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CONSTRUCTION OF THE BAKAUHENI-TERBANGGI BESAR TOLL ROAD TO IMPROVE THE COMMUNITY'S ECONOMY

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ABSTRACT

Infrastructure development in Lampung, especially toll roads, is urgently needed to support mobility, increase the distribution of goods and services, especially in areas with high levels of devel-opment and it can reduce congestion on a number of Trans-Sumatra Roads in Lampung, there some points or areas are the main routes, which is able to support the economy constrained by traffic jams and inadequate roads. This study aims to examine whether the construction of the toll road has had the expected im-pact and achieved the above goals. A number of sectors are used as the main study in this research, namely Population, Employ-ment and Unemployment; Industrial and Commercial; Retail; Housing area; and Business Operational Efficiency. This study us-es empirical studies, which use field data as the main source, such as the results of interviews and observations. The results of the study show that the positive impact of infrastructure development in the short term has been felt by the community, especially in terms of business and retail operational efficiency. However, vari-ous studies have stated that the biggest impact on infrastructure development is in the future, especially with massive population growth which will certainly increase the capacity of the economic ecosystem, even forming a new economic ecosystem

KEYWORDS *Infrastructure; mobility; economy*

INTRODUCTION

Infrastructure development in Lampung, especially toll roads, is very necessary to support job mobility, increase the distribution of goods and services, especially in areas with a high level of development and reduce congestion on a number of Sumatra Cross Road Routes in Lampung, where a number of points or

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areas that are the main routes that are able to support the economy are constrained by congestion and unfit roads. Toll road infrastructure has a very important role in supporting the economy, social, culture, unity and unity of the community in terms of interacting, binding and connecting between regions in Indonesia. Toll road infrastructure is also a facility that connects production sources, markets and consumers. Lampung Province is one of the areas affected by toll road construction. The construction of the toll road will undeniably have an impact on the socio-economic conditions that exist in the future in the area around the toll road. One of them is Lampung Province, as one of the areas affected by development.

Economically, it has an impact on changes in labor patterns, business opportunities, and industrial growth that cannot be avoided. The conversion of land from community housing and agriculture to toll roads has made investors enter into businesses in the industrial sector, so as to change the livelihoods of people who were previously farming into factory workers or small and medium enterprises (SMEs). In line with that, industrial development tends to be followed by property investment in the form of housing for workers. The impact of development in the economic sector will be utilized in the future by the people in Lampung Province.

Policy impact analysis is included in the objectives and scope of the evaluation study, as revealed by (Weiss, 2022), (Wibawa et al., 2014) and (Anggara, 2014). (William, 2013), stated that the purpose of evaluation analysis is more about measuring the effects and impact of a program/policy on society. Measuring the effect of a policy on people's lives is to compare the conditions between before and after the policy. Soemarwoto in (Giroth, 2004) said that impact is a change that occurs as a result of an activity. Soemarwoto further explained that "these activities can be natural, in the form of chemistry, physical and biological, can also be carried out by humans in the form of analysis of environmental impacts, development, and planning. These impacts can be biophysical, social, economic and cultural". Meanwhile, according to (Anggara, 2014), impact is a change in physical or social conditions as a result of policy output. The effect produced by an intervention program on the target group and the extent to which the effect is capable of giving rise to new patterns of behavior in the target group (impact). The results produced by program interventions in the target group, both expected and incapable of giving rise to new behaviors in the target group (effect). Dye, Anderson, Lester and Stewart in (Winarno, 2017) and (Anggara, 2014) reveal that basically the impact of a public policy has several dimensions that must be taken into account in the discussion of evaluation. There are five dimensions of policy impact according to Dye in (Anggara, 2014), namely:

1. The impact of policies on public affairs and the impact of policies on the people involved. Thus, the goals in public policy that are expected to be influenced by the policy should be limited, and the expected impact of the policy should be determined from the outset of the public policy.
2. Such policies may impact circumstances or groups beyond the policy goals or objectives of the policymaker previously thought. Policies can have an impact on current and future conditions that will affect both target and out-of-target groups.

The impact of toll road infrastructure development policies, related to the process, will not only have an impact on changes in natural conditions, but will also have an impact on the socio-economic conditions of the surrounding community. According to (Salim & Cooksey, 2019) the development process gives rise to mobility so that one community group is connected, sometimes it can even collide with other groups, and also collide social values with each other. Large projects have the ability to cause shocks and imbalances in the social environment. Both the development with great leaps and the construction of large projects equally affect the social environment.

Furthermore, (Salim & Cooksey, 2019) argued that the nature of development also aims to cause diversity and diversification in community economic activities such as agricultural development, industry, mining, services and others. But it is impossible to forget about the balance of the environment. There are several problems that can be identified:

1. Toll road infrastructure development cannot always be enjoyed by all stakeholders, but there are often widening socioeconomic gaps.
2. Infrastructure development policies on the one hand cause diversity in the economic diversification of the community, but on the other hand also cause environmental degradation that is not conducive.
3. The development process gives rise to mobility so that one group of people is interconnected, sometimes even clashing with other groups, which can cause shock and imbalance in the social environment.
4. The Policy Strategy for infrastructure development is more viewed from the physical environmental impact, while the socioeconomic environmental impact is much more complex and long-term.

Theoretical Framework

This section provides a brief review of various economic theories about the role of public infrastructure, in particular its relationship to output or growth. It also serves as a background for building an economic model and choosing an empirical approach to use in this research. Empirical models with infrastructure capital are derived based on reviews.

Growth Theory

In traditional macroeconomic neoclassical growth theory, economic growth is driven by exogenous factors, namely population dynamics and technological processes. A strong analysis of how corporate behavior and government policy actions can affect long-term growth through the impact of technological advances certainly cannot be done well. In fact, the role of government in the growth process is often not looked at in economic theory (Kuipers et al., 2018). However, as will be studied, that new theory of growth gives a much greater role to public infrastructure, namely to development.

Growth PathThrough Infrastructure

At a theoretical level, infrastructure can be modeled to have an effect on each output measure through two paths; directly as the third input in the production function and indirectly by influencing the total productivity of factors (Agénor & Moreno-Dodson, 2006).

Direct Effects

In standard production functions where factors are gross complement, an increase in infrastructure capital will have a direct impact on increasing the productivity of other factors. This is especially clear if we examine in cases with a very influential agenda (Kremer, 2013), for example, if roads or bridges provide access to previously inaccessible areas, which then allows productive investment there, or if the repair of electrical or telecommunications networks so that it is possible some type of machine or other more advanced equipment. But since infrastructure capital is also believed to produce important externalities in various economic activities, its net effect may be greater than expected from the effects of accumulating simple factors. The relation to such indirect effects will be explained next.

Indirect Effects

The first indirect y ang effect relates to maintenance, the durability of private capital, and the cost of adjustment. Today, there is growing evidence that infrastructure policies are biased towards the realization of new investments by neglecting maintenance on existing infrastructure. The main reason seems to be the reason for political economy (Maskin & Tirole, 2018), as well as (Dewatripont & Seabright, 2016). Consequently, the service life of the infrastructure stock itself and the private capital that utilizes it is reduced, such as trucks operating on broken roads or machines connected to unstable voltage lines, so operating costs increase (Engel et al., 2019). The case of palliative private investment for devices such as electric generators.

Second, infrastructure seems to have a microeconomic impact through a number of channels, including increased labor productivity resulting from improved infrastructure and information technology, reduced time wasted on work and stress, as well as improved health and education, and so on . In addition, such improvements are likely to encourage additional investment in human capital in the medium and long term (Straub, 2018). Finally, infrastructure can be a source of scale and scope of the economy across all sectors of the economy. For example, as roads and railroads improve, transportation costs decline, private companies benefit from economies of scale and more efficient inventory management.

Gap Analysis

(Madden & Savage, 2018) found that infrastructure improvements helped increase the national growth rate. Infrastructure development helps to change the entire scenario of economic activity in the country and this leads to an increase in GDP. (Sahoo et al., 2012) study the effect of physical infrastructure on economic growth in the People's Republic of China during the period 1975 – 2007. In their study, they calculated the index of physical infrastructure with six sub-headings namely as follows: power consumption, roads, energy consumption, telephone lines, railway lines, the number of people using airways. In accordance with the findings, it can be seen that infrastructure development has a tremendous influence on growth. Infrastructure investment has a greater impact than public and private sector investment. There is a one-way causality relationship from infrastructure stocks to growth and a two-way causality relationship from infrastructure stocks to public-private sector investments.

(Bougheas & Downward, 2020) study the significant positive relationship between infrastructure and specialization level and also state a strong non-monotonic relationship between infrastructure and growth using the OLS regression model. The results of the study show that economic growth initially accelerated due to infrastructure improvements and when it reached its peak, economic growth also touched its highest point and after that began to decline when additional infrastructure was installed. Researchers are confident in this result because the phenomenon can occur, namely when excess infrastructure creates problems to deal with it and its maintenance and waste become a permanent source of economic problems. (Straub, 2018) used physical indicators for four different sectors (telecommunications, electricity, roads, and water) and applied two different approaches (growth regression and growth accounting) to analyze the relationship between infrastructure, growth, and productivity in Asian developing countries during the period 1971 – 2006, with the interim conclusion that there was a relationship between the three.

(Hong et al., 2011) studied the relationship between transport infrastructure and regional economic development comprising 31 regions in China in 1998-2007. In accordance with the results of studies using the panel data method, it can be seen that toll road infrastructure and drinking water have a significant effect on growth. In addition, there is a positive effect on growth even in areas with low toll road infrastructure. Meanwhile, water infrastructure contributes positively to growth only when a number of investments are actualized. A study by (Fedderke & Bogetić, 2009) using panel data for South African manufacturing during the period 1970-2000, and a series of 19 measures of infrastructure, isolated the impact of endogenicity. This paper develops instrumentation strategies that can be generalized to other contexts. In their study, controlling the possibility of endogenicity in infrastructure measures made the capital impact of physical infrastructure not only positive, but also a large and economically meaningful impact.

As explained above, researchers tried to examine the impact of infrastructure development on economic growth, where the context studied was the construction of the BAKTER (Bakauheni-Terbanggi Besar) toll road. In the study on gap analysis, previous researchers examined economic growth in infrastructure development in general in qualitative and quantitative approaches, while in this study the researcher will examine economic growth in each sector to detail the impact of toll road development, so that it can be known which sector gets the most impact, and if there are sectors that do not get the impact of infrastructure development, it will be immediately identified. The sectors to be discussed are, Population, Employment and Unemployment; Industrial and Commercial; Retail; Housing; and Business Operational Efficiency. The data presented is based on field data which is then summarized in the form of graphs to make it easier for readers.

State of Art

Previous research discussing the construction of toll roads related to improving the economy of the people of Lampung has never been done before. The research conducted by Muhammad Alfayyad Ryandika entitled "Legal Protection

for the Community against the Impact of Land Acquisition of Toll Road Sections Divided by Large Pematang Panggang" only discusses the general positive and negative impacts on the community's economy with a focus on legal protection of the rights of related communities (Ryandika, 2022). Research conducted by the Magelang City Research and Development Agency discusses strategies that need to be applied to empower the community's economy, especially in the people of Magelang City (Oerbawati, et al, 2021). The research conducted by Uswatun Khasanah contains a description of the positive and negative impacts of toll road construction for the people of Kasreman Village, Geneng District, Ngawi Regency, which is then associated with an Environmental Impact Assessment (AMDAL) (Khasanah, 2017). Research by Hayakawa and Tsubota found that toll road construction can increase transportation speed so as to facilitate economic activities and effectively affect the price of a good or service, one of which is the price of butter in Japan (Hayakawa & Tsubota, 2022). Research by Xiaofeng on the impact of toll road construction on socioeconomic and environmental in China (Xiaofeng, Siwei, Yue, 2021). Compared to some of the previous studies above, the author's research here shows updates related to how toll road construction affects people's economic growth based on field data obtained from the research site and effectiveness related to toll road construction policies in Terbanggi Besar, Lampung.

RESEARCH METHOD

This study uses empirical studies, which use field data as the main source, such as interviews and observations. Analysis through empirical studies reviews patterns and behaviors that occur in the community. Researchers use this method to see the process of community development and growth from the economic side after the con-struction of the Bakauheni-Terbanggi Besar toll road (Sunggono, 2003). While the re-search approach uses a qualitative approach, the analysis process with the results of analytical descriptive data expressed in written or oral form by accounting for the quality of sources and data (Fajar & Achmad, 2010). The location of data collection is carried out in Lampung Province, where the toll road was built. Research data is ob-tained from behaviors or phenomena that exist around society that are seen through research research. Parties engaged in the business field are the main source of this re-search, while the general public as a source of additional information (Soekanto, 1986). Secondary sources in this study are books, journals, statistical data and other references related to the study of infrastructure development as a support for the community's economy. The collected data were obtained from the observation process, interview and documentation process (Narbuko, 2005; Masri, 2008; Achmadi & Nar-buko, 2005).

Furthermore, in the research conducted by Luo Xiaofeng, Liu Siwei & Yuan Yue (2020) gave a conclusion that In short is, highways have a huge driving effect on the economy and society, and also have an important impact on the ecological environ-ment from various aspects. It can be seen from the literature that domestic and foreign studies are currently relatively weak in quantification, mainly due to the lack of de-tailed data support. Therefore, systematic assessment of the impact of roads on the economic, social, and ecological environment needs to be carried

out by collecting raw data and conducting scientific analysis, as well as being the basis for realizing road planning involving sensitive protected areas.

RESULT AND DISCUSSION

Spatial policy is the domain of the government, but community participation cannot be ruled out (Denhard & Denhart, 2003; Musso & Frederickson, 1999). This is because the community is the recipient of the impact and at the same time as a driver for the country's economy. Integrated development is highly expected in multi-sectoral development (Widodo, 2013). Such as the construction of the Bakauheni-Terbanggi Besar toll road, which has been the hope of the community for a long time as a need for mobilization. The following are the results of developments after the construction of the Bakauheni-Terbanggi Besar toll road. Population, Employment and Unemployment

Case studies shed light on how toll road projects impact population, employment, or unemployment levels recorded. This is not to say that there are necessarily effects on labor or migration but the study of those effects would be too difficult and extensive if it examined at the aggregate data level. With this case study, it can be proven that with the improvement of infrastructure through the procurement of toll roads, the employment trend has increased markedly after this road investment wasinaugurated, So it is concluded that there is a possibility of impact on a sub-regional scale. Here's a presentation of related data:

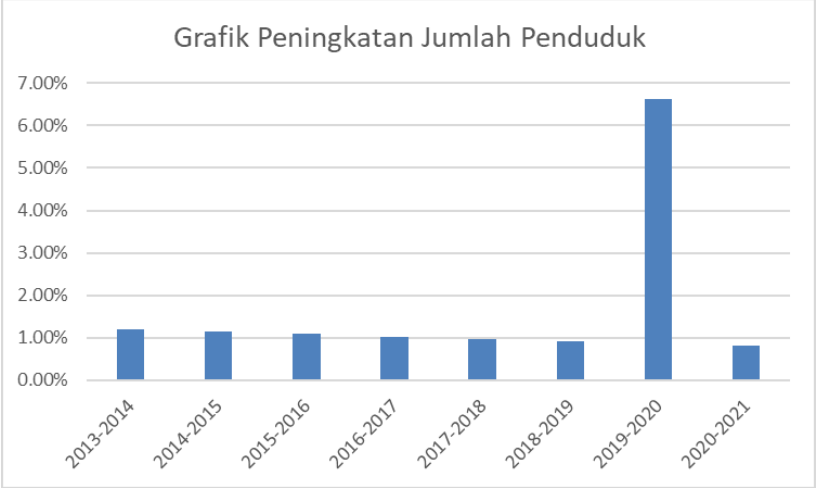

Figure 1 Population Growth
Source: BPS, 2022.

From the data above, it can be seen that the construction of the toll road has an impact on increasing the population drastically, right after the inauguration of the Bakauheni-Terbanggi Besar toll road. Then for employment growth can be seen below:

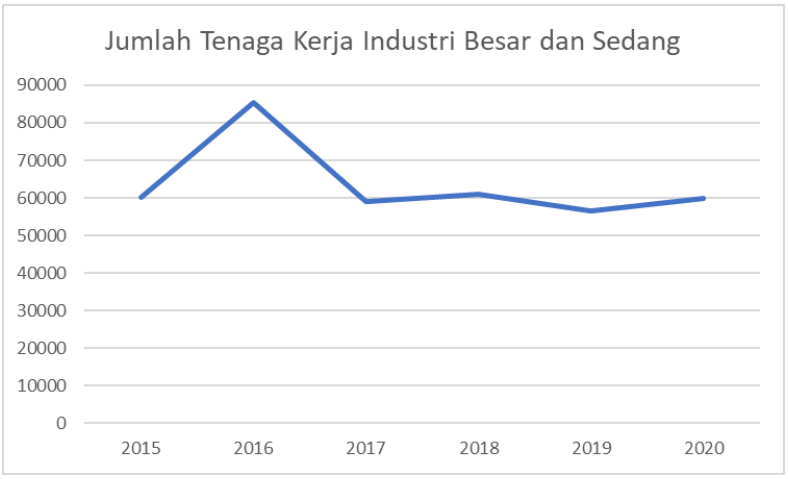

Figure 2 Number of Large and Medium Industrial Labor
Source: BPS, 2022

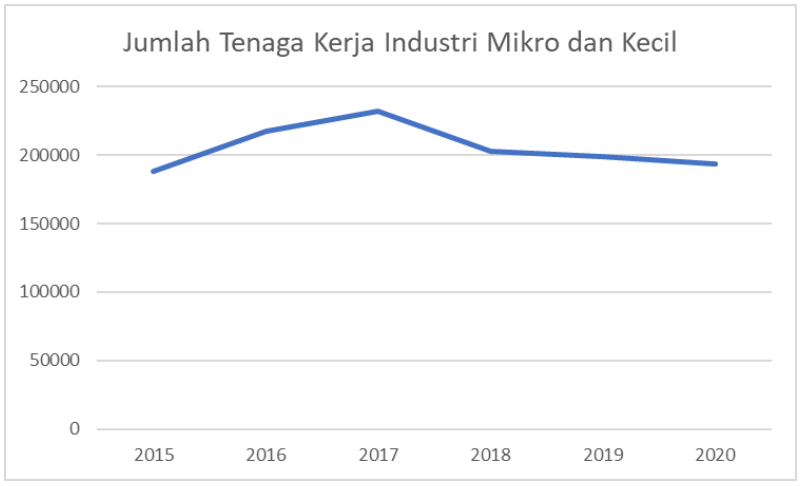

Figure 3 Number of Large and Medium Industrial Labor
Source: BPS, 2022.

Based on data showing that employment is not affected by the construction of toll roads, even in the previous year there were other variables and factors that influenced the increase and decrease that steep on the graph of employment development in Lampung. As for the open unemployment chart, it can be seen as follows:

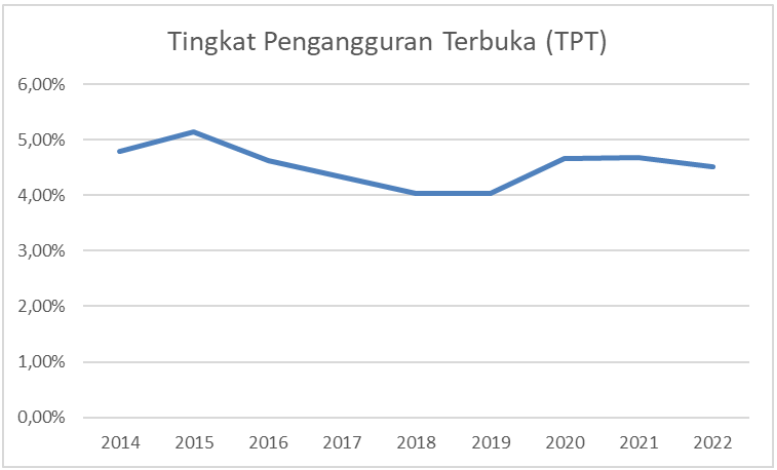

Figure 4 Open Unemployment Rate
Source: BPS, 2022.

From the chart, it is known that the infrastructure development carried out does not affect the unemployment rate in Lampung. However, at the end of 2022, it began to decline, it's just that it is not yet known whether there will be a significant decline and whether the construction of the Bakauheni-Terbanggi toll road is a factor, while this can only be a recommendation.

The problems of ppulation, employment and unemployment however to some extent remain detrimental, the presence or absence of toll construction. Therefore, the conclusion that the absence of investment in the construction of toll roads or other adequate roads will hinder the development of regions is certainly irresistible. However, the conclusion of this infrastructure development needs to be held, both for short-term and long-term investment, whether it has an instant or slow impact.

However, if we consider this series of cases carefully, the overall conclusion is that the impact of road investment on the associated order in the case study project is not large enough to be able to see the impact above the level of other factors. In short, the impact of road investment is not enough to bring about noticeable changes to economic performance in the regions, particularly in Employment and Unemployment. The complexity of the assessment is illustrated by the case of the completion of road construction followed by a marked increase in employment growth, but with relatively slow growth it is necessary to conduct in-depth studies for its long-term impact. For studies on other sektor can be seen in the next discussion.

Industrial and Commercial Development

There is much clearer evidence that road investment can have a major impact on the development of industrial and commercial sites, as well as on the location of economic activity. In the details of the data in the case study, it is considered to have strong evidence that the use of space in industrial/commercial sites is strongly influenced by the construction of toll roads. These impacts are expected to have an effect on some site decisions at the local level, i.e. attracting some businesses to the area and some points related to development. In the third case it is thought that there is a possibility but a more limited impact.

This is not something that is not planned, because basically the procurement or construction of toll roads is more oriented towards increasing economic growth and has the principle of paying attention to aspects of regional potential (Widodo, 2013). The social functioning of land use succeeds with macroeconomic interests. The construction of toll road infrastructure requires a very large area of land; The financing scheme implemented so far involves large-scale investors. Another source of funding comes from the government through State-Owned Enterprises that are basically profit-oriented (de Soto, 1989). For details of the industry chart in Lampung, please see the following:

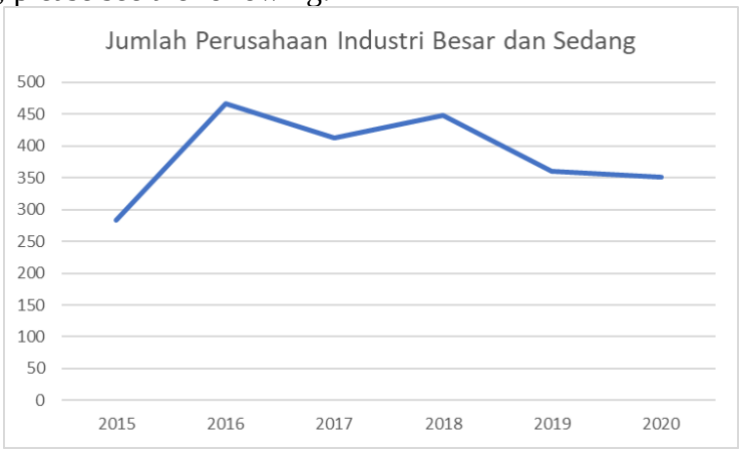

Figure 5 Large and Medium Industry Graphics
Source: BPS, 2022.

The graph shows that the construction of toll roads did not have a direct and instant impact, where there was no significant increase after the inauguration or even a decrease, the peak of a large industrial increase and is in Lampung in 2016. For micro and small industries can be seen the following:

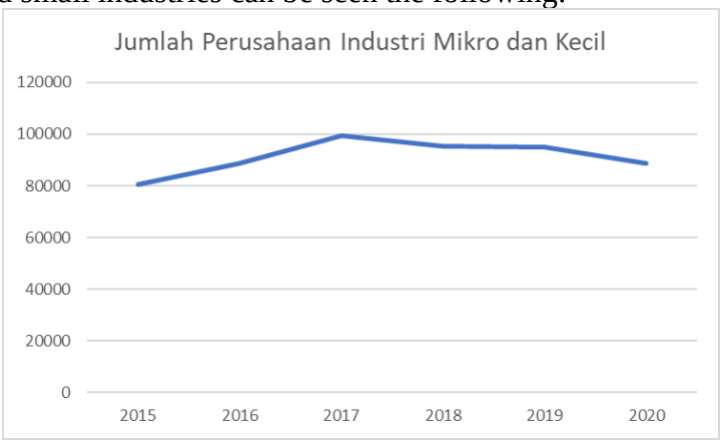

Figure 5 Micro and Small Industry Graphs
Source: BPS, 2022.

In micro and small industries also do not get direct and instant influence from development projects, fortunately micro and small industry charts show stability, although of course with A number of declines that occurred in some years.

Retail

Evidence of influence on retail development is strong, except in the case of rural areas. The obvious development is that in each rest area within the toll project environment, the large number of visits in the rest area is the basis for the community to sell there; Daily necessities, snacks, souvenirs can be found there. As for retail development, the rest is near the exit gate of the toll road. However, retail development, of course, is based on "local" demand and spending. Therefore, the growth of retail activity in one area will largely replace activity elsewhere in the sub-region. Therefore, the economic impact created through the effect on retail development is essentially local. Apart from that, it does not mean dimming the previous business, because basically the surrounding community will stick to buying and selling activities as before, especially in big cities. such as Bandar Lampung and Metro will remain crowded with economic activity there.

Housing

The case study also provides strong evidence that housing development is influenced by toll road construction. In this case study of the Bakauheni-Terbanggi Besar toll road, there is evidence, that the level of construction of houses and housing increased at locations near the toll road project, just before and after it was built, such as the construction of a number of houses and housing near the New Town toll exit. In some cases, these results are supported by planning policy decisions to provide land on sites near development projects.

In some cases of routes, there is a shortage of housing development in contrast to higher levels of activity in more accessible locations. This affectsmostly involves a "shift" in housing demand, as does the population within the sub-region or local area. Stimulating housing development can encourage the growth of a particular community or city, which is then capable of creating a new or larger economic cycle.

Business Operational Efficiency

The impact of road investment is explored through business surveys. Companies in areas where roads have been repaired were interviewed about the quality of the transport network and whether the investment has reduced travel time/costs, better access to suppliers and customers, better labor access, and has benefited businesses. In all cases related to the construction of the Bakauheni-Terbanggi Besar expressway, the majority of companies reported benefits for business through an overall increase in travel time and costs, the specific benefits cited varied but included faster business travel, easier movement of goods, and better access to customers/suppliers. In this regard, there are a number of statements from the community.

"With the construction of this toll road, it makes it easier for us to deliver passengers to their destination faster"

The above statement was taken from several people who work in inter-provincial passenger transportation, which was then collected and concluded as quoted above. Other quotes like the following:

"The construction of this toll road reduces travel time and costs in shipping goods, and can be comfortable resting if you are tired, although in some rest areas facilities are not complete"

The quote was inferred from several freight forwarders in various sectors, the answer shows that the profit is not only time but also cost. The relationship between impact on site decisions or site development and overall economic growth is less clear given the evidence reported above about the absence of impact on data levels. Nonetheless, the impact of this type of development is generally too limited to be detectable in aggregated data. So, in the industrial and service sector, the influence of this toll road development project as a whole still cannot be seen in data, but in fact it has had some direct impacts, which is expected in the future to have a greater long-termimpact, namely faster economic growth.

CONCLUSION

From the presentation of the research results, the conclusion that can be taken is that the positive impact of infrastructure development for the short term has been felt by the community, especially in terms of operational efficiency. business and retail. Meanwhile, data still cannot be seen the impact, except on population growth, which has increased drastically after the inauguration. However, various studies have stated that the biggest impact on infrastructure development is in the future, especially with massive population growth, it will certainly be me. increase the capacity of the eco-nomic ecosystem, and even form a new economic ecosystem.

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