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THE ROLE OF INFRASTRUCTURE IN DRIVING ECONOMIC GROWTH: A REVIEW FROM A DEVELOPMENT ECONOMICS PERSPECTIVE

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Abstract
This research aims to investigate the role of infrastructure in influencing economic growth from a development economics perspective. Adequate infrastructure has been recognized as the main key in supporting sustainable economic growth. However, empirical studies that reveal the specific mechanisms and impacts of infrastructure on economic growth are still limited, especially in the context of developing countries such as Indonesia. This research uses a qualitative approach with descriptive methods. The research results show that adequate infrastructure in Indonesia, especially in transportation, energy, information technology and health, provides great opportunities to encourage inclusive and sustainable economic growth. This not only increases production and distribution efficiency, but also increases the country's competitiveness in attracting investment, as well as expanding accessibility to various regions and improving people's quality of life. However, the impacts of infrastructure development have complex aspects, including job creation and increased access to basic services, but also high costs, adverse environmental impacts and social inequality. Therefore, while exploiting the economic potential offered, mitigation measures are needed to minimize negative impacts and ensure equitable and inclusive development for all levels of society and regions.
Keywords: Infrastructure, Economic Growth, Economic Development, Productivity, Investment.

A. INTRODUCTION

Economic growth is a process in which the economic conditions of a country experience continuous improvement towards better conditions over a certain period. This change is reflected in a higher level of economic activity compared to the previous period (Rostow, 1959). Differentiates between economic growth and development, with economic growth defined as a sustainable increase in output per capita in the long term. Economic growth is often used as an indicator of development success, because increases in production levels are usually associated with increases in community welfare (Galeotti, 2007). However, it is important to note that apart from economic growth, income distribution is also an important indicator in assessing the welfare of society (Perotti, 1996). Gross Domestic Product (GDP) data is a key indicator for understanding a country's economic conditions in a period. The GDP value provides an overview of a country's ability to manage and utilize the resources it has, and reflects the economic activity that occurs in a region (Kaplinsky, 2000).

According to Kuznets (1973), economic growth is defined as the process of increasing output per capita in the long term. The term "per capita" indicates that there are two aspects that need to be considered, namely total output (GDP) and population. This process of increasing output per capita must be analyzed taking into account both aspects: overall GDP growth and changes in population. Therefore, to understand economic growth holistically, we need to pay attention not only to increases in total output, but also changes in population (Lewis, 2013). The position of population in the context of economic development is very important because economic growth is always closely related to population dynamics. In this context, understanding economic growth not only includes an increase in total output, but also the implications of population growth for the economy. Changes in population can affect labor availability, market demand, and the need for infrastructure and public services (Preston, 1975).

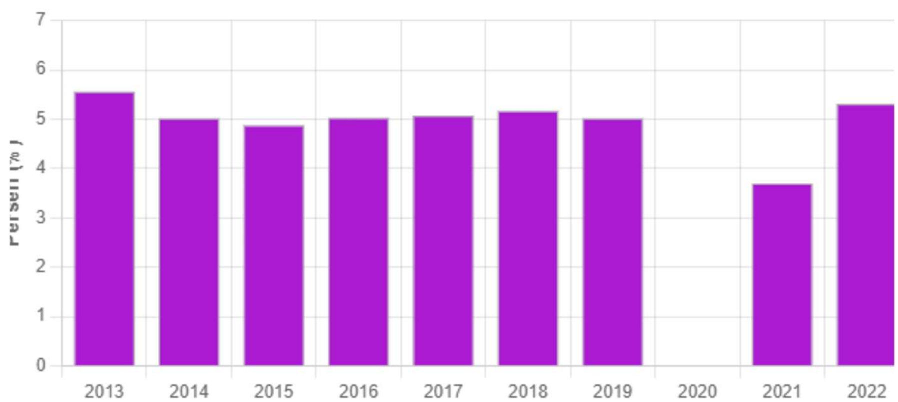

Figure 1 Indonesia's economic growth in the last 10 years
Source: Goodstat Data

According to data released by the Central Statistics Agency known as BPS, Indonesia's economic growth in 2022, when compared to the previous year, will reach 5.31% on an annual scale. This figure shows a significant increase compared to economic growth in 2021 which only reached 3.70%. Apart from that, economic growth in 2022 will also record the highest achievement since 2013 with an achievement of 5.56%. This significant increase was supported by a growth in the percentage of exports of 16.28% and imports of 14.75% (BPS, 2022). Thus, Indonesia's economic performance in 2022 shows a positive trend that encourages optimism in national economic recovery after the period of uncertainty caused by the COVID-19 pandemic.

The development of infrastructure in Indonesia under the leadership of President Joko Widodo (Jokowi) has marked a significant era in the country's development. Strong government involvement and high commitment to infrastructure development have become the foundation for encouraging sustainable economic growth (Warburton, 2016). A number of ambitious infrastructure projects have been launched in recent years, including the construction of an extensive toll road network, high-speed rail projects and improvements in the energy and telecommunications sectors. These steps have created a significant positive impact, not only in improving connectivity and mobility between regions, but also in advancing related economic sectors (Warburton, 2018). For example, expanded infrastructure has opened up accessibility to remote areas, facilitated the distribution of goods, increased connectivity between business actors, and increased the overall competitiveness of the Indonesian economy.

Intensive infrastructure development has also created new investment opportunities, encouraged the growth of the construction sector, created new jobs, and stimulated the growth of related industries such as manufacturing and transportation (Chete et al., 2014). In addition, better infrastructure has improved people's access to basic services such as education, health and financial services, which in turn can improve people's overall welfare and quality of life. By continuing to prioritize sustainable infrastructure development, Indonesia has a great opportunity to strengthen its economic foundations and accelerate growth towards a more prosperous and inclusive future (Rauniyar & Kanbur, 2010).

One of the main focuses of the Jokowi administration is improving accessibility and connectivity throughout Indonesia, which is reflected in rapid road construction efforts (Negara & Ramyandi, 2020). For example, the construction of the Trans Toll Road is an important milestone in this initiative. This infrastructure project is the center of attention because of its broad and immediate impact on the community. By building an integrated toll road network, the government has succeeded in connecting remote areas with the main economic centers in Indonesia (Salim & Negara, 2018). Apart from that, the construction of toll roads has also significantly reduced logistics costs, accelerated the distribution of goods, and increased accessibility to regional markets. The presence of this infrastructure not only facilitates population mobility, but also opens the door to new investment opportunities, especially in sectors that were previously difficult to reach (Ray & Ing, 2016).

Apart from toll road projects, the government has also prioritized the development of railway lines as an efficient and environmentally friendly means of transportation. Expanded railway lines have opened up accessibility to remote areas that were previously difficult to reach (Negara, 2016). By connecting remote areas with industrial and trade centers, these railways not only strengthen regional connectivity, but also stimulate local economic growth. Apart from that, the railway line is also a safer and more comfortable means of transportation for residents, and helps reduce traffic jams on the roads (Hairi, 2020).

Data from the Ministry of Public Works and Public Housing (PUPR) highlights the significant positive impact of the completion of these infrastructure projects on regional economic growth. Providing better access to economic centers has opened the door to increasing regional competitiveness, inviting private sector investment, and creating new jobs directly (Rosenfeld, 1997). With adequate infrastructure, previously marginalized areas now have easier access to send their local products to wider markets. This not only increases the income of local communities, but also reduces economic inequality between regions (Cortright, 2006).

Another positive impact of this infrastructure development is increased connectivity between regions, which opens up opportunities for collaboration and exchange between regions. With better infrastructure, regions can mutually strengthen their comparative advantages and increase efficiency in regional supply chains (Lam et al., 2013). This creates a more conducive environment for the growth of diverse economic sectors, including agriculture, industry, tourism and trade. Thus, infrastructure development carried out by the government not only has an impact on overall economic growth, but also produces real positive changes in the regional economic structure, bringing benefits to society at large (Grimes, 2021).

In a development economics perspective, economic development does not only involve increasing output or overall economic growth, but also includes efforts to improve the welfare of society as a whole. It involves efforts to reduce poverty, increase equality, and expand access to economic resources and opportunities (Soubbotina, 2004). In this context, sustainable economic development aims to create inclusive growth, where the benefits can be enjoyed by all levels of society. This involves efficient and strategic allocation of resources, as well as policies oriented towards creating decent jobs, increasing access to education and health services, and reducing economic and social inequalities (Ros, 2013).

In addition, from a development economics perspective, it is important to take into account aspects of sustainable and environmentally sound development. Sustainable economic development must take into account the long-term consequences of economic activities on the environment and human life (Rees, 2003). This includes efforts to limit negative impacts on the environment, promote responsible use of resources, and encourage environmentally friendly technological innovation. In this case, sustainable economic development considers the needs of future generations and does not sacrifice environmental welfare for current economic interests (Turner & Pearce, 1993). Thus, economic development in a development economics perspective is not only about rapid economic growth, but also about creating a better and more sustainable future for all.

The aim of this research is to investigate the role of infrastructure in driving economic growth from a development economics perspective, by identifying specific mechanisms through which infrastructure such as transportation, energy, and telecommunications influence economic growth, as well as to evaluate its impact on societal well-being. The benefits of this research include providing relevant policy input for governments and policy makers to increase the effectiveness of infrastructure investment, strengthen the foundations of economic growth, and promote inclusive and sustainable development at the national and international levels.

B. METHOD

In this research, a qualitative approach was adopted with a descriptive research type to describe in detail the role of infrastructure in driving economic growth from a development economics perspective. The qualitative method was chosen because it provides flexibility in exploring the complexity of the phenomenon being studied, with the researcher acting as the main instrument (Gerring, 2017). Data collection techniques used include observation, interviews and documentation, with a focus on in-depth understanding of the natural context of the research object. The data analysis process is carried out inductively, allowing researchers to construct meaning from the data collected and develop hypotheses that are relevant to field findings. To provide further analytical sharpness, data was obtained from various sources such as documents, literature, the internet, and related research results. In analyzing the data, researchers adopted the Miles and Huberman (1994) Interactive Analysis Model, which involves the stages of data collection, data reduction, data presentation, and drawing conclusions. This rigorous methodological approach provides a solid foundation for holistically understanding the role of infrastructure in driving economic growth, while situating this research within a robust and structured analytical framework.

C. RESULTS AND DISCUSSION

The Role of Infrastructure in Driving Economic Growth according to a development economics perspective

Economic growth is an important benchmark in evaluating the success of an economy's development. The progress of an economy is often reflected in how much growth it achieves in terms of changes in national output. Analysis of changes in output is generally the focus of short-term economic analysis, which reflects economic dynamics in a relatively short period of time (Rostow, 1990). In economic growth theory, there are two main approaches that are often explained: classical theory and modern theory. Classical theory, introduced by figures such as Adam Smith and David Ricardo, emphasizes belief in the effectiveness of free market mechanisms in encouraging economic growth. They argue that a free and unimpeded market will automatically experience sustainable economic growth (Letiche, 1960).

On the other hand, modern economic growth theory offers a more sophisticated perspective. One of the famous modern theories is the Harrod-Domar (2008) growth theory, which highlights the importance of investment in driving economic growth. This theory describes that the higher the level of investment, the better a country's economy. Investment not only influences aggregate demand, but also aggregate supply through its effect on production capacity. In the long term, investment will also increase the capital stock which in turn will contribute to sustainable economic growth. Thus, through this theory, the importance of investment in the economic development process is emphasized as the key to achieving sustainable and inclusive growth (Hochstein, 2017).

Economic development is a process that involves continuous change, where efforts to increase per capita income are the main focus. The increase in per capita income must occur sustainably in the long term in order to achieve stable and sustainable economic development. One important element in economic development is improving institutional systems in various fields, such as economics, politics, law, social and culture. This system can be evaluated from two main aspects, namely organizational (institutional) improvement and regulatory improvement, both in formal and informal forms (Alshaib et al., 2023). Therefore, economic development is not a passive process, but is an active action that must be taken by the state to improve the welfare of its people. In this context, active participation from society, government and all elements within a country is very important to achieve the goals of sustainable and inclusive economic development (Gupta & Vegelin, 2016).

Economic development aims to achieve three main pillars, namely growth, equality and sustainability. Economic growth, as the first goal, refers to increasing production and utilization of human, equipment and natural resources to increase productive activities to the maximum. This means ensuring that available resources are used efficiently to achieve increases in economic output (Khoshnava dkk, 2019). Economic equality, as the second goal, emphasizes the importance of equitable distribution of the benefits of economic growth. This involves eliminating economic disparities between regions, classes, and individuals so that all parties can enjoy the rewards of economic growth. Thus, equity is the key to ensuring social justice and sustainable prosperity (Mensah, 2019).

Infrastructure is the backbone of a healthy and sustainable economy. Including transportation networks, energy supply, access to clean water, sanitation and information technology, infrastructure is the foundation that supports various economic activities and improves people's quality of life (Thacker et al., 2019). Good transportation networks, for example, facilitate the movement of goods and people, open accessibility to regional and international markets, and increase connectivity between regions. Meanwhile, a reliable and affordable energy supply is a major catalyst for economic activity, enabling the smooth production, distribution and consumption of goods and services (Cigu et al., 2018) Access to clean water and adequate sanitation not only supports public health, but also strengthens labor productivity. In the digital era, information technology infrastructure is key in expanding access to information and facilitating communication, innovation and global connectivity.

The availability of adequate infrastructure has a broad impact on economic development and community welfare. Adequate infrastructure creates a conducive environment for investment and inclusive economic growth (Srinivasu & Rao, 2013). With an efficient transportation network, for example, logistics costs can be reduced, increasing the competitiveness of local industry and opening up new investment opportunities. A stable energy supply also provides certainty for entrepreneurs to plan production better, as well as encouraging investment in the environmentally friendly renewable energy sector . Meanwhile, better access to clean water and sanitation improves public health, reduces the burden of disease, and increases labor productivity. In this way, quality infrastructure becomes a strong foundation for sustainable economic growth and improving the overall welfare of society (Gabriel & Kirkwood, 2016).

Infrastructure development in Indonesia has several important roles in driving economic growth. These roles include:

1. **Increase productivity**

Adequate infrastructure, especially in the form of reliable transportation and energy networks, has a significant impact in increasing economic productivity. A good transportation network facilitates the smooth movement of goods and people, connecting producers with markets and enabling efficient distribution of goods across regions. With a reliable transportation network, logistics costs can be reduced, travel time can be shortened, and the risk of delivery delays can be minimized. This not only increases the efficiency of production and distribution processes, but also opens up new opportunities for market penetration and business expansion. Meanwhile, a reliable energy supply is the backbone of economic activity, ensuring the smooth operations of companies, factories and households. With a reliable energy supply, the production process can take place without obstacles, reducing potential losses due to interruptions or power outages. This means that reliable energy infrastructure not only supports production activities, but also improves people's quality of life by ensuring the availability of energy for various needs, from households to industry.

Apart from increasing economic productivity, adequate infrastructure also supports various stages of the economic process, including production, distribution and consumption. With a good transportation network, distribution of goods from producers to consumers can be done more efficiently and cheaply. This means that consumers can access a variety of goods more easily and cheaper, while manufacturers can expand their market reach more effectively. In addition, reliable energy infrastructure ensures the smooth operation of various production and service facilities, such as factories, offices and health facilities. Thus, adequate infrastructure not only increases general economic productivity, but also supports various aspects of daily economic activities, from production to consumption, which in turn contributes to sustainable economic growth and the overall welfare of society.

2. **Increase competitiveness**

Good infrastructure is an important pillar in increasing a country's competitiveness in attracting investment and developing business life. With adequate infrastructure, such as ports, airports and efficient transportation networks, the movement of goods and services can be carried out more smoothly and quickly. Modern ports and well-connected airports not only facilitate the flow of goods and people, but also speed up product distribution and marketing. With efficient logistics processes, companies can optimize their supply chains, reduce operational costs, and increase production efficiency. This in turn provides a competitive advantage for companies in domestic and international markets.

Apart from that, adequate infrastructure also strengthens a country's competitiveness on a national and international scale. With good infrastructure, the country is able to attract investment from various economic sectors, both domestic and foreign. The existence of modern and integrated infrastructure provides a positive signal to investors regarding stable and investment-friendly business conditions. Investment in infrastructure also opens up opportunities for growth in related sectors, such as construction, hospitality and tourism, which ultimately contributes to overall economic growth. Thus, good infrastructure not only accelerates the development of business life, but also strengthens a country's position in the global competitive arena, increases its competitiveness in attracting investment and plays an active role in the world economy.

3. **Expanding accessibility**

Equitable and affordable infrastructure development has a very positive impact in expanding accessibility to various areas, both urban and rural. With adequate infrastructure, such as good transportation and communication networks, access to remote areas that were previously difficult to reach becomes easier. This opens up new opportunities for economic growth in less developed areas, because it allows for investment, access to wider markets, and opportunities for cooperation between regions. In addition, expanded accessibility also contributes to increasing population mobility, allowing them to access public services, educational opportunities and wider employment opportunities.

Not only that, equitable infrastructure development also plays a role in reducing regional disparities between urban and rural areas. By improving connectivity between regions, quality infrastructure opens up opportunities for more balanced economic growth across the country. Rural areas that were previously marginalized can participate in the dynamics of the national economy and benefit from economic growth equally. This not only reduces economic disparities between regions, but also contributes to social development and the overall welfare of society. Thus, equitable and affordable infrastructure development has the potential to be a major driver in creating inclusive and sustainable economic growth throughout the country.

4. **Provides a basis for investment**

Quality infrastructure has a crucial role in attracting investment, both domestic and foreign. The existence of adequate infrastructure, such as an efficient transportation network, access to reliable energy, and sophisticated information technology, provides investors with certainty regarding the smooth operation of their business. Quality infrastructure creates a conducive environment and can increase investor confidence in the stability and ease of running their business. Investors tend to be more interested in investing their capital in areas that have good infrastructure because this can reduce their risks and operational costs. Thus, quality infrastructure development not only facilitates private sector growth, but also creates momentum for increased investment in various economic sectors.

Furthermore, investment in infrastructure not only impacts directly related sectors, but also opens up opportunities for investment in other economically related sectors. Infrastructure development often triggers economic growth in the surrounding area, such as increased business activity, population growth, and increased demand for various goods and services. This could trigger a surge in investment in related sectors, such as construction, hospitality, tourism and trade. Thus, investment in infrastructure not only provides direct benefits in terms of increasing the competitiveness of a region, but also has a positive impact in increasing cross-sector investment opportunities and expanding market share. As a result, quality infrastructure development not only supports current economic growth, but also creates a strong foundation for sustainable and inclusive economic growth in the future.

5. **Encourage innovation and technology**

The development of information technology infrastructure has a broad impact in encouraging innovation and digital transformation in various economic sectors. With strong infrastructure, including a fast and extensive internet network and reliable communications systems, companies and individuals can access and use information technology more effectively. This opens the door to the application of high technologies such as artificial intelligence, data analytics and the Internet of Things (IoT) in various fields, from manufacturing to financial services. In the agricultural sector, for example, information technology can be used for crop monitoring, weather analysis, and supply chain management, increasing the productivity and sustainability of agricultural businesses.

Furthermore, good information technology infrastructure also plays an important role in increasing operational efficiency and the competitiveness of an economy. With the right adoption of information technology, companies can automate business processes, reduce production costs, and improve the quality of their products and services. Additionally, advanced information technology infrastructure enables better integration between different parts of the economy, such as government, industry, and society, creating a more connected and highly competitive ecosystem. This in turn increases the economy's adaptability to global changes, enabling businesses to respond quickly to market dynamics and increasingly fierce global competition. Thus, the development of information technology infrastructure is the key to accelerating economic progress and maintaining a country's competitiveness in this digital era.

6. **Improving people's quality of life**

Infrastructure that includes access to clean water, sanitation and adequate health facilities plays a very important role in improving the welfare and productivity of society as a whole. Reliable access to clean water is the foundation of a healthy and productive life. With widely available clean water and good sanitation, people can keep themselves and their surroundings clean, reduce the risk of infectious diseases, and improve the overall quality of life. In addition, adequate health facilities, such as health centers, hospitals and primary medical services, provide easy and affordable access to necessary health care. This helps in detecting and treating disease early, maintaining public health, as well as increasing productivity by reducing work absenteeism and activity limitations due to disease.

Furthermore, adequate health infrastructure also has a significant economic impact by reducing the burden of disease and health costs. With affordable and quality health facilities, people can access medical care without having to experience heavy financial burdens. This helps reduce the health care costs borne by individuals and families, as well as reducing the burden on the health system as a whole. In addition, with a healthier society, economic productivity increases because work absences due to illness can be minimized, while positive contributions to economic growth can be obtained through savings in health costs and investment in disease prevention efforts. Thus, investment in health infrastructure is not only an investment in community welfare, but also an investment in sustainable economic development.

The impact of infrastructure development on economic growth in Indonesia

Infrastructure development has a complex impact on economic growth, both positive and negative impacts. Here are some of the impacts .

Positive impact:

1. Stimulation of Economic Growth

Good infrastructure, such as roads, ports and airports, plays a crucial role in connecting various regions within a country or even across borders. For example, building an efficient and well-connected road network enables the movement of goods from producers to consumers quickly and cheaply. Likewise, modern and efficient ports can reduce waiting times and costs for shipping goods via maritime routes, which in turn increases a country's economic competitiveness in the global market. Adequate airports also open the door to tourism and international mobility, presenting new opportunities for investment and economic growth.

Apart from facilitating the flow of goods and services, good infrastructure also provides incentives for companies to invest and develop. The existence of reliable infrastructure makes the business environment more attractive and allows companies to expand their geographic reach. Investment in infrastructure also triggers a domino effect in related sectors, such as construction and technology, which creates new jobs and increases overall economic activity. By facilitating trade and investment, good infrastructure provides a strong foundation for long-term economic growth, leading to increased incomes and overall societal well-being.

2. Job Creation

Large infrastructure projects have great potential to create jobs in various sectors, both directly and indirectly. During the construction phase, these projects require a lot of hands-on work, from physical construction to project management, which creates job opportunities for skilled and unskilled workers in the community. Additionally, related sectors such as manufacturing, logistics and services also benefit from the additional demand generated by these large infrastructure projects. For example, the construction of new highways can increase demand for construction vehicles, building materials, and transportation services, which in turn creates more jobs in these sectors.

Once construction is complete, the positive impacts of infrastructure projects continue to be felt through the jobs that remain available for the maintenance, management and operation of the infrastructure. This includes jobs such as road maintenance, port management, and airport operations. These jobs include not only technicians and engineers, but also administrative, security, and customer service staff, which together contribute significantly to lower unemployment rates in an area. With increased employment and resulting income, people have more purchasing power, which in turn increases demand for local goods and services, resulting in a healthier and more sustainable economic cycle.

3. Improved Access to Basic Services

Infrastructure development such as electricity networks, clean water and sanitation has a very significant impact on community welfare. An adequate electricity network, for example, not only increases people's access to energy for daily needs, but also opens up new opportunities for the development of industry and small and medium businesses. With stable electricity, households can use electronic equipment to increase comfort and efficiency, while businesses can improve production processes and expand markets. This in turn drives local economic growth and creates new job opportunities.

Apart from that, adequate access to clean water and sanitation is also an important factor in improving community welfare. With the right infrastructure for providing clean water and a good sanitation system, communities can reduce the risk of disease associated with dirty water and poor sanitation. This not only improves the overall health of society, but also reduces the health care costs incurred by individuals and the government. Furthermore, when communities have better access to clean water, time previously spent searching for water can be allocated to other productive activities, such as education or economic development. Thus, the development of basic infrastructure such as electricity networks, clean water and sanitation not only improves the physical well-being of society, but also strengthens the foundation for sustainable economic and social growth.

4. Encouraging Investment

Good infrastructure creates a very favorable environment for investment, as it provides certainty and stability in terms of access and management of resources. For example, efficient transportation networks allow companies to easily access raw materials, markets, and labor, reducing logistics costs and increasing operational efficiency. In addition, reliable infrastructure also creates certainty for companies regarding the availability of critical resources such as electricity, water and communications. Investment in modern, well-managed infrastructure also reflects the government's commitment to long-term economic growth, giving investors confidence that the investment environment will remain stable and business-friendly.

Apart from that, good infrastructure also signals to investors that the government has the ability and readiness to support economic growth. Investment in adequate infrastructure shows the government's long-term commitment to sustainable economic development, creating long-term confidence for both domestic and foreign investors. This stable and secure investment environment can encourage greater capital flows into a country or region, which in turn increases economic activity, creates jobs and encourages innovation. Thus, good infrastructure is not only the physical foundation for economic growth, but also a key factor in creating an attractive and sustainable investment environment.

Negative impact:

1. High Development Costs

Infrastructure development often requires significant investment from the government, which can pose serious financial challenges. The costs of building roads, ports, airports and other infrastructure can be very high, especially for large-scale projects. When governments do not have sufficient resources to fund these projects directly, they may have to take out loans or implement budget deficit policies. A budget deficit can increase the country's debt burden, lead to dependence on external financing, and present long-term fiscal sustainability risks.

An increase in government debt can have a negative impact on a country's economy. High interest costs to pay debts can reduce budget allocations for other important sectors, such as education, health or social development. Additionally, increasing government debt can also trigger investor and financial market concerns, which in turn can result in economic instability and a decline in currency values. Therefore, although infrastructure development is necessary to promote long -term economic growth, governments need to carefully consider the long-term financial implications of large infrastructure investment decisions.

2. Environmental Impact

Infrastructure development often causes significant environmental damage. For example, the construction of highways, new settlements, or housing developments often require the clearing of large tracts of land, which can result in deforestation and loss of natural habitat. This can have serious negative impacts on biodiversity and local ecosystems, threatening rare or endangered species, as well as disrupting the ecological balance. Apart from that, infrastructure development can also cause air and water pollution which is dangerous for the environment and human health. The construction process itself often produces air pollution and waste, while ongoing infrastructure operations can produce greenhouse gas emissions and water pollution that can damage river, lake or ocean ecosystems.

Apart from that, poor or poorly managed infrastructure can also increase the risk of natural disasters, such as floods or landslides. For example, building dams that do not take into account environmental impacts can change river flow patterns and cause flooding upstream or downstream of the river. In addition, destruction of natural habitats caused by infrastructure development can also increase the risk of landslides and soil erosion, especially in mountainous areas or steep slopes. Therefore, in planning and implementing infrastructure projects, it is important to carefully consider their impact on the environment and take necessary mitigation measures to minimize undesirable environmental damage. This includes developing environmental restoration plans, implementing environmentally friendly technologies, and consulting with relevant stakeholders to ensure that infrastructure development is carried out in a responsible and sustainable manner.

3. Social gap

Unequal infrastructure development can exacerbate disparities between regions and between community groups. When infrastructure development is concentrated in urban areas or economically developed areas, rural or remote areas are often left behind. This can lead to greater impoverishment in these marginalized areas, as lack of access to critical infrastructure such as roads, electricity or clean water can hamper local economic development and access to basic services. In addition, community groups that are already vulnerable or marginalized, such as indigenous peoples or ethnic minorities, may also not benefit equally from infrastructure development, due to a lack of attention to or meeting their specific needs in the planning and implementation of infrastructure projects.

Apart from that, uneven infrastructure development can also deepen disparities between regions in terms of access to economic and social opportunities. When adequate infrastructure is only available in some areas, this can hinder labor mobility and investment to other areas that need economic development. Thus, areas that are less economically developed can be trapped in a cycle of poverty and underdevelopment that is difficult to break through without adequate access to infrastructure. Therefore, in order to reduce disparities between regions and between community groups, it is important to ensure that infrastructure development is carried out evenly and inclusively, taking into account the needs and priorities of marginalized communities and ensuring that the benefits of such development are widely felt by the entire community.

4. Dependence on Certain Sectors

Focusing infrastructure development on a particular sector, such as transportation or energy, can create significant dependence on that sector in a country's economy. For example, when governments allocate large resources to build extensive transportation networks, the economy becomes highly dependent on the smooth flow of goods and mobility of populations. The same applies to the energy sector; when large investments are made in the construction of power plants or other energy infrastructure, the economy becomes highly dependent on a stable and affordable energy supply. The economy's dependence on certain sectors increases the risk of global market fluctuations, such as increases in fuel prices or changes in international trade policies that may affect the supply or price of imported goods.

Apart from that, focusing infrastructure development on certain sectors can also hinder healthy economic diversification. When most investment is allocated to one sector, the potential for economic growth in other sectors may be overlooked. Strong economic diversification is key to increasing a country's economic resilience to global market fluctuations and reducing the risks associated with dependence on a single sector. Therefore, it is important for the government to consider diversification in infrastructure development plans, ensuring that investment is balanced evenly across various economic sectors. In this way, countries can minimize the risk of economic dependence on one particular sector and strengthen the foundation for sustainable and stable economic growth.

D. CONCLUSION

With adequate infrastructure, especially in terms of transportation, energy and information technology, as well as quality health facilities, Indonesia has the opportunity to encourage inclusive and sustainable economic growth. Good infrastructure not only increases economic productivity through efficiency in production and distribution processes, but also increases the country's competitiveness in attracting both domestic and foreign investment. In addition, equitable and affordable infrastructure development expands accessibility to various regions, reduces regional disparities, and improves people's quality of life by providing better access to clean water, sanitation and health services. Thus, adequate infrastructure is an important foundation in creating a conducive environment for inclusive economic growth and improving the overall welfare of society in Indonesia.

In order to understand the impact of infrastructure development on economic growth in Indonesia, it was found that infrastructure development has a complex impact, with a series of positive and negative consequences. Positively, infrastructure development stimulates economic growth through increasing accessibility, creating jobs, increasing access to basic services, and encouraging investment. However, there are also negative impacts that need to be considered, such as high development costs, adverse environmental impacts, social gaps that deepen inequality, and economic dependence on certain sectors. Therefore, while utilizing the potential for economic growth offered by infrastructure development, it needs to be balanced with appropriate mitigation measures to minimize its negative impacts, and ensure that development is carried out evenly and inclusively for the benefit of all levels of society and regional groups.

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