



Assessment of Road Transport, Agricultural Pricing and Food Security in Cross River State, Nigeria

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Abstract: Food security remains a critical concern in many developing countries, particularly in Nigeria, where agricultural production and distribution are often constrained by infrastructural and economic challenges. In Cross River State, a region rich in agricultural resources, the effectiveness of road transport infrastructure and agricultural pricing mechanisms plays a significant role in determining the availability, accessibility and affordability of food. Against this background, coupled with the lacuna in the literature which this research intends to fill, this study investigates the interplay between road transport, agricultural pricing and food security in Cross River State with focus on Odukpani and Akpabuyo Local Government Areas. The specific objectives were to examine the effect of road transport on agricultural pricing in Cross River State; and assess the effect of road transport on food security in Cross River State. The cross-sectional research design was adopted for the study and the study population comprised farming households in Odukpani and Akpabuyo LGAs from which a sample of 200 hundred (200) respondents was drawn using the probability sampling technique. While 200 copies of structured questionnaire were administered, 195 were appropriately filled out, retrieved and analyzed. Descriptive statistics and logistic regression were used to analyze the primary data. The findings from the logistic regression revealed that both road transport and agricultural pricing have insignificant effect on food security in Cross River State. Further findings showed that road transport has an insignificant effect on agricultural pricing in Cross River State. Based on the findings, it was recommended that government should invest more in rural road infrastructures, integrate road infrastructure with food supply systems, Cross River State can achieve better food distribution, among others are critical to stabilizing agricultural prices, ensuring fair returns for farmers, and enhancing the general food security in Cross River State.

Keywords: Road Transport, Agricultural Pricing, Food Security, Logistic Regression, Cross River State, Nigeria.

INTRODUCTION

Agriculture remains a cornerstone of Nigeria's economy, providing employment for a significant portion of the population and contributing to national food security. In Cross River State, agriculture is particularly vital, especially in the southern local government areas such

as Odukpani and Akpabuyo, where it serves as the main source of income. However, the efficiency of agricultural production and distribution is heavily influenced by the state of transportation infrastructure, particularly road networks. Poor road conditions in Cross River State have been identified as a major impediment to the effective marketing of agricultural produce. Farmers in these regions face challenges in transporting their goods to urban markets due to deteriorated roads and numerous extortion checkpoints. These obstacles not only increase transportation costs but also lead to significant post-harvest losses, thereby affecting food availability and pricing [1].

The broader Nigerian context reflects similar challenges, where inadequate transportation infrastructure contributes to increased food prices and food insecurity. High transportation costs, driven by factors such as fuel price hikes and vehicle maintenance due to poor road conditions, have been linked to the rising cost of food items across the country [2]. These issues underscore the critical need to examine the impact of road transport on agricultural pricing and food security, particularly in regions like Odukpani and Akpabuyo where agriculture is vital to livelihoods.

Despite the agricultural potential of Odukpani and Akpabuyo Local Government Areas, farmers and consumers alike are grappling with the adverse effects of inadequate road transportation infrastructure. The deplorable state of rural roads hampers the efficient movement of agricultural produce from farms to markets, leading to increased transportation costs, reduced profit margins for farmers, and higher food prices for consumers [3]. Moreover, the presence of multiple extortion checkpoints exacerbates the situation, as farmers are compelled to pay unofficial fees, further inflating the cost of transporting goods. These challenges contribute to significant post-harvest losses, as perishable goods often spoil before reaching their destinations, thereby reducing the overall food supply and threatening food security in the region [4].

The cumulative effect of these transportation challenges is a disruption in the agricultural value chain, where increased costs and losses diminish the economic viability of farming and limit access to affordable food for the population [5]. Addressing these issues is imperative to enhance agricultural productivity, stabilize food prices, and ensure food security in Odukpani and Akpabuyo Local Government Areas. It is against this background that this study attempts to give answers to these research questions: what is the impact of road transport on agricultural pricing in Cross River State? and what is the impact of road transport on food security in Cross River State? This key objective of this research is to investigate the impact of road transport on agricultural pricing and food security in Cross River State, Nigeria. The paper is organized into five sections. Section one is the introductory section, section two deals with the reviews of literature relating to the study. The third section is the methodology. Section four covers results and discussion of findings, while section five deals with conclusions and recommendations.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Conceptual review

i. Road transport

Road transport refers to the movement of people and goods using motor vehicles on roads. It is a critical component of a nation's infrastructure, influencing economic development and accessibility. According to [6] road transport is the use of paved and unpaved road networks to

facilitate the movement of commodities and individuals, playing a pivotal role in linking rural agricultural producers to urban markets and services.

ii. Agricultural pricing

Agricultural pricing refers to the system of determining the value of agricultural commodities based on market forces, government interventions, or a combination of both. According to [7] agricultural pricing encompasses the methods and policies used to set the prices of farm produce, which in turn affect farmers' income, production incentives, and food availability in the market.

iii. Food security

Food security is defined as the condition where all individuals have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life. As noted by [8][9] food security exists when people consistently have access to adequate food in terms of quantity, quality, and cultural acceptability, without risking their health or livelihoods.

Empirical review on road transport and agricultural pricing

Adeneye and Abeeb (2025) [10] investigated how transportation costs affected agricultural commodity prices in Nigeria's Delta and Rivers States. The study used a survey research approach, collecting and analyzing both qualitative and quantitative data on the topic using key informant interviews and a standardized questionnaire. 348 people were included in the study's sample. Multiple regression analysis was used to examine the primary data that was gathered. The study's conclusions showed that the price of agricultural commodities is positively and statistically significantly correlated with transportation costs. Furthermore, the price of agricultural goods is statistically significantly impacted by rises in government various taxes, levies and unlawful fees, bribery paid by drivers, and the cost of vehicle maintenance and repairs.

In Kwara South Senatorial District, Kwara State, Nigeria, [5] evaluated the transport services used by cashew farmers, looked at the yearly outputs and cashew income, and evaluated the effect of transport on both. 1,373 farmers were methodically chosen from 36 rural villages within the study area to provide the data. Principal component analysis, regression analysis, and correlation analysis were used to analyze the responses. The findings revealed that only roughly 44.4% of the local villages were connected by tarmac roads. The transportation services were evaluated as good by about 56.4% of respondents. Significant associations were found between cashew output and; road condition ($b = -0.151$, $p = 0.000$) and; transport services ($b = -0.097$, $p = 0.000$), while, income from cashew was directly and significantly correlated with transport mode ($r = 0.059$, $p < 0.05$), road condition ($r = -0.153$, $p < 0.05$) and, transport services ($r = -0.096$, $p < 0.05$). The study came to the conclusion that variations in transportation facilities only partially explained the spatial variations in cashew output and income in the study area. It also suggested that transportation facilities be improved in order to increase farmers' crop output and income and improve rural livelihood.

Bassey (2021) [1] carried out a study on the impact of road transportation on agricultural development in Yakurr Local Government Area (LGA), Cross River State, Nigeria. Data were collected through personal observations, oral interviews, and questionnaire administration. A total of 400 copies of questionnaires were administered and 380 copies were returned and used for analysis. The study employed a descriptive statistical approach. The study noted that the

potentials of agriculture are not fully utilized in the study area due to the challenges of road transportation in the communities. These challenges are due to setbacks in government policies on transportation and agricultural development, lack of partnership and community-based organizations involvement in the maintenance of roads among others. These challenges result in high cost of transporting farm produce, inaccessibility to marketplaces, inaccessibility to farm inputs and general constraint of extension officers' operations. All these have negative effects on agricultural development.

Olutumise (2020) [11] used multinomial logit (MNL) to evaluate the relationship between the transportation system and output market participation among yam producers in the Southwest area of Nigeria. The MNL's findings indicated that the farmers' preferred mode of transportation was influenced by a number of factors, including household size, distance, farming experience, extension services, and market participation. Thus, the study comes to the conclusion that participation in the output market and the transportation system work together in a way that significantly affects the production and availability of food (yam) in the market.

Barnabas (2017) [12] investigates how transportation affects agricultural product marketing in a few markets in Plateau State's Jos North LGA. The survey research approach was used. The study's conclusions demonstrated that transportation is crucial to the distribution of agricultural goods, aids in the development of a market for them, and lowers farm product spoilage and waste. It also demonstrated how better transportation might motivate farmers to put in more effort to boost output.

Yaro, Okon, and Bisong (2014) [3] evaluated how rural transportation affected Boki LGA's agricultural development. The study used focus groups, key informant interviews, and questionnaire surveys to collect data. Paired sample tests were used to evaluate the data. The outcome shows that agricultural development is positively impacted by the transportation system in terms of employment and income.

Empirical review on road transport and food security

The link between transportation infrastructure and food security is well- established in academic literature, with numerous studies demonstrating how transportation systems directly impact food availability, accessibility, and affordability. Akinwale (2017) [13] emphasizes that an efficient transportation network is crucial in minimizing post- harvest losses by ensuring the timely movement of agricultural produce from farms to markets.

Furthermore, the economic effects of poor transportation are profound. Fadeyi (2016) [14] argues that inadequate infrastructure leads to inflated transportation costs, which ultimately increase food prices. When roads are impassable or roadsides become congested due to poor maintenance, the cost of transporting food from rural areas to urban centers escalates. As these costs are passed on to consumers, the affordability of food becomes a pressing issue, particularly for low-income households. The result is often reduced access to food, contributing to food insecurity.

In a similar vein, Adeniran, Gbadebo, and Ayantoyinbo (2025) [15] evaluated how transportation infrastructure affected food security in Ogbomoso, Oyo State, Nigeria's Ogo-Oluwa Local Government Area (LGA). The study combined qualitative and quantitative data collection approaches using a mixed-methods methodology. Using standardized questionnaires, a total of 592 respondents were chosen from a variety of industries, including market dealers, farmers, and transportation companies. While in-depth qualitative interviews with local stakeholders were carried out to obtain insights into the particular transportation

challenges faced by the community, the quantitative data was analyzed using descriptive and inferential statistical techniques, such as frequencies, percentages, and multiple regression analysis. The study's conclusions show that a major obstacle to the region's food security is a lack of suitable transportation infrastructure. In particular, the cost of transporting agricultural products to markets is increased due to poor road conditions, high transportation expenses, and restricted access to effective transportation systems, all of which have an impact on food prices. This increases food insecurity by making food more expensive, particularly for low-income households. Additionally, bad road conditions cause farmers to lose a lot of money after harvest since they can't quickly transport perishable commodities to markets, which results in wastage and spoiling. The study also found that farmers' access to bigger, more lucrative markets is restricted by ineffective transportation networks.

Several studies have suggested that improving road networks and transportation systems can facilitate better market access for farmers, thereby improving food security outcomes. Olaniyan & Fola (2018) [16] found that the availability of well-maintained roads allows farmers to easily transport their produce to urban markets where demand is higher, ultimately enhancing their income and reducing food scarcity in rural communities. Efficient transportation systems also enable farmers to access a wider variety of agricultural inputs, such as fertilizers, seeds, and pesticides, all of which are necessary for increasing farm productivity [17].

Moreover, the research conducted by Ogunbiyi *et al.* [18] highlights the role of strategic investment in rural infrastructure in enhancing food distribution channels. Their study revealed that areas with better transportation infrastructure experienced lower food prices, improved access to markets, and a reduction in post-harvest losses. These findings underscore the importance of infrastructure development, particularly in rural areas, as a catalyst for boosting agricultural production, improving food supply chains, and reducing food insecurity.

Using simple percentages Effiong, Aboh, and Azu (2024) [19] evaluated the impact of road development on food sovereignty in Akwa Ibom State, Nigeria. Additionally, it was determined that road projects contribute to food sovereignty, even though some of the abandoned projects have resulted in difficulties and environmental problems.

In Akinyele Local Government Area, Oyo State [20] investigated how the rural road transportation system affected food security. The study uses regression analysis on the primary data, multicollinearity and Cronbach Alpha reliability tests, and descriptive analysis. Additionally, the regression analysis shows that food security is positively and statistically significantly impacted by transportation infrastructure.

In Osun State, Nigeria [6] investigated how transportation networks contribute to food security and stability. Both primary and secondary data are used in this study's survey research design. The outcome indicates that the multiple determinant coefficient (r^2) is 0.893 and the correlation coefficient (r) is 0.927. The study came to the conclusion that transportation networks are essential for improving food items' mobility to different markets.

Theoretical framework

Spatial Interaction Theory:

This theory is associated with the work of Edward Ullman (1954), Spatial Interaction theory explains the flow of goods, services, people, or information between locations in space, based on complementarity, transferability, and intervening opportunities. The theory helps explain how road transport facilitates the movement of agricultural produce from rural farms to urban

markets. Efficient road networks reduce the cost and time of transportation, thereby affecting the pricing of agricultural goods.

Poor road infrastructure increases transport costs, which leads to higher prices for agricultural products in urban areas and lower returns for rural farmers. Spatial Interaction Theory highlights how transport accessibility (transferability) directly impacts market prices. Food security depends on the availability, accessibility, and affordability of food. Spatial Interaction Theory shows that better road transport enhances food distribution, reduces post-harvest losses, and ensures timely delivery of food to areas of need, thus improving food security.

Research gap

There is a gap in the literature on the study of road transport, agricultural pricing and food security nexus in Cross River State. To the best of our knowledge, only Bassey (2021) carried out a study on the impact of road transportation on agricultural development in Yakurr Local Government Area (LGA), Cross River State. Thus, this study seeks to fill the gap in the literature and extend the frontier of knowledge by exploring the link between road transport, agricultural pricing and food security nexus in Cross River State using the logistic regression approach.

RESEARCH METHODOLOGY

The cross-sectional research design was adopted for the study and the study population comprised farming households in Odukpani and Akpabuyo LGAs from which a sample of 200 hundred (200) respondents was drawn using the probability sampling technique. This sampling technique is appropriate since it enhances representativeness, reduces sampling bias, and enables the researchers to generalize the findings on the relationship between road transport, agricultural pricing, and food security in Cross River State, Nigeria. While 200 copies of structured questionnaire were administered, 195 were appropriately filled out, retrieved and analyzed. The structured questionnaire comprised of section which is the demographic information, and section B which consists of questions on impact of road transport on agricultural pricing as well as the impact of road transport and food security.

To establish the reliability of the instrument, a copy of the questionnaire was administered to fifty (50) respondents in the study area that was used for the main study. The data was then subjected to reliability analysis using the Cronbach-Alpha method to determine the internal consistency of the instrument. Report for each sub-scale yielded reliability coefficients ranging from 0.803 to 0.861. Each of the sub-scales was adjudged to be high enough and reliable to declare the instrument fit for use in generating data for the actual study. Descriptive statistics and logistic regression were used to analyze the primary data. The justification for using the logistic regression is that it helps to determine how the independent variable, road transport influence the likelihood of the dependent variables (food security and agricultural pricing).

The logit regression model can be specified as shown below:

$$Y_i = F(X_i\beta) + \varepsilon_i \quad \dots (1)$$

$$Y_i = 1, \text{ if adopted}$$

$$0, \text{ otherwise}$$

where,

$$\varepsilon \sim N(0,1);$$

β = maximum likelihood;

ε = error term;

X = set of independent variables included in the model.

The logit regression model is expressed as:

$$\text{Ln (AGPR)} = \ln (\hat{Y}/1-\hat{Y}) = \beta_0 + \beta_1\text{RQ} + \beta_1\text{RQ} + \beta_2\text{TC} + \beta_3\text{ACR} \quad \dots (2)$$

$$\text{Ln (FSEC)} = \ln (\hat{Y}/1-\hat{Y}) = \beta_0 + \beta_1\text{RQ} + \beta_1\text{RQ} + \beta_2\text{TC} + \beta_3\text{ACR} \quad \dots (3)$$

Where:

AGPR = measured by prices of farm produce

FSEC = Food security measured by household access to sufficient food

RQ = Road quality

TC = Transport cost

ACR= Accessibility of roads

$\hat{Y}$ is the predicted probability of the event which is coded with 0 = Non-performance; 1 = otherwise (performance)

$1 - \hat{Y}$ = is the predicted probability of the other decision

X = is the predictor variable representing other independent variables for internal and external variables.

The variables are measured by using the responses of the respondents in the questionnaire. The responses were coded with 0 = No; 1 = Yes.

DATA ANALYSIS AND DISCUSSIONS OF FINDINGS

Presentation of Data

From table 1, two hundred (200) questionnaires were administered to respondents and out of this number, 195 questionnaires were returned while 5 questionnaires were not returned. The total number of questionnaires returned was 195 representing 97.5 per cent while the total number of questionnaires not returned were 5, representing 2.5 per cent of the respondents who did not return their questionnaire.

Table 1: Summary of respondents.

Questionnaire	Responses	Total	Percentage (%)
Number of questionnaires returned	195	195	97.5
Number of questionnaires not returned	5	5	2.5
Total	200	200	100

[Source: Field survey by the Author, 2025]

Table 2 above shows the socio-demographic characteristics of the respondents. From the table female respondents were the majority representing 72.8 percent of the respondents. Respondents with business experience between 11 to 16 years were the majority representing

38.9 per cent of the respondents. Furthermore, the majority of the respondents were involved in garri business representing 28.2 per cent of the respondents.

Table 2: Socio-demographic characteristics of the respondents.

Variable	Frequency	Percent
Sex		
Male	53	27.2
Female	142	72.8
Farming experience		
Less than 5 years	29	14.9
5 – 10 years	56	28.7
11 – 16 years	68	38.9
Above 16 years	42	21.5
Nature of products		
Vegetables	18	9.2
Palm oil	52	26.6
Grains	50	25.6
Garri	55	28.2
Tubers	25	12.8

[Source: Field survey, 2025]

The SPSS output in Table 3 reveals that a 1-point increase in transport cost (TC) increases the log-odds of agricultural pricing (AGRP) by 0.123. Also, for each 1-point increase in TC, the odds of AGRP are 0.884 times higher, holding other variables constant. TC is a statistically significant predictor of agricultural pricing since its P-value of 0.009 is less than 0.05.

Table 3: Logit regression result.

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a						
TC	.123	.178	.479	1	.009	.884
ACR	-.040	.152	.068	1	.795	.961
RQ	.087	.071	1.483	1	.223	1.090
Constant	.056	1.555	.001	1	.971	1.058

a. Variable(s) entered on step 1: TC, ACR, RQ.

Dependent variable: AGRP

[Source: Researcher's computation, 2026]

However, from the SPSS result, a 1-point increase in access to roads (ACR) decreases the log-odds of AGRP by -0.040. Also, for each 1-point increase in ACR, the odds of AGRP are 0.961 times higher, holding other variables constant. ACR is not a statistically significant predictor of agricultural pricing since its P-value of 0.795 is greater than 0.05. Also from the result, from, a 1-point increase inroad quality (RQ) increases the log-odds of AGRP by 0.087. Also, for each 1-point increase in RQ, the odds of AGRP are 1.090 times higher, holding other variables constant. RQ is not a statistically significant predictor of agricultural pricing since its P-value of 0.971 is greater than 0.05.

Table 4: Logit regression result.

		Variables in the Equation				
		B	S.E.	Wald	df	Sig.
Step 1 ^a	TC	.120	.206	.337	1	.561
	ACR	.492	.181	7.353	1	.007
	RQ	.170	.084	4.067	1	.044
	Constant	-5.126	1.807	8.043	1	.005
	Exp(B)	1.127	1.635	1.186	.006	

a. Variable(s) entered on step 1: TC, ACR, RQ.

Dependent variable: FSEC

[Source: Researcher's computation, 2026]

The SPSS output in Table 4 reveals that a 1-point increase in transport cost (TC) increases the log-odds of food security (FSEC) by 0.120. Also, for each 1-point increase in TC, the odds of FSEC are 1.127 times higher, holding other variables constant. TC is not a statistically significant predictor of food security since its P-value of 0.561 is greater than 0.05. Similarly, from the SPSS result, a 1-point increase in access to roads (ACR) increases the log-odds of FSEC by 0.492. Also, for each 1-point increase in ACR, the odds of FSEC are 1.635 times higher, holding other variables constant. ACR is a statistically significant predictor of food security since its P-value of 0.007 is less than 0.05. Also from the result, from, a 1-point increase in road quality (RQ) increases the log-odds of FSEC by 0.170. Also, for each 1-point increase in RQ, the odds of FSEC are 1.186 times higher, holding other variables constant. RQ is a statistically significant predictor of food security since its P-value of 0.044 is less than 0.05.

Discussions of findings and policy implications

Effect of Road Transport on Agricultural Pricing in Cross River State:

The logistic regression result revealed that transport cost has a positive and significant effect on agricultural pricing in Cross River State. This implies that an increase in transportation expenses leads to a corresponding increase in the prices of agricultural products. The finding is consistent with economic theory, which posits that transportation constitutes a major component of the total cost of moving farm produce from rural production areas to urban markets. Farmers and traders often transfer the burden of high transport expenses to consumers through higher commodity prices. In Cross River State, poor transportation infrastructure, fuel price fluctuations, and high vehicle maintenance costs may have contributed to this outcome. The significance of transport cost further indicates that transportation remains a critical determinant of market prices for agricultural commodities.

The result also showed that access to roads has a negative and insignificant effect on agricultural pricing. This suggests that although access to roads may slightly reduce agricultural prices by improving the movement of goods, its influence is statistically weak and insufficient to significantly determine pricing patterns. The insignificance may be attributed to the fact that the mere existence of roads does not necessarily guarantee efficient transportation. Many rural roads in Cross River State may be inaccessible during rainy seasons, poorly connected to markets, or underutilized due to inadequate maintenance.

Similarly, road quality was found to have a positive but insignificant effect on agricultural pricing. This indicates that improvements in road quality may contribute to higher agricultural prices, though the impact is not statistically strong. The positive relationship could arise because better roads increase market integration and allow farmers to access distant urban

markets where prices are relatively higher. However, the insignificance suggests that road quality alone does not strongly determine agricultural pricing without complementary factors such as storage facilities, market access, and transport efficiency.

Effect of Road Transport on Food Security in Cross River State:

The findings further revealed that transport cost has a positive but insignificant effect on food security in Cross River State. This indicates that transportation expenses do not significantly determine the food security status of households. Although high transport costs may affect the affordability and distribution of food products, households may adopt coping mechanisms such as local sourcing of food or subsistence farming. Consequently, the influence of transport cost on food security becomes statistically weak.

Access to roads was found to have a positive and significant effect on food security in Cross River State. This finding reinforces the findings of Akinwale (2017), Saheed (2022) as well as Atodele and Oluwagbenga (2023). This implies that improved road accessibility enhances food security by facilitating easier movement of agricultural produce, reducing travel time, and connecting rural farmers to urban markets. Better road access also improves households' ability to obtain food supplies, health services, and income-generating opportunities. The significance of this variable confirms that transportation infrastructure plays an important role in ensuring food availability and accessibility in the state.

Furthermore, road quality has a positive and significant effect on food security. This suggests that good road conditions contribute substantially to improving food security among households. Quality roads reduce transportation delays, minimize post-harvest losses, and enhance the timely distribution of food products. In addition, improved road conditions lower vehicle operating costs and encourage commercial activities within rural communities. The finding demonstrates that road infrastructure development is essential for strengthening food systems and enhancing the welfare of households in Cross River State.

CONCLUSION

This study examined the effect of road transport on agricultural pricing and food security in Cross River State, Nigeria, using logistic regression analysis. The findings revealed that transport cost significantly influences agricultural pricing, indicating that rising transportation expenses contribute to increased prices of agricultural commodities. Access to roads and road quality, however, showed insignificant effects on agricultural pricing. The study further established that access to roads and road quality significantly improve food security in Cross River State, while transport cost showed no significant influence on food security. These findings underscore the importance of transportation infrastructure in enhancing food accessibility, reducing post-harvest losses, and promoting rural economic development. Overall, the study concludes that efficient transportation systems are critical for achieving sustainable agricultural development and food security in Cross River State. Improved road infrastructure and reduced transportation costs will not only stabilize agricultural prices but also enhance the welfare of households and rural communities.

Recommendations

- Government should rehabilitate and maintain rural roads regularly to reduce transportation difficulties faced by farmers and traders.
- Transportation costs should be reduced through fuel subsidy support for agricultural transport operators and provision of affordable rural transport schemes.

- More feeder roads should be constructed to connect remote farming communities with urban markets and storage facilities.
- iv, Government should establish integrated rural development programs that combine road infrastructure with agricultural support services.
- Public-private partnerships should be encouraged in financing and managing road infrastructure projects in rural areas.
- Market infrastructure such as storage facilities and agro-processing centers should be developed alongside road projects to maximize the benefits of transportation improvements.
- Policymakers should strengthen monitoring and evaluation mechanisms to ensure sustainability and effectiveness of road infrastructure projects.

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