



**EFFECTS OF ROAD TRANSPORTATION ON SOCIO-ECONOMIC DEVELOPMENT OF
RURAL COMMUNITIES IN KANO NORTH SENATORIAL DISTRICT,
KANO STATE, NIGERIA**

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ABSTRACT

The study examined the effects of road transportation on socio-economic development of rural communities in Kano North Senatorial District, Kano State, Nigeria. Multistage sampling procedure was used to select 400 respondents. Data were collected using structured questionnaire and analysed using both descriptive and inferential statistics. The finding revealed that, road transport has effect on social and economic development. Economic activities connected to road had a positive coefficient (0.350341) and was statistically significant at 5% level. This indicates that a unit increase in economic activities connected to road would lead to increase in economic development by 35%. Access to road in reducing transportation cost had a positive coefficient (0.1807951) and was statistically significant at 5% level. This indicates that a unit increase in access to road in reducing transportation cost would lead to increase in social development by 18%. It concluded that government should provide access to more roads that will help in providing more works to ease life. It was recommended that, there was a very serious high cost of transportation, high transport costs can take up a significant portion of a household's budget affecting spending on other essential needs like food, education and healthcare.

Keyword: Road, Transportation, Socio-Economic, Development, Rural, Communities

INTRIDUCTION

Over the years, transportation represents one of the most important human activities, because it is concerned with the movement of people or goods for some particular purpose. It is an indispensable component of any economy, and plays a major role in spatial relations between and among locations. It creates valuable links between regions and economic activities, between people and the rest of the world. Road transport in Nigerian today accounts for more than 90% of the country's goods and passenger movement (Filani, 2020; Oni, 2024). This shows the importance of road transportation to the economy of the country. This assertion corroborates the view of Okoko (2021) that transport is a necessary ingredient in all aspects of economic and social development. Road transport or road transportation is a type of transport by using roads. Transport on roads can be roughly grouped into the transportation of goods and transportation of people. In many countries licensing requirements and safety regulations ensure a separation of the two industries. Movement along roads may be by bike or automobile, truck, or by animal such as horse or oxen (Akintola, 2020). Akintola (2020) emphasizes progress in terms of economic and social factors within a geographic unit. Economic development is the process of raising the level of prosperity through increased production, distribution and consumption of goods and services. Rural community is an open swath of land that has few homes or other buildings, and not very many people. A rural areas population density is very low. Many people live in a city, or urban area. In a rural area, there are fewer people, and their homes and businesses are located far away from one another. Rural community is an area which is under development and not civilized, based on geographical conditions. The characteristics of rural community are rural area which is sparsely populated because many people leave rural areas and settles in the urban areas for more facilities (Filani, 2020).

The importance of road transport in rural areas of Nigerian can be justified from both social and economic perspectives. Socially, a significant proportion of Nigeria population lives in the rural areas and demand for various forms of transport to facilitate socio-political interactions Secondly, the



rural areas are indispensable source of food, raw materials to urban centres and the country's economic growth as a whole. In the light of the above, it becomes expedient to examine rural transportation problems, so that the extent of the problems can be known, and possible solution proffered to achieving sustainable rural development (Peter, 2015). Kano state, which is among the largest population area in Nigeria which witnesses activities centers that attract different types of people, thus the need for transportation to support such activities in rural communities is very important. This is because there is relationship between activities of the people and goods and services between rural –urban and within the rural communities in Kano State. Therefore, there is a need to conduct a structured study to assess the role of road transport in the proposed study area in order to ascertain the effect it has on socio-economic development.

The link between transport and other economic and social sectors in relation to the Millennium Development Goals for Africa has been defined by the AU Summit in which targets have been set for the transport sector for each of the eight MDGs. As indicated in the African transport section of the MDGs, transport has a role in facilitating the movement of goods and services as well as in ensuring access to educational and health facilities, which is also a key player in the achievement of the MDGs.

METHODOLOGY

Study Area

Kano state is located between Latitudes 11°50' N-12°03' N of the Equator and between Longitudes 8° 22'E-8°47'E of Prime meridian (Fig. 1a). The total land area of Kano State is about 20,760sqkm (Research and Documentation Directorate Kano, 2009). It is made up of 36 rural local government areas and 8 in the metropolitan area. The North Senatorial district, which study area is bounded by Jigawa State to the north east, Katsina State to the North West, Bauchi State to the South East, and Kaduna State to the North West. The populations of Kano north sanatoria district is about 2,601,500 of which 1,734,334 are male while 867,166 are female. Kano north sanatorial district has enjoyed a position as a trading paramount in the Sudan having a past close connection with North Africa and the Mediterranean coast. In more recent times, there are various large markets such as Danbatta major market, Dawanau International Grain Market, Bichi General Market, etc. which attract people from all over the country. According to Tuduwada (2007) in Kano north sanatoria district, industrial establishments grew from less than 30 in the mid-1960s to 40 in the early 1970s and over 110.

Sampling Procedure and Sample Size

Multi stage sampling technique was adopted for this study. Firstly, Kano senatorial district was selected purposively because of its geographical position and it has more rural communities in Kano state. Four LGAs will be selected systematically by arranging the LGAs that made up the senatorial district in alphabetical order and every 3rd LGA will be selected for questionnaire administration. Two rural communities will be purposively selected from each LGA making a total of eight (8). Also, systematic sampling technique will be used for selecting household head who will respond to the questionnaire. To obtain selection interval the following formulae (Razaq and Ajayi, 2000) was used. Therefore every 4th household will be selected for this survey until all copies of the questionnaire are exhausted. Records from the National Population Commission present the total population of Kano north senatorial district as 2,601,500 people as at 2006 population census (NPC, 2009). This was projected using Newman (2001) formula for population projection which arrive at 2,629,564 people in year 2021. The formula is given as; $P_n = P_o + (1 + R/100 \times P_o) n$. Using kreje and morgan table which stated that any population that is above 1million 380 – 400 can be used. Therefore, the sample size is 400.

Method of Data Collection

Primary data was collected using structured questionnaire.

Data Analysis

The study used descriptive and inferential statistics in analyzing the data.



RESULTS AND DISCUSSION

Socio-economic Characteristics of the Respondents

Table 1 shows that, the socio-economic characteristics of the respondents. The result depicts that majority of the respondents 92% were males. This indicates that socio economics activities in the study area was dominated by males and this could be as a result of the tradition and cultural heritage where females normally engage more in domestic activities which makes them always stay indoors. From the result also, age of the respondents depicts that, less than 18 is 5%, 18-30 is 26%, 31-40 is 43%, and 41-50 is 23% and 51 and above is 2%. The result indicated that the respondents were within the productive age bracket of 31-40 years; this also showed they were in their active and productive age. It also implied that younger farmers have strong preference for production activities. The age was important in this study since in the study areas age has a correlation with socio economics activities. Marital status of the respondents shows that, divorced 1%, Married 91%, Single 6%, Widowed 2%. This shows that most of the respondents in the study area were married; this could be attributed to the norms and culture of the people in the area that supported early marriage. This indicates that the married people would have cheaper labour than the single farmers who would have to pay for such services or do them by themselves.

The level of education of the respondents shows that, Primary 24%, religious education 27%, Secondary 35%, Tertiary 15%. The result further revealed that the level of respondent's education was averagely low. This indicates that respondents had few years in school. The implication of this result is that, few of the respondents can read and write either in Arabic or in western education which can seriously affect their decision to accept and understand developmental project with little stress. Occupation of the respondents shows that, Civil Servant 1%, Farming 55%, Fishing 17%, House wife 4%, Trading 24%. The result shows that majority of the respondents were farmers. Farming is one of their major economics activities in the area. Household Size of the respondents shows that, means is 7.369668 and standard deviation is 4.33434. This shows that the respondents had large household size; this is not surprise as many of them had more than one wife which is permissible in their culture. However, polygamy nature of the rural farmers plays significant role for having larger household size and they see it as a good and economical way of maximizing farm returns by using family labour. It also implies that, respondents can utilize family labour in some of their socio-economic activities, hence the larger the size of the household, the more family labour is utilized which has effect on production.



Table1: Socio-economic Characteristics of the Respondents

| Characteristics | Frequency | Percentages | Cumulative frequency |
|---------------------------|-----------|--------------------|----------------------|
| Sex | | | |
| Male | 194 | 92 | 91.51 |
| Female | 18 | 8 | 100.00 |
| Age | | | |
| Less than 18 | 10 | 5 | 4.88 |
| 18-30 | 54 | 26 | 31.22 |
| 31-40 | 89 | 43 | 74.63 |
| 41-50 | 47 | 23 | 97.56 |
| 51 and above | 5 | 2 | 100.00 |
| Marital status | | | |
| Divorced | 3 | 1 | 1.42 |
| Married | 192 | 91 | 91.98 |
| Single | 13 | 6 | 98.11 |
| Widowed | 4 | 2 | 100.00 |
| Level of education | | | |
| Primary | 49 | 24 | 23.75 |
| Quarnic | 58 | 27 | 50.71 |
| Secondary | 73 | 35 | 85.31 |
| Tertiary | 31 | 15 | 100.00 |
| Occupation | | | |
| Civil Servant | 3 | 1 | 1.42 |
| Farming | 115 | 55 | 55.92 |
| Fishing | 35 | 17 | 72.51 |
| House wife | 8 | 4 | 76.30 |
| Trading | 50 | 24 | 100.00 |
| | Mean | Standard deviation | |
| Household Size | 7.369668 | 4.33434 | |

Source: Field Survey, 2024

Determinants of Effects of Transportation on Social Development

Effect of transportation on social development. The results in Table 4 revealed that the Pseudo R^2 (0.5988), Adj R-squared (0.4724), F (6, 205) 3.74, Prob > F (0.0015), this showed that the estimated model and the set of explanatory variables fit the data. R^2 value shows that the independent variables have explain the variation in the dependent variable by 59%. Based on the result, economic activities connected to road had a positive coefficient (0.5569321) and was statistically significant at 1% level. This indicates that a unit increase in economic activities *connected* to road would lead to increase in social development by 55%. This shows that having economic activities in the area such as markets, petty trades, Okader, and others situated where they are connected to road increase their social development. This is in line with the finding of Adeniyi, D. (2018), showed that economic activities connected to road lead to increase in social development.

Table 2: Determinants of Effects of Transportation on Social Development

| Variable | Coefficient | Standard Error | T-statistics | P-Value |
|---|-------------|----------------|--------------|---------|
| Economic activities connected to road | 0.5569321 | 0.1790287 | 3.11 | 0.002 |
| Access to road transport in marketing agriculture produce | 0.2039921 | 0.2372014 | 0.86 | 0.039 |
| Flow of business activities in the settlement | 0.4545218 | 0.2986747 | 1.52 | 0.013 |
| Access to road in reducing transportation cost | 0.1807951 | 0.2364796 | 0.76 | 0.044 |
| Number of periodic markets | 0.4409822 | 0.1719521 | 2.56 | 0.011 |
| Employment generation | 0.1718117 | 0.2502203 | 0.69 | 0.069 |
| Cons | 4.236783 | .4277056 | 9.91 | 0.000 |
| R-squared | 0.5988 | | | |
| Adj R-squared | 0.4724 | | | |
| Prob > F | 0.0015 | | | |

Source: Field survey, 2024



Determinants of Effects of Transportation on Economic Development

Effect of transportation on economic development. The results in Table 4.4 revealed that the Pseudo R^2 (0.966916), Adj R-squared (0.951258), F (6, 205) 1.43, Prob > F (0.0570), this showed that the estimated model and the set of explanatory variables fit the data. From the result the economic activities connected to road had a positive coefficient (0.350341) and was statistically significant at 5% level. This indicates that a unit increase in economic activities connected to road would lead to increase in economic development by 35%. The result shows that effective road networks enhance economic activities, leading to job creation, improve access to markets and overall regional prosperity. Investment in roads is often seen as a catalyst for broader economic development efforts. This result is in line with the finding of Olufemi, K. (2018) revealed that, economic activities connected to road increase economic development.

Table 3: Determinants of Effects of Transportation on Economic Development

| Variable | Coefficient | Standard Error | T-statistics | P-Value |
|---|-------------|----------------|--------------|----------|
| Economic activities connected to road | 0.350341 | 0.174048 | 2.012895 | 0.045427 |
| Access to road transport in marketing agric produce | 0.996478 | 0.223392 | 4.460679 | 0.03468 |
| Flow of business activities in the settlement | 0.458098 | 0.240654 | 10.21424 | 0.04440 |
| Access to road reduce transportation cost | 0.232812 | 0.215888 | 5.710428 | 0.039760 |
| Number of periodic markets | 0.423332 | 0.168822 | 2.507561 | 0.012929 |
| Employment generation | 0.806485 | 0.245788 | 3.281223 | 0.001214 |
| Cons | 1.097678 | 2.81012 | 3.9100 | 0.000 |
| R-squared | 0.966916 | | | |
| Adj R-squared | 0.951258 | | | |
| Prob > F | 0.0570 | | | |

Source: Field survey, 2024

CONCLUSION AND RECOMMENDATIONS

The study analysed the effect of road transportation on socio economic development. From the results it was found that economic activities connected to road had a positive coefficient (0.5569321) and was statistically significant at 1% level. This indicates that a unit increase in economic activities connected to road would lead to increase in social development by 55%. This shows that having economic activities in the area such as markets, petty trades, Okader, and others situated where they are connected to road increase their social development. Economic activities connected to road had a positive coefficient (0.350341) and was statistically significant at 5% level. This indicates that a unit increase in economic activities connected to road would lead to increase in economic development by 35%.

It was recommended that, the result revealed that, there was a very serious high cost of transportation, high transport costs can take up a significant portion of a household's budget affecting spending on other essential needs like food, education and healthcare. It was recommended that government should provide access to more roads that will help in providing more works to ease life.

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