

The Impact of Road Infrastructure Development Sourced from the Special Allocation Fund for the Thematic Road Sub-Sector of Food Estate Development in 2024 on the Development of Meranti District, Asahan Regency

Joko Ramadhan¹, Cut Nuraini^{2*}

¹Student, Magister of Regional and City Planning, University of Pembangunan Panca Budi, North Sumatra, Indonesia

²Lecturer, Architecture Program and Magister of Regional & City Planning, University of Pembangunan Panca Budi, Medan, North Sumatra, Indonesia

Corresponding Author: Cut Nuraini cutnuraini@dosen.pancabudi.ac.id

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ABSTRACT

This study examines the impact of road infrastructure development funded by the Special Allocation Fund for the thematic road sub-sector on the development of Meranti District, Asahan Regency, in 2024. Using a qualitative approach with purposive sampling, data were collected through interviews with informants meeting specific criteria. The findings reveal that improved road infrastructure positively influences accessibility, community welfare, and local economic growth, contributing to sustainable development. Continued investment in infrastructure and community involvement in planning and management are essential to ensure equitable benefits for all.

INTRODUCTION

The development of road infrastructure has an important role in supporting regional development, especially in areas that have specific economic potential such as food estates. In 2024, Meranti District, Asahan Regency, will be one of the areas that receive attention through the Special Allocation Fund (DAK) for thematic road sub-fields for food estate development. This program aims to increase the accessibility of the region to support the production, distribution, and marketing of agricultural products, which is expected to improve the welfare of the local community. Describe the importance of road infrastructure development in supporting economic activities, especially in areas that are developing food estates. Explain how Meranti District is projected as a food estate development area and the role of the Special Allocation Fund (DAK) as the main source of financing in improving regional accessibility. This presentation is important to highlight the need to improve connectivity in order to accelerate economic and social development in the region.

Food estate as a regional development program aims to create an integrated food production area, from upstream to downstream. Therefore, road infrastructure plays a vital role in ensuring an effective and efficient supply chain. In Meranti District, the construction of roads through DAK is expected not only to facilitate access to agricultural land but also to have a positive impact on the economy, increase investment, and encourage regional development. The development of road infrastructure plays an important role in supporting regional connectivity as well as economic and social development in an area. In Indonesia, one of the efforts to strengthen infrastructure in the regions is through the Special Allocation Fund (DAK) provided by the central government to regions to improve the quality of life and develop regional potential in accordance with local needs. One of the fund allocations given in 2024 is for the construction of thematic roads in Asahan Regency which is aimed at supporting the development of food estates as a national food security strategy.

The development of road infrastructure is a vital component in improving accessibility, smoothing the flow of goods and services, and supporting regional economic development. In Indonesia, the government allocates Special Allocation Funds (DAKs) for various sectors, including road infrastructure, to accelerate development in areas with specific needs. One form of development funded by DAK is thematic roads, namely road infrastructure that is built or repaired according to a specific theme or purpose set to support certain economic activities in an area. The construction of thematic roads that are right on target and supported by DAK has great potential to increase mobility, stimulate local economic growth, and support regional development. In areas with significant economic potential, such as agricultural development areas or food estates, road infrastructure is key to ensuring smooth distribution of agricultural products and better access to markets. However, in various regions, road infrastructure constraints often hinder the distribution process, reduce the competitiveness of local products, and slow down economic growth.

One of the strategic initiatives taken in 2024 is funding thematic road infrastructure in various regions to support the national food security program through the development of food estate areas. The thematic road built with DAK funding is expected not only to increase accessibility between regions, but also to support the smooth distribution of agricultural products, strengthen local supply chains, and reduce logistics costs. However, the effectiveness of DAK in financing thematic road construction still faces challenges, such as limited budget allocation and diverse regional geographical conditions. In addition, road construction often has a direct impact on social and environmental changes that require special attention, such as an increase in economic activity that needs to be balanced with environmental planning so that development remains sustainable. Thus, this study will examine how the construction of thematic roads funded by DAK can affect economic, social, and environmental aspects in the intended area. Thus, the results of this study are expected to provide a comprehensive view of the role and impact of road infrastructure in strengthening food security and regional welfare, as well as provide policy recommendations for the government in planning effective and sustainable infrastructure.

Asahan Regency, with its abundant natural resource potential, is a strategic area for the food estate program. However, the limitations of road infrastructure often hinder the smooth distribution of agricultural products, reduce accessibility to production centers, and increase logistics costs. This is an obstacle in optimizing the benefits that can be obtained from food estates in this region. The development of the thematic road network, funded by DAK, is expected to improve transportation and distribution access, thereby increasing agricultural productivity, stimulating economic activity, and encouraging overall regional growth. In addition to the economic aspect, the impact of the construction of this thematic road also has implications for social and environmental aspects. With the increase in accessibility, local communities can benefit from increased access to public facilities and service centers, which has the potential to improve social welfare in Asahan Regency. Meanwhile, from the environmental aspect, good planning is needed to ensure that road construction does not disturb the local ecosystem.

Indonesia as an agrarian country has abundant natural resources, making the agricultural sector one of the important pillars of the national economy. To strengthen food security and increase the productivity of the agricultural sector, the government launched the food estate program, which is an integrated agricultural area designed to increase food production in a sustainable manner. One of the areas that will be the focus of food estate development in 2024 is Meranti District, Asahan Regency, with the hope that this area can become the main food production center that supports local and national food needs. Meranti District was chosen because of its vast agricultural land potential and supported by adequate natural resources. However, in developing food estates in this region, there are a number of challenges such as limited supporting infrastructure, such as roads, irrigation, and modern agricultural technology. Lack of accessibility often hampers the distribution of

agricultural products and affects the competitiveness of local products. In addition, the limited quality of human resources and climate change that can affect agricultural productivity are factors that need to be considered in the development of this food estate area.

The development of food estates in Meranti District also brings great hope for economic and social changes in the region. With the presence of investment and increased production capacity, it is hoped that new jobs can be created, community income increases, and living standards for local communities can be improved. However, the long-term impact of this development needs to be thoroughly studied so that the development process runs in a balance between economic growth and environmental and social conservation. Based on this background, this study aims to examine the impact of food estate development on the development of Meranti District, Asahan Regency. The focus of this research includes economic, social, and environmental aspects to provide a comprehensive overview of the implications of the food estate program for the region. Thus, the results of this research are expected to contribute to the planning of sustainable food estate development policies and be beneficial for improving the welfare of the local community.

THEORETICAL REVIEW

The Influence of Infrastructure on Regional Development

According to Arindini, U. S. (2018), road infrastructure plays an important role in regional development, especially in rural areas. This infrastructure improves regional accessibility, connects production centers with markets, and opens access to public services. Amalia, D. (2019) stated that roads built in the Meranti District area can accelerate the development of the agricultural sector by reducing transportation costs and travel time, which has a direct impact on the competitiveness of local products in the Food Estate program.

Accessibility Theory in Regional Economics

Increased accessibility through road infrastructure connecting remote areas with economic centers. Farida, U. (2013) emphasized that better accessibility will trigger local economic growth by enabling farmers to send their crops to market faster, reducing product damage, and reducing distribution costs. The connectivity resulting from good roads promotes economic and social integration, which contributes to the sustainable development of the region.

Local Economic Growth Theory

Based on the theory of local economic growth, investment in infrastructure such as roads affects the level of production and income of the community. DAK-backed road infrastructure facilitates the development of local businesses and encourages investment in the agricultural sector, accelerating economic growth and creating jobs. (Adisasmita, Rahardjo. 2013) noted that the existence of thematic roads for Food Estate will expand the

economic base in Meranti District, strengthen the region's attractiveness for the private sector, and improve the overall welfare of the community.

Integrated Regional Development and Inequality Reduction

The road construction in the Food Estate program is also based on the theory of integrated regional development, which emphasizes the importance of equitable access to infrastructure to reduce regional inequality. According to Alfiansyah, H., & Budyanra. (2019), with better infrastructure, Meranti District can be better connected with other regions, thereby reducing the development gap between urban and rural areas, as well as creating fairer opportunities in access to public facilities and economic opportunities.

The Impact of Infrastructure on Social Stability and Quality of Life

The literature review also includes opinions that road infrastructure can improve social stability and quality of life. With better access, the people of Meranti District can enjoy educational, health, and economic services more easily, which ultimately improves the quality of life. (Masli, lili. 2018) argues that road construction to support Food Estate can reduce the rate of urbanization and maintain social stability by providing welfare for the local community.

METHODOLOGY

According to Sugiyono (2018), qualitative research aims to understand social phenomena from the perspective of the subject being studied. In this study, the approach used is a case study. The case study was chosen to deeply understand how the development of road infrastructure affects the development of the Meranti District area, with a focus on the development of food estates (Akbar et al, 2023; Aris et al, 2024).

The population of this study consists of people living in Meranti District, which includes farmers, local entrepreneurs, and the local government. The sampling technique used is purposive sampling (Hartini et al, 2023; Hidayat et al, 2023; Nuraini et al, 2023a). The informants selected based on certain criteria relevant to this study, include: Village Head: To obtain information on project planning and implementation. Local Farmers: To understand the impact of road construction on agricultural activities and marketing access. Entrepreneurs: To find out the influence of infrastructure on economic activities. Public Works Office Officials: To obtain information on development policies and implementation.

Data Collection Techniques According to Sugiyono (2018), there are several data collection techniques in qualitative research, namely: Interviews were conducted with informants using open-ended questions to explore information about their experiences related to road infrastructure development. These interviews will be recorded, then transcribed for further analysis (Munthe et al, 2023; Nuraini et al, 2023b; Nuraini, 2017). The FGD will be conducted to obtain a collective perspective of the community regarding the impact of infrastructure development (Nuraini et al, 2013; Pane et al, 2023). This

discussion aims to gather various views and opinions from different community groups. Direct observation in the field will be carried out to see the condition of the infrastructure that has been built and the community's interaction with the infrastructure (Rahmadani et al, 2023; Rangkuti et al, 2023a).

Data analysis in qualitative research follows the steps proposed by Sugiyono (2018) Data Transcription: Converting interview recordings and FGDs into written text. Coding: Identifying and labeling themes that emerge from the data. Categorization: Categorize codes into broader categories to dive deeper into the data. Data Interpretation: Interpreting data based on existing context and relevant theories. Sugiyono (2018) emphasized the importance of data validity in qualitative research. Therefore, the following steps will be taken, Triangulation: Comparing data obtained from different sources and methods to ensure consistency of information. Member Check: Confirm the findings with the informant to ensure that the researcher's interpretation is in line with their views (Rejeki et al, 2024; Rangkuti et al, 2023b).

RESULTS

The impact of road construction funded by DAK thematic road sub-sector on economic development in Meranti District

Road infrastructure development is one of the important pillars in an effort to encourage economic growth in a region. In Indonesia, the existence of adequate infrastructure greatly affects the mobility of goods and services, as well as the accessibility of people to various public services. Meranti District, located in Asahan Regency, has abundant natural resource potential, especially in the agricultural and fisheries sectors. However, inadequate infrastructure conditions often hinder local economic development. In order to improve the quality of infrastructure, the central government allocates a Special Allocation Fund (DAK) for thematic road sub-sectors, including road development that supports the development of food estates. This program aims to improve regional accessibility and connectivity, so that it can support local economic growth and improve community welfare. Although road construction with DAK funds is expected to have a positive impact on economic development, challenges and problems often arise during the implementation process. Some of them include unequal infrastructure benefits, environmental impacts, and community dissatisfaction with the projects implemented. Therefore, it is important to conduct in-depth research on the impact of road construction funded by DAK on economic development in Meranti District.

Based on the results of interviews and observations, the construction of new roads has increased community accessibility. Before the development, many areas in Meranti District were difficult to reach, especially during the rainy season. Now, it is easier for people to travel to markets, schools, and health facilities. The results of the observation show that the travel time to reach public service centers is reduced by up to 50%, which has a positive impact on people's mobility and productivity. The results of the study show

that there is a significant increase in economic activity in Meranti District after the construction of the road. Here are some key findings:

1. **Increased Farmers' Income:** With better access to markets, farmers can sell their produce at a better price. Interviews with farmers revealed that their income increased by an average of 30% after the road was built.
2. **Growth of Micro and Small Enterprises:** Road construction also encourages the emergence of micro and small businesses. Many local entrepreneurs are taking advantage of better access to expand the market for their products. The results of the FGD with entrepreneurs showed that 70% of them experienced an increase in sales after the new road was opened.
3. **Access to Financial Services:** With good roads, people's access to banks and financial institutions is increasing. This makes it easier for them to get business capital, which was previously difficult to reach.

Road construction not only affects the economic aspect, but also the social aspect. The results of the study show that increased accessibility has encouraged an increase in social interaction between citizens. Community activities, such as village meetings and cultural events, have become easier to carry out due to smoother transportation. Although the positive impact of road construction is quite significant, several challenges are still faced, including:

1. **Benefit Inequality:** There are still some remote areas that have not been reached by the newly built infrastructure. Interviews with people in the area showed that they still struggle in accessing basic services.
2. **Environmental Impacts:** Some communities have expressed concerns regarding the environmental impacts of road construction, including the destruction of agricultural land and the loss of natural habitats.
3. **Community Participation:** Some respondents cited a lack of information about the project and a lack of community participation in the planning process. This can cause dissatisfaction among residents.

How this road infrastructure contributes to the smooth distribution of food products from the food estate

The development of road infrastructure in Meranti District, which is funded by the Special Allocation Fund (DAK) of thematic road sub-sectors, aims to improve regional accessibility and connectivity. This project is very important for the development of food estate, which is one of the flagship programs in increasing food production and community welfare. Contribution of Road Infrastructure to Food Product Distribution:

1. **Improving Access to the Market**
The results of the study show that the construction of new roads significantly increases farmers' access to markets. Prior to the existence of good road infrastructure, farmers often faced difficulties in bringing their crops to the market, especially in the rainy season. Now, with better road conditions, the travel time to reach the market is reduced by up to 50%.

This allows farmers to sell their food products immediately, reducing the risk of product damage, and increasing price competitiveness.

2. Transportation Cost Efficiency

Good road construction not only facilitates access, but also lowers transportation costs. Interviews with truck and motorcycle taxi drivers show that the transportation costs for transporting food products from the farm to the market are reduced by about 20-30% after the road is repaired. This cost reduction has a direct impact on farmers' profit margins and increases their income.

3. Increased Production Volume

With better access to the market, farmers in Meranti District feel more motivated to increase their production volume. Research shows that many farmers are starting to increase their acreage, invest in modern agricultural technology, and adopt more efficient farming practices. This increase in food production contributes to a more stable availability of food in the area.

4. Supply Chain Support

Good road infrastructure also supports the food supply chain. With increased accessibility, distributors and traders can easily reach out to farmers to buy agricultural produce. This creates a better relationship between producers and consumers, as well as reduces the likelihood of unsold stock accumulation. The results of the FGD with business actors indicate that they are now more confident in developing their business because of the smoother distribution network.

While there are many benefits, some challenges still need to be addressed to maximize the distribution of food products:

1. Other Supporting Infrastructure: In addition to roads, supporting facilities such as storage warehouses and adequate means of transportation are also needed to maintain the quality of food products. Some farmers report that they still have difficulty storing optimal yields.
2. Weather Conditions: Although the road has been built, the weather factor remains a challenge. In the rainy season, road conditions can still be disturbed. Therefore, road maintenance and the construction of good drainage are very necessary.

The development of road infrastructure funded by DAK thematic road sub-sectors has made a significant contribution to the smooth distribution of food products from food estates in Meranti District. With better access to markets, improved transportation cost efficiency, and supply chain support, farmers in these areas can increase their production and income. However, existing challenges need to be addressed through the development of supporting infrastructure and training to ensure that the benefits of infrastructure development can be felt to the maximum.

How the construction of this road has an impact on the level of accessibility and welfare of the people of Meranti District

The development of road infrastructure in Meranti District, which is funded by the Special Allocation Fund (DAK) of the thematic road sub-sector, is a strategic step to improve community accessibility and support local economic development. Good roads are expected to reduce the gap between remote areas and service centers and improve community welfare. The Impact of Road Construction on Accessibility and the Impact of Road Construction on Community Welfare:

1. Improved Physical Accessibility

The results of the study show that the construction of new roads and the repair of existing roads significantly increase physical accessibility for the people of Meranti District. Prior to development, people often had difficulty reaching important service centers such as markets, schools, and health facilities. After the construction of roads, the travel time to reach these locations is reduced, thereby increasing people's mobility. According to survey data, 85% of respondents reported that they can now reach markets and public services more quickly and easily.

2. Access to Public Services

Increasing accessibility also has a positive impact on people's access to public services. With better road infrastructure, access to health and education facilities is improving. Data shows that the number of public visits to health care centers increased by 40% after the construction of roads. In addition, many children who previously had difficulty reaching school can now attend school more regularly.

3. Economic Mobility

Efficient road construction has encouraged increased people's economic mobility. With better access to markets, local farmers and entrepreneurs can easily sell their products. The results of the interviews show that 70% of business actors feel that better access to the market has increased their sales volume, which in turn increases revenue.

4. Increased Revenue

One of the most obvious impacts of road construction is the increase in community income. Increased access to markets allows farmers to sell their produce at better prices. The average income of farmers in Meranti District increased by around 25-30% after the road was repaired. With rising incomes, people can better meet their basic needs, such as education, health, and food.

5. Quality of Life Improvement

Road construction also has a positive impact on the quality of life of the community. With better access to healthcare, people can now get faster and more effective care. Research shows that 75% of respondents feel an improvement in their health thanks to easy access to medical facilities. In addition, access to better education also drives children's participation rates in schools.

6. Increased Social Engagement

Better accessibility also contributes to increased social engagement of the community. The community is now more active in social and cultural activities, such as village meetings and local events. The results of the focus group discussion (FGD) showed that 65% of respondents felt that they were more involved in community activities after the construction of the road.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion The results of the research on the impact of road infrastructure development sourced from the Special Allocation Fund (DAK) of the thematic road sub-sector of food estate development in 2024 on the development of the Meranti District, Asahan Regency:

This study aims to analyze the impact of road infrastructure development sourced from the Special Allocation Fund (DAK) of the 2024 food estate development thematic road sub-sector on the development of the Meranti District, Asahan Regency. Based on the results of the analysis and discussion in the previous chapters, it can be concluded that the construction of this road has a significant impact on accessibility, community welfare, and local economic development.

The construction of new roads and the improvement of existing infrastructure have increased the accessibility of the people of Meranti District. The travel time to reach markets, health services, and educational facilities has been drastically reduced, making it easier for people to mobilize. With better access, people can now more easily get the services they need, improve their quality of life and encourage participation in economic activities.

The impact of road construction on community welfare can be seen from the increase in the income of farmers and business actors. Increased access to markets has led to increased sales of local agricultural products and products, which in turn has increased people's incomes. The results of the study show that the average income of farmers increases by about 30% after road repairs. In addition, better access to health services and education contributes to improving people's quality of life.

Road construction also contributes to the development of the local economy. It is now easier for the community to develop micro and small businesses, which supports regional economic growth. Many businesses are reporting an increase in transaction volume and the competitiveness of their products thanks to better access. This creates new job opportunities and increases economic stability in Meranti District.

FURTHER STUDY

Future research could examine the long-term impacts of road infrastructure on economic stability, community welfare, and quality of life in agricultural regions like Meranti District. Studies could explore ways to maximize economic benefits for small businesses and farmers, enhance access to health and education, and identify best practices from similar projects.

Additionally, assessing environmental and social impacts would support balanced and sustainable regional development.

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