Toll Road Infrastructure Development Towards Interregional Connectivity and The National Economy

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Abstract

Infrastructure has a very important role in encouraging national economic growth. The availability of good infrastructure can increase people’s access to resources so as to increase productivity which in turn can increase national economic growth. This paper aims to determine the influence of infrastructure development and toll road management on connectivity between regions and improving the Indonesian economy, as well as knowing the role of the Government in accelerating infrastructure development and toll road management on connectivity between regions and improving the Indonesian economy. The research method used is an analysis method (descriptive) with a qualitative variable approach which is described in the form of statements which are the result of data analysis through observation. The method that the author uses in writing is literature studies and field studies. Data collection techniques can be carried out with literature studies (Library Research), field studies (Field Research) and Observation on the development of infrastructure development and toll road management in Indonesia. The connection of integrated toll road network infrastructure in Indonesia has a significant effect on connectivity between regions and improving the national economy.

Key words: infrastructure, toll roads, the national economy

Introduction

Infrastructure has a very important role in encouraging national economic growth. Through infrastructure development and toll road operations, spatial structures are formed as connectivity between regions in Indonesia. With the connectivity between regions integrated with toll roads, traffic distribution of goods/services and human movements are more efficient in moving the wheels of the economy, both micro and macro.

Economic growth is one of the indicators of development results that have been carried out and is also useful for determining the direction of development in the future. The availability of good infrastructure can increase people’s access to resources so as to increase productivity which in turn can increase national economic growth.

Definition of Infrastructure, according to Grigg (1988) infrastructure is a physical system that provides transportation, irrigation, drainage, buildings and other public facilities, which are needed to meet basic human needs, both social and economic needs. The infrastructure itself in a system supports the social system and economic systems as well as being a link with the environmental system. The availability of infrastructure has an impact on the social system and the economic system that exists in society.
The Directorate General of Wildlife Development, Ministry of PUPR, build toll road infrastructure to grant toll road concession rights to State-Owned Enterprises and Private Enterprises to be managed professionally and systematically. With good governance, the goal of managing the road connecting the country will be achieved efficiently and effectively so that it has an impact on the progress of the Indonesian economy evenly from Sabang to Merauke.

The government is currently trying to accelerate infrastructure development and professional toll road management for connectivity between regions as an effort to improve the Indonesian economy. Therefore, the author made a paper with the title "Analysis of the Effect of Toll Road Development and Management on Inter-Regional Connectivity and Improving the Indonesian Economy".

**Literature Review**

**Toll Road Infrastructure**

Based on the Presidential Regulation of the Republic of Indonesia Number 38 of 2015, Infrastructure is a technical, physical, system, hardware, and software facility needed to perform services to the community and support a network of structures so that the economic and social growth of the community can run well. Infrastructure Provision is an activity that includes construction work to build or improve infrastructure capabilities and/or infrastructure management and/or infrastructure maintenance activities in order to improve infrastructure benefits.

Meanwhile, based on the Presidential Regulation of the Republic of Indonesia Number 38 of 2015, types of economic and social infrastructure include transportation infrastructure, roads, water resources and irrigation, drinking water, centralized wastewater management systems, local waste management systems, waste management systems, telecommunications and informatics, electricity, oil and gas and renewable energy, energy conservation, urban facilities, educational facilities, facilities and infrastructure sports, as well as arts, regions, tourism, health, community institutions, and public housing.

Infrastructure development is very important to improve the national economy, one of which is the development of toll road infrastructure as infrastructure in supporting the smooth distribution of goods/services, connecting one region with another that is interconnected and integrated. With the development of toll road infrastructure, it will improve the national economy.

**Toll Road Management**

The Toll Road Regulatory Agency (BPJT) is an agency authorized to carry out part of the Government's authority in the implementation of toll roads which includes the regulation, operation and supervision of Toll Road Business Entities (BUJT), so that they can provide benefits to the community. The existence of BPJT is mandated by Law No. 38 of 2004 concerning roads, regulated in Government Regulation No. 15 of 2005 concerning toll roads and stipulated through the Regulation of the Minister of Public Works and Public Housing No.43 / PRT / M / 2015 concerning toll road regulatory agencies (BPJT).

Based on the Regulation of the Minister of Public Works and Public Housing Number 43 / PRT / M / 2015 the Toll Road Regulatory Agency (BPJT) has the following duties and functions:

a. Recommending initial tariffs and toll tariff adjustments to the Minister;
b. Takeover of toll road concession rights that have completed its concession period and recommend further operations to the Minister;
c. Taking over the temporary rights of toll road business that failed in the implementation of the concession, to be later re-auctioned;
d. Preparing for toll road business which includes financial feasibility analysis, feasibility study, and preparation of amdal;
e. Procuring toll road investments through auctions in a transparent and open manner;
f. Assisting the process of implementing land acquisition in terms of ensuring the availability of funds originating from Business Entities and making mechanisms for their use;
g. Monitoring the implementation of planning and implementation of construction as well as the operation and maintenance of toll roads carried out by Business Entities; and
h. Supervise Business Entities for the implementation of all obligations of toll road concession agreements and report them periodically to the Minister.

In managing toll roads professionally and systematically, the Toll Road Regulatory Agency provides concessions to State-Owned Toll Road Business Entities or Private Toll Road Business Entities. Toll road business is an activity that includes funding, technical planning, construction implementation, operation, and maintenance of toll roads.

Infrastructure development, especially toll roads, is a priority for the Government in producing extensive freeway infrastructure so that later it can boost productivity through structural transformation. Toll roads have a very
Figure 1. Toll Road Network Map

significant role for the development of an area. In addition, toll roads are national roads that can support the increase in economic growth, realizing equitable development and balance in regional development.

The picture above is a map of the toll road network in Indonesia that is integrated with professional and systematic management. The toll road network is connected from Sumatra Island (Trans Sumatra), Java Island (Trans Java), Kalimantan Island, and Sulawesi. With the connection of the toll road network in Indonesia, it has a significant effect on connectivity between regions and the improvement of the national economy.

The following list of toll roads contains toll roads that have been operating, are in the construction stage in the field, and that have been owned by the operator or Toll Road Business Entity (BUJT). Toll roads in the auction stage or those that are still just discourses are not included in the list.

Innovation in Infrastructure Development and Toll Road Management

Green Tollroad
The focus on green toll road in Indonesia includes six indicators, including Access, feasibility and service, energy and water efficiency, environment, materials, construction and regional cooperation. These indicators have objectives as stated in the United Nations Sustainable Development Goals (SDGs);

Multi Lane Free Flow (MLFF)
The government is trying to implement a non-stop toll payment system, namely Multi Lane Free Flow (MLFF). Through the MLFF system, toll road users no longer need to stop when they want to pay tolls.

Electronic Traffic Law Enforcement (ETLE)
Electronic Traffic Law Enforcement (ETLE) is a law enforcement system in the field of traffic based on information technology by utilizing electronic devices in the form of CCTV cameras that can detect various types of traffic violations. The advantages of ETLE include being able to present motor vehicle data automatically. So ETLE is a breakthrough in traffic law enforcement, especially on toll roads where road users often spur vehicles to exceed the speed limit.

Method

Rmoney Research Scope

Research Time
This research was conducted for 1 (two) months from 10th of June to 10th of July of 2022nd in order to obtain data related to the theme of the paper.

Types and Properties of Research
The type of research used in this study is a mixed method. Mixed methods research design is a procedure in collecting, analyzing, and mixing quantifiable and qualitative methods in a study, or a series of studies to understand problems in research, Creswell & Plano Clark (2015: 1088). This approach is carried out in combination with the aim of providing a better understanding.

The writing of this paper is descriptive qualitative and analytical. The result of the research highlighted is the process. Related to the theoretical foundation that can be used is the researcher’s sense of subjectivity. Another term
for qualitative research is the naturalistic method, which is written based on the conditions and situations of the subject under study.

**Metode Data Collection**

The data collection method is part of the sampling instrument of the predetermined population in the study that determines the results of a study. The research method used is an analytical method (descriptive) with a qualitative variable approach which is described in the form of statements that are the result of data analysis through observation. The method that the author uses in writing is through literature studies and field studies.

When viewed in terms of data collection techniques, data collection techniques can be carried out through literature studies (Library Research) and field studies (Field Research). The explanation of the data collection technique is as follows:

a. Library Research

In this study, the author obtained data by using and studying literature or reading materials such as books, articles, journals, and others related to the problem under study.

b. Field Research

The research was conducted by directly involving the object of research to collect research data and information with the following techniques:

c. Observation (Observation)

Observation as a data collection technique has specific characteristics when compared to other techniques, namely interviews and questionnaires. Data collection techniques with observations related to observations on the development of infrastructure development and toll road management in Indonesia.

**Results and Discussion**

The following is the effect of infrastructure development and toll road management on connectivity between regions and the national economy:

a. Toll roads have a significant effect as a link between regions
b. Toll roads are integrated with supporting infrastructure such as airports, and ports;
c. Toll roads shorten travel time between regions;
d. With the existence of toll roads, there is an even distribution of regional development;
e. Toll roads as infrastructure to support access to industrial estates and tourism areas;
f. With the existence of toll roads, it increases and facilitates the distribution of goods and services;
g. Toll roads facilitate and increase people’s mobility;
h. The existence of toll roads attracts investors so as to increase the quality of the national economy.

Based on the results of research and data analysis carried out in this study regarding the effect of toll road infrastructure development on connectivity between services and the economy, the author can state as follows:

a. Toll road infrastructure development at PT Jasa Marga is quite good, this can be seen from the results of the study in the questionnaire statement as many as 12 perreal from 117 respondents, namely, 528 respondents 37.6 % answered Very Setuju (SS), 734 respondents 52.3 % answered Agree (S), 101 respondents 7.2 % answered Doubtful (DR), 38 respondents 2.7 % answered Disagree (TS), 3 respondents 0.2 % answered Strongly Disagree (SSTS).

b. Connectivity between regions and the national economy is quite good, it can be seen from the results of the study in the questionnaire statement with a percentage of responses, namely, 684 respondents 48.7 % answered (Very Setuju), 644 respondents 45.9 % answered (Agree), 76 respondents 5.4 % answered (Doubtful), 0 respondents 0 % answered (Disagree), 0 respondents 0 % answered (Strongly Disagree). Based on the results of the study, that r count is greater than r table with a value \(0.418 \geq 0.1816\) then it is declared valid. Variable reliability of toll road infrastructure development (0.497 > 0.1816), regression coefficient of 0.618 "STRONG" (0.600 - 0.7999). The results of the coefficient of determination test of the correlation of toll road infrastructure development to connectivity between regions and the national economy amounted to 38.20 %, while the remaining 61.80 % was influenced by other variables that were not studied. A
simple linear regression i.e. $Y' = 23.92 + 0.574X$. Hypothesis test and t test results are $(8,432 \geq 1,981)$ counting greater than table. This means that the development of toll road infrastructure has a significant influence on connectivity between regions and the national economy.

**Conclusion**

Based on the results of the elaboration contained in the writing above, it can be concluded that:

a. That the development of toll road infrastructure has a significant influence on connectivity between regions and the national economy

b. The government through the State-Owned Enterprise PT Jasamarga (Persero) Tbk consistently builds toll road infrastructure as a medium of nationalism, a form of pride for the homeland, identity, and a unifying nation. Connecting connectivity for Indonesia’s economic growth. As one of the state-owned enterprises providing toll road infrastructure services, Jasamarga has an important position in encouraging national economic growth through the construction and operation of toll roads as an infrastructure for distribution of goods/services and human traffic as well as infrastructure for forming regional spatial structures. Economic growth is one indicator to see the results of development that has been carried out and is also useful for determining the direction of development in the future. The availability of good infrastructure can increase people’s access to resources so as to increase productivity and efficiency and ultimately increase economic growth.

c. The development of technology in the era of the industrial revolution 4.0 is very fast. PT Jasamarga (Persero) Tbk through its subsidiary, PT Jasamarga Tollroad Operator, continues to strive to improve capabilities in facing the industrial era 4.0 using the Company’s resources, both human resources and science. So that it can continue to grow and develop following technological advances to become a Market Leader, especially in the field of Infrastructure Development and Toll Road Operations in Indonesia and can expand its wings to capture multi-business opportunities.

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