic output increases (Rejeb et al., 2024), which in turn increases national income. Many studies show a positive correlation between the education level of a population and the level of labor productivity, affirming that investment in education is a direct investment in economic productivity.

In addition to increasing productivity, education is also key to encouraging innovation and technological development. Individuals who have higher education tend to be more involved in research and development, which results in new discoveries and technological improvements. This innovation not only improves the efficiency of the production process but also creates new products and services that can open up new markets. Thus, education serves as a catalyst for economic growth through innovation pathways, which are crucial in an increasingly competitive global economy (Bitzenbauer et al., 2024). Education also generates positive externalities that contribute to economic stability and growth. For

example, higher levels of education are often associated with improved health, meaning that educated individuals tend to be healthier and have longer life expectancies. In addition, education can also reduce crime rates and increase political and social participation. These factors create a more stable and conducive environment for economic growth, as social and political stability is an important prerequisite for investment and sustainable economic development.

Furthermore, education plays an important role in increasing social mobility, which can reduce economic and social inequality. By providing broader access to quality education, individuals from disadvantaged economic backgrounds can increase their chances of getting better jobs and higher incomes. This not only helps the individual but also increases the overall productivity of the economy. Higher social mobility can create a more just and equitable society, which is essential for social stability and long-term economic growth (Magazzino, 2024). Education also plays a role in creating economic sustainability by promoting environmental awareness and sustainable business practices. Educated individuals are more likely to understand and adopt green technologies and environmentally friendly practices. In addition, they tend to support public policies that support environmental sustainability. Thus, education not only contributes to the current economic growth but also ensures that the growth does not damage the natural resources that will be needed by future generations.

### **Economic Growth Can Increase Investment In Education**

Economic growth plays an important role in increasing investment in education. With stable economic growth, the government can increase the education budget and improve the quality of education. This allows people to have wider access to better education, thus improving people's quality of life and awareness. Investment in education can also boost economic growth. With better education, individuals have the ability to develop the necessary skills and knowledge in various fields, such as technology, business, and social sciences. This allows them to contribute to economic growth by creating jobs, increasing productivity, and improving the quality of

products and services (Dickens et al., 2006). One of the direct impacts of increased investment in education is the strengthening of education infrastructure. With more funding available, the government can build more schools, improve existing facilities, and provide modern learning equipment. Good infrastructure is essential to create a conducive learning environment, which in turn can improve the quality of education received by students. These investments also include educational technologies that can help address learning challenges and adapt teaching methods more effectively.

Economic growth can also increase investment in education through improved skills and knowledge. With better education, individuals have the ability to adapt to the technological and social changes that occur. This allows them to remain relevant and effective in society, as well as improve the quality of life and public awareness. In addition, economic growth can also increase investment in education through increasing public awareness. With better education, people have a higher awareness of the importance of education in improving the quality of life and public awareness. This allows them to be more active in increasing investment in education and improving quality of life and public awareness.

Economic growth can also increase investment in education through improving the quality of human resources. With better education, human resources have the ability to develop the necessary skills and knowledge in various fields, so that they can contribute to economic growth by creating jobs, increasing productivity, and improving the quality of products and services. In synthesis, economic growth plays an important role in increasing investment in education. With stable economic growth, the government can increase the education budget and improve the quality of education (Saleem et al., 2024). Investment in education can also boost economic growth through improving skills and knowledge, as well as increasing public awareness and the quality of human resources. Therefore, economic growth is essential in increasing investment in education and improving people's quality of life and awareness (Mojica-Perez et al., 2024)

A growing economy allows investment in curriculum development that is more relevant to the needs of the job market. By understanding economic trends and industry needs, education systems can be adapted to provide relevant skills

and knowledge to students. For example, an increased focus on STEM (science, technology, engineering, and math) and digital skills can prepare young people to play an active role in a knowledge and technology-based economy (Zulkifli et al., 2022). This ensures that the resulting workforce not only meets current market needs but is also able to adapt to future changes. Investment in improved education as a result of economic growth has a significant long-term impact. With better education, individuals become more productive and innovative, which directly (Markiano Solissa et al., 2023; Zulkifli et al., 2022) increases the economic competitiveness of a country. Improving the quality of labor also attracts foreign investment, as international companies tend to invest in countries with skilled and educated labor. Thus, a positive cycle is formed in which economic growth increases investment in education, which then promotes further economic growth through increased productivity and innovation.

### **Factors That Can Influence The Relationship Between Education And Economic Growth**

Another factor that can affect the relationship between education and economic growth is the security of property rights. Property rights security enables greater investment and improves people's quality of life. Thus, property security can increase investment in education and improve people's quality of life. One of the main factors influencing the relationship between education and economic growth is the quality of education itself. High-quality education provides individuals with relevant skills and knowledge, which can then be applied in the world of work. Up-to-date curricula, effective teaching methods, and the availability of adequate resources all contribute to the quality of education. Without adequate quality, education will not be able to increase productivity and innovation needed to boost economic growth (Oklevik et al., 2022; Zou et al., 2024)

Furthermore, broad and equitable access to education is another important factor. When all individuals, regardless of their economic or social background, have equal opportunities to access education, human potential can be maximized. Inequality in access to education can result in large numbers of the population lacking the necessary skills to contribute

productively to the economy (Reza & Widodo, 2013; Saleem et al., 2024). Therefore, policies that promote the inclusion and accessibility of education for all levels of society are essential to ensure that the entire population can contribute to economic growth (Fitriani & Daryono, 2024). The relevance of education to the needs of the job market also greatly influences the relationship between education and economic growth. The education system must be able to adapt to changes in the economy and industry to ensure that graduates have the skills required by the job market.

The level of investment in education by the government and private sector is another crucial factor. These investments include school infrastructure development, teacher training, curriculum development, and provision of educational resources. Without adequate investment, education systems will not be able to provide the quality and access needed to support economic growth. Countries with high investment in education tend to have higher economic growth rates because they are able to create a more skilled and productive workforce. Not only that, the economic and social context in a country also affects how education contributes to economic growth (Zou et al., 2024). In the context of a stable and developing economy, education is more likely to produce significant positive impacts due to adequate infrastructure support and employment opportunities. Conversely, in the context of a weak or unstable economy, education may not be sufficient to promote economic growth in the absence of broader structural changes. Social factors such as culture, community values, and perceptions about education also affect how much impact education has on the economy.

### **Conclusion**

From the results of the study, it can be concluded that the research findings show that there is a strong positive relationship between education and economic growth. Individuals with higher levels of education generally have higher incomes and are more productive. Countries with higher levels of education also tend to have higher economic growth. The study's findings have important implications for education and economic policy. Increased investment in education can improve individual skills and knowledge, which can promote

economic growth and improve people's well-

being.

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