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IMPACT OF COMMUNITY DRIVEN DEVELOPMENT PROJECT: A CASE OF FADAMA II PROJECT IN OYO STATE, NIGERIA.

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Abstract
This paper evaluates impact of Community Driven Development programme on infrastructure under National Fadama II Project in Oyo State Nigeria. Data were collected from two hundred and sixty-four farmers using multistage sampling procedures. Data were analyzed using descriptive statistics and infrastructure index. The result shows that average infrastructural index in the area was 0.42. Forty-four villages were classified as infrastructural developed villages (IDV) while the remaining were infrastructural under-developed villages (IUV). The study therefore calls for the involvement of both private and public organization in construction and rehabilitation of rural infrastructure, processing services centers and researches on labour saving devices for agriculture in the study area.

Key words: *Community Driven, Infrastructural index, Private organization, Multi-stage sampling, Fadama II project, Oyo state*

Introduction

Rural infrastructure is the product of economic activities. The rural economy is largely dependent on on-farm activities. Infrastructure is a frequently used word, but there is no consensus in economic literature on its precise meaning. Nurkse (1961) views infrastructure as an umbrella term for many activities referred to as "social overhead capital". These include services from; (a) public utilities such as power supply, piped water supply, sanitation and sewerage, (b) public works such as road and major dam and canal works for irrigation and drainage. Jibunuoh (1998) described infrastructure as an element with technical, economic and institutional character with a social component as an integral part. Akinyosoye (2000) was however of the opinion that economists introduced the term infrastructure into the literature of development economics to be used interchangeably with "overhead capital". According to him, distinctions such as "social infrastructure," "economic infrastructure," "physical infrastructure" and "institutional infrastructure" were being made in order to emphasize a particular aspect of the many attributes that the word "infrastructure" represented. But a common definition is essential for understanding and resolving issues related to research and the public sector role in development of infrastructure. This common trend was sought in the definition of "public goods" because infrastructural development essentially means creation of public capital goods (Ahmed and Donovan, 1992). Such capital goods carry the distinction of producing external economies (technological and pecuniary) and social benefits different from private benefits.

The importance of infrastructural services to economic development is enormous. As indicated by the Agricultural Development Bank (ADB) (1999), infrastructure provides the environment for productive activities to take place and facilitates the generation of economic growth. For instance, in the absence of adequate marketing, processing, water and transports facilities, and the production process or location advantages may not be optimized. On the other hand, availability of an efficient infrastructure network can stimulate new investment in various sectors.

As a poverty alleviation mechanism, the ADB (1999) stated that provision of infrastructure leads to economic growth and poverty alleviation. The poor are usually identified as having inadequate access to infrastructure services such as clean water, sanitation, transportation and communication, which are considered as 'input indicators' of poverty. These limit their access to another set of input indicators (namely health services, education facilities, food and markets), which will have a negative impact on 'output indicators' of poverty such as life expectance, literacy, employment income and nutrition. Hence, the provision of infrastructure can

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directly reduce poverty through its effect on these input and output components. The role of infrastructure is complex and its effects are indirect. Consequently development economists have not focused on infrastructure as much as they have on directly productive activities such as agriculture and industry.

It has also been established that infrastructure imparts welfare in three basic respects: First, it has basic consumption value and as such affects utility derivable from existing and budgeted income. Second, its availability affects productivity and capacity to earn income. Third, it affects households and national stock real wealth in the rural and urban economies. Availability of infrastructure affects peoples' time allocation (poor and the rich). Infrastructure also has multiple effects on heath and quality of life. Some authors (*Kessiades, et al., 2000,* and Alaba, 2001) have variously pointed out that individuals are poor because they do not have access to infrastructure services of necessary quality. The Impact evaluation report by IFPRI in 2008 shows that the economic rate of return at completion of *Fadama I* project was 40% compare to an estimated 24% at appraisal level. However, the remaining 60% of the project output was claimed up through post harvest losses resulting from poor transportation infrastructure and the non-inclusion in *Fadama I* such as processing, storage and other downstream activities. In addition, because of poor post harvest handling of the output, the products lost quality and could not fetch the best price available in the markets.

Infrastructure's ability to reduce the cost of marketing agricultural products is obvious and well known. An IFPRI (International Food Policy Research Institute) report study shows that African farmers receives only 30 to 50 percent of the final prices paid by consumers, compared with 70 to 85 percent of prices received by farmers in Asia. About two-thirds of this difference is attributable to the substantial difference in transportation costs between countries in the two continents – a factor directly related to transport infrastructure. The inadequacy in the provision of rural infrastructure, lack of maintenance culture coupled with inconsistency in policies regarding infrastructural development is expected to have a negative impact on agriculture, which is the major occupation in the rural areas and main sustenance of development in Nigeria. Realizing the important role infrastructure would play in the development of Nigerian agriculture, much government effort over the years has been put into opening up the new land and linking rural communities with the cities through *Fadama II* project. Economists have long been working to discover why some countries move fast, while others lag behind on the path of economic development. The role of infrastructure facilities in economic development remains to be fully unfolded or has been unraveled with considerable degree of ambiguity. In response, the Nigerian Government launched the Second National Fadama Development Project (*Fadama II*) in 2005 as a follow up of first phrase (1992-1999) with the main goal of sustainably increase the income of the users with its five key components. This study focused the on impart of the community infrastructure provided by the project as one of the major components of the project. The rural infrastructure component is to support creation of economic infrastructure and local public goods that would improve the productivity of Fadama user households. This study will attempt to reveal the impact of the Second National Fadama Development Project as one of the major recent development Project put in place by the government as an initiative to improve the sector and the whole economy of the country.

Theoretical Framework and Literature

Infrastructural investments in transport (roads, railways and civil aviation), power, Irrigation, watersheds, hydroelectric works, scientific research and training, markets and Warehousing, communications and informatics, education, health and family welfare play a strategic but indirect role in the development process. Unlike sectoral development, of, say, agriculture or industry, infrastructure does not directly increase output, but makes a significant contribution towards growth by increasing the factor productivity of land, labour and capital in the production process. Theoretically, economists proceed from the premise that the creation of infrastructure by generating external economies leads to widespread benefits.

Figure1 shows how traditional theory conceptualizes the effect of infrastructural development on production for a competitive market economy. In a situation of inadequately developed infrastructure, firms are confronted with higher marginal cost (MC1) at every level of production, and, given the market price of their output, produce at Q_1. With an improvement in infrastructure, the marginal cost curve shifts downward to the right (MC_2),

resulting in a total cost savings of area abcd for the earlier level of output, Q_1, and an increase in output from Q_1 to Q_2. The cost reduction occurs through the interaction of infrastructure with directly productive inputs of firms/farms thereby increasing efficiency of production. This may, however, come in a variety of ways, such as reduction in transfer costs, improved diffusion of technology, new combinations of inputs and outputs, better input prices, increased specialization and commercialization, and improved entrepreneurial capacity, all realized through infrastructural investment. It may also be pointed out that this is a simple abstraction. It does not take into account the process and sectoral interaction through which benefits accrue and also does not say anything about social developments, such as effects on consumption patterns, health and family planning. The cost reduction is the outcome of an interaction between directly productive inputs of other firms.

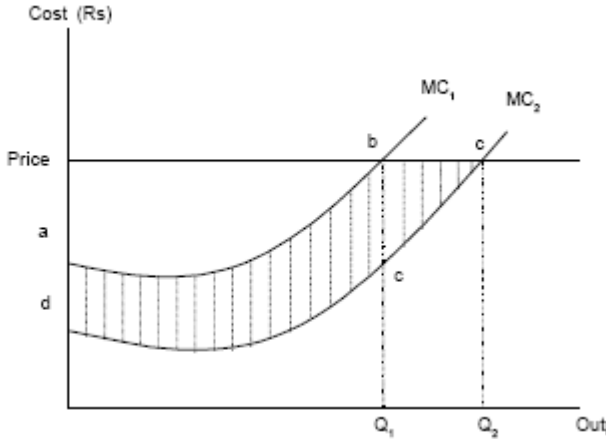

Figure 1: Infrastructure Provision and Efficiency of Production

MC_1 = Marginal Cost with infrastructure deficiencies
MC_2 = Marginal Cost with adequate infrastructure

Many authors have viewed infrastructural developments as a form of rural/community development. According to Idachaba and Olayide, (1980) rural infrastructures constituted the substance of rural welfare, which is the improvement of the socio-economic life of a community. Infrastructural development goes with developmental programme such as agricultural extension, mass education health and nutrition extension or any of the terms applied to sectoral programmes within rural community. It is generally believed that a move towards infrastructural provision is actually a move for national development. The importance of infrastructural development to rural development in the developing countries of Africa cannot be over emphasized. Idachaba and Olayide (1980) observed that a realistic national development programme should be able to cater for a majority of the nation's populace, which according to him, is formed in the rural areas in less developed countries.

Infrastructure represents, if not the engine, then the "wheels" of economic activities. The role of infrastructure in promoting development is not new; its improvement increases the efficiency of production and contributes to standards of living. Improvement of welfare and production capacity through availability of reliable and sustainable infrastructure is regarded as one of the most important objective of, as well as means to economic development. For example, telecommunications, electricity, and water are used in the production process of nearly every sector, and transport is an input for every commodity. Users demand infrastructure services not only for direct consumption but also for raising their productivity by reducing the time and effort needed to secure safe water, to bring crops to market, or to commute to work. In many communities in Nigeria, inadequate or low quality infrastructures have been known to have serious implications for welfare and persistence of poverty (Alaba, 2001).

A recent study at the International Food Policy Research Institute (IFPRI) in 2008 undertaken a comprehensive analysis of the impact of infrastructure on poverty in rural India by looking at the relationship between government expenditure incurred on Research and Development, irrigation, roads, education, power, soil and water, rural development, health and family welfare, and the impact of each of these expenditures on the incidence of poverty in rural areas by employing a simultaneous equation regression model. The study is based on time series of state-wise data on poverty, rural employment, wages and government expenditure on specified infrastructures. By using a simultaneous equation regressive model, the authors bring out that government expenditure on roads had the highest impact on reduction of poverty, followed by that on welfare, health, rural development, education, and soil and water. In addition to above was the study by Peng (2002) who pointed out that road construction could reduce the expenditure of Agricultural production, Fang *et al.* (2004) revealed that the potential of agricultural production can be release through rural infrastructure investment.

In one of the technical background documents for the World Food summit, held 10 years ago, it is concluded that "Roads, electricity supplies, telecommunications, and other infrastructure services are limited in all rural areas, although they are of key importance to stimulate agricultural investment and growth". The document further argues, "Better communications are a key requirement as they reduce transportation cost, increase competition, reduce marketing margins, and in this way can directly improve farm incomes and private investment opportunities". Binswanger *et al*. (1993); Fan, *et al*. (2000); Mundlak, *et al*. (2002); Fan and Zhang (2002); and Fan and Zhang (2004) studies demonstrate that investment in infrastructures is essential to increase farmers' access to input and output markets, stimulate the rural non-farm economy and vitalize rural towns, to increase consumer demand in rural areas, and to facilitate the integration of less-favoured rural areas into national and international economies.

Materials and Methods

The Study Area

The study was carried out in Oyo State one of the states selected for *Fadama II* project in the south western geo-political zone, Nigeria. It is bounded in the west by Benin Republic, in the south by Ogun State, in the east by Osun State and in the north by Kwara State. According to the 2006 Census, the Oyo State population stood at 5,591,589. Oyo State has thirty-three Local Government Areas (LGAs) in which only 10 participated in Second National *Fadama* project. Agriculture is the major source of income for the greatest number of people of the State. Apart from the primary roles of providing food and shelter, employment, industrial raw materials, it remains an important source of internally generated revenue in the State. The state has distinct wet and dry seasons, which characterize its humid tropical climate, with the dry season extending from November to March. Annual rainfall varies from about 500 mm in the northern belt to 1,100 mm in the forest belt. The climate favours the growth of food crops like yam, cassava, millet, maize, fruits, rice and plantains. Cash crops such as cocoa, citrus, tobacco and timber also abound in the state. Figure 2 shows the map of the *FadamaII* and non-Fadama local government areas in Oyo state.

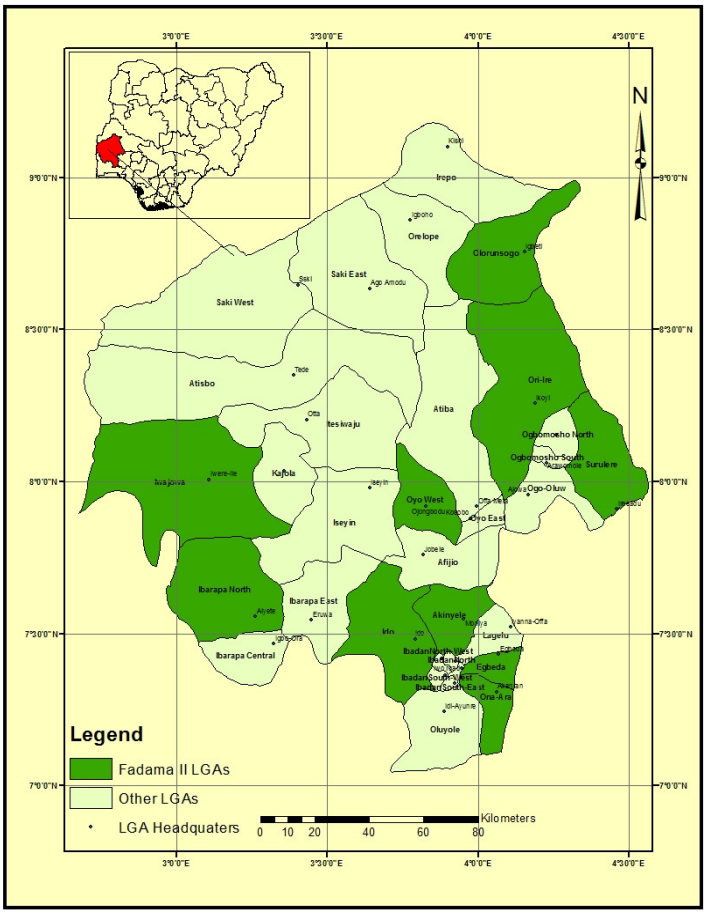

Figure 2: Map Oyo State showing *Fadama II* Local Government Areas

Source of Data and Sampling Procedure

Primary data was collected for the purpose of this study using structured questionnaire. Some of these include: socio economic and demographic characteristics, Infrastructure proxy variable (such as distance of getting to various infrastructure such as road, market facilities, processing equipment and the access to sanitation etc.) and total production inputs and output quantities and their respective prices of Fadama and non-Fadama crop farmers. A multi-stage stratified random sampling procedure was adopted for the study. The stratification sampling procedure helped in avoiding selection bias that could arise from comparison between participating and non-participating *Fadama II* project LGAs. The sampling frame was stratified into two strata: Beneficiaries' local government areas and Non -beneficiaries' local government areas (LGAs) that have some social economic and biophysical characteristics comparable to the beneficiaries' LGAs. The first stage of selection involved random selection of two LGAs out of ten that participated in *Fadama II* project and two LGAs from the remaining twenty-three local government areas that are non participants. In the next stage, 17 villages were randomly selected from each of these LGAs. The last stage involved selection of 4farmers from each village. In all, a total of 160 farmers/respondents were chosen in each stratum (given total of 320 farmers/respondents for *Fadama II* and non-Fadama farmers). A total of 320 respondents were interviewed, while two hundred and sixty four questionnaires contained information for meaningful analysis.

Analytical tool

The analytical techniques in the data analysis include: descriptive statistics, infrastructure index and gross margin. Composite measure of infrastructure development (Infrastructure Index): The infrastructural index used for this study is based on the sampled village level data adopted from Fakayode *et.al*. (2008) and comparable to method developed by Sen (1980). A total cost of access (TC) was computed by summing the individual cost of access (TC_i) to the some six basic infrastructure elements in the study area. These six are those provided by *Fadama II* project. These infrastructure elements/facilities include market, motorable road, potable borehole, box Culvert, VIP toilet and processing unit. A total cost of infrastructure availability (TC) was computed by summing the average cost (AC_i) of getting a particular infrastructural facility in the 68 villages. AC_i was however obtained as an average individual transportation cost was (ID_{ci}) of the respondents in each of the 68 villages. The use of transportation cost was based on the fact that an interaction exists between transport facilities and institutional infrastructures, Ahmed and Donovan (1992). An Average Total Cost (ATC) of getting to each of the six infrastructure elements across the villages was obtained by dividing the total cost (TC) by the total number of village (N). AC_i was finally weighted with ATC to obtain the weight W_i for each infrastructure and across all the villages. The infrastructure index (INF) was finally obtained by finding the average of the W_{is} of the six infrastructural facilities for each of the 68 villages.

Algebraically:

$$ACi = \frac{\sum_{i=1}^{n} IDi}{n} \quad \text{.....(1)}$$

$$TC = \sum_{i=1}^{N} ACi \quad \text{.....(2)}$$

$$ATC = \frac{TC}{N} \quad \text{.....(3)}$$

$$Wi = \frac{ACi}{ATC} \quad \text{.....(4)}$$

$$INF = \sum_{1}^{6} (Wi.TCi \sum_{1}^{6} Wi \quad \text{..... (5)}$$

Where:

ID_{ci} = Individual transportation cost of getting to each Infrastructure by the respondents in each village

AC_i = Average cost of transportation in each village.

TCi = Total cost of transportation to a particular infrastructure i across villages.

ATC = Average total cost of transportation across villages.

W_i = Weight of Average transportation cost in each village.

INF = Infrastructural Index

N = Total number of villages

M=Total number of infrastructure facilities.

n = Number of respondents in each village.

The infrastructural Index (INF) indicates the degree of under-development, thus, the higher the value of the INF, the less developed the village considered. Further approach to grouping the villages into developed and underdeveloped areas was to sum the infrastructural index for all the 68 villages and

the average obtained. The villages with value above the average were said to be under-developed and those below average were said to be developed.

Results and Discussion

Table 1 presents the distribution of respondents by marital status. The bulk of the respondents (87.1%) are married regardless of the category of respondents (81.1% for Fadama and 98.8% for non-Fadama farmers). The implication of this is that, there is likely to be more family labour available for farm work. However, majority of respondent farmers (Fadama and non Fadama) farmers are older than 50 years. This is the active age when farmers can carry out the physical rigor of farm activities. This has implication for agricultural production because farm work requires physical energy and strength.

Education status shows that the largest percentage of the respondents (83.3%) had primary education and more. Education has an important implication particularly for the adoption of new technology and practice (Akinbile and Ndaghu, 2000). In all, most of the households have at least 6 members which is higher than the national average (5) for all respondents (Fadama and non-Fadama). The size of the household is an importance variable especially in a situation where human power is a major source of power for carrying out farming activities. Notwithstanding Fadama respondents shows a relatively higher percentage of women participation in the farming activities than men. This was attributed to their participation in Fadama I project, a project that gave equal chances to both man and woman and with the provision of some incentives such as market expansion and rehabilitation/construction of rural roads that links to the city, which particularly motivate women to agricultural activities. The implications of more women participation in farming activities increases the population in the agricultural production, thereby reduces food prices, by making food available and improves the standard of living Nkonya *et al*. 2008).

The result further shows that majority of respondents/farmers belonged to organization. Membership of associations is common among Fadama II more than non-fadama farmers. Belonging to farmers' organization enable respondents/farmers to have access to information, cheaper inputs, extension services, profitable and other intangible benefits that enhance efficiency in production. The distribution of the respondent's farm size shows that average farm size for the entire groups was 2 hectares and most farmers have farming experience of at least 10 years while majority of respondents/farmers are full time farmers. The result shows that infrastructure facilities in the study are those related to agriculture available in both Fadama and non-Fadama areas. These include: Market, motorable road, Boreholes, VIP toilet, Box culvert and processing services center. Fadama farmers spent an average of N44.44 and 27.02 minutes respectively to access market infrastructure provided by the project in beneficiary communities while in non-beneficiary communities spent more on the average to access the same facility. The infrastructure facilities in the study are those related to agriculture available in both Fadama and non-Fadama areas. These include: Market, motorable road, Boreholes, VIP toilet, Box culvert and processing services center. The study revealed that Government and Non-Governmental agents provided available infrastructure facilities in non- Fadama areas.

Fadama farmers spent an average of N44.44 and 27.02 minutes respectively to access market infrastructure provided by the project in beneficiary communities while in non-beneficiary communities spent more on the average to access the same facility. It shows that Fadama farmers spent the least average amount to various infrastructure elements. Thus the distance barrier is reduced, as transport cost is at minimal in Fadama participating LGAs. Thereby, Fadama participating villages had better access to various infrastructural facilities provided and they were found to be significantly better off in a number of areas including agricultural production, household incomes, and health. The findings support Bhatia et al 2004, Wanmali 1985, Ahmed and Donovan (1992), that the measure of access to various infrastructures is the physical distance in kilometers or transport cost between the households and the centers where these services are provided. Table 3 shows the average length of time individuals wait for motor vehicle. It was observed that average waiting time for Fadama LGAs is lower compare to non-Fadama LGAs at 10.44 minute, compared with Fadama LGAs of 5.70 minutes. Across LGAs it is 6.80 minutes.

In order to have a vivid exposition of the degree of under-development, index of infrastructure, Table 4 shows that the index of infrastructure ranges between 0.04 and 0.53 for

all the LGAs with an average of 0.17, 0.24 and 0.42 for fadama, non-fadama and the entire 68 villages respectively. It further reveals that Fadama villages were more highly infrastructural developed compared with non-Fadama villages.

Conclusions and Policy Recommendations

Cost of transportation, is a direct function of status of rural road networks and it has been employed in this study as a measure of underdevelopment. There is therefore needful by public and private to make construction and rehabilitation of rural roads and transportation the first point in any developmental agenda, this would result in reducing the cost transportation of goods and passengers. This will tends to increase the share of farmers in the final realization of farm produce, therefore increasing their welfare.

Fadama participating villages had better access to various infrastructural facilities provided and they were found to be significantly better off in a number of areas including agricultural production, household income and also the participation of women in the economy also they obtain higher price for produce and to buy a larger proportion of consumption needs from the market when compared to non-Fadama participating villages. Thus development of infrastructure has a positive effect/impact on the wholesome lives of the people in the areas. Therefore more infrastructural facilities should be provided by government and private organization in Nigeria to enhance development most especially in non-Fadama areas.

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Table 1: Socio-economic Characteristics of the Respondents

Variable	Fadama	Non -Fadama	All
Marital status			
Single	1.7	1.1	1.5
Married	81.1	98.8	87.1
Widowed	12.1	-	8.0
Divorced	5.2	-	3.4
Total	100.0	100.0	100.0
Age			
< 30	1.7	1.1	1.5
30-50	62.6	50.0	58.3
51-70	35.6	48.9	40.2
Total	100.0	100.0	100.0
Educational level			
No Formal	20.7	8.9	16.7
Primary	39.1	65.6	48.1
Secondary	29.9	24.4	28.0
Tertiary	10.3	1.1	7.2
Total	100.0	100.0	100.0
Household size			
1-5	16.1	2.2	11.4
6-10	73.0	84.4	76.9
11-15	8.6	13.3	10.2
> 15	2.3	-	1.5
Total	100.0	100.0	100.0
Gender			
Male	69.0	88.9	75.8
Female	31.0	11.1	24.2
Total	100.0	100.0	100.0
Membership of organization			
Members	66.7	46.7	59.8
Non members	33.3	53.3	40.2
Total	100.0	100.0	100.0
Farm size(ha)			
< 1.00	8.0	7.8	8.0
1.00-2.00	66.7	60.0	64.4

2,00- 4.00	21.8	31.1	25.0
> 4.00	3.4	1.1	2.7
Total	100.0	100.0	100.0
Farming experience			
<10	42.5	20.0	34.8
11-12	36.8	38.9	37.5
21-30	17.2	36.7	23.6
>30	3.4	4.4	3.8
Total	100.0	100.0	100.0
Employment status			
Full time	55.20	80.0	63.6
Part time	44.80	20.0	24.4
Total	100.0	100.0	100.0

Table 2: Average Amount Spent on Market in the study Area

Status	≤ ₦ 40	₦41- ₦ 60	₦ 61-. ₦ 80	≥ ₦80	Average
Fadama	₦ 8.42	₦52.00	₦74.29	₦133.5	₦44.44
	0.55km	27 km	3.36 km	24.25km	22.27km
	0 mins	0.82mins	19.23 min	61.25min	27.02min
Non-fadama	₦20.86	₦53.57	₦80.00	₦100.00	₦55.23
	1.47 km	3.00km	3.00km	4.71km	2.56km
	0.16 min	6.67 min	NA	16.67min	7.03min
All	₦ 12.97	₦52.65	₦74.69	₦126.80	₦32.39
	1.1 km	2.24 km	2.0 km	2.66 km	1.50km
	3.53 min	20.58min	22.01min	27.60min	9.05min
Average Amount spent on Motor able Roads					
Status	≤ ₦ 40	₦ 41- ₦ 60	₦ 61-. ₦ 80	≥ ₦80	Average
Fadama	₦ 11.91	₦50.00	₦72.00	₦138.24	₦28.58
	1.11 km	1.50 km	2.80 km	4.94 km	4.25 km
	2.10 mins	7.50 mins	19.00 mins	12.94 mins	4.25 mins
Non-fadama	₦14.05	₦50.00	NA	₦185.00	₦34.02
	0.92 km	2.00 km	NA	3.10 km	1.18km
	0.0.45 mins	7.50 mins	NA	18.50mins	2.61 mins
All	₦ 12.67	₦ 50.00	₦ 72.00	₦ 155.56	₦ 30.38
	1.04 km	1.67 km	2.80 km	4.26km	0.45 km
	0.26 mins	7.50 mins	19.00 mins	21.67 mins	3.63 mins
Average Amount spent on Water					
Status	≤ ₦ 40	₦ 41- ₦ 60	₦ 61- ₦ 80	≥ ₦80	Average
Fadama	₦ 0.77	₦ 0.77	₦ 100	₦2.66	₦50.04
	0.33km	0.30 km	3.00 km	0.510 km	0.13 km
	0.63 mins	1.00 mins	3.00 mins	0.70 mins	2.06 mins
Non-fadama	₦ 0.23	₦ 0.200	₦ 80	NA	₦ 32.34
	0.30 km	0.30km	NA	NA	0.2.02 km

	NA	NA	NA	NA	NA
All	₦ 2.55	₦ 2.00	0.8	₦ 9.20	₦ 4.03
	0.24 km	0.50km	2.00km	5.00 km	5.00 km
	2.55mins	0.30mins	3.00mins	0.32mins	0.32mins
Average Amount Spent on Box culvert in the study Area					
Status	≤ ₦ 40	₦ 41- ₦ 60	₦ 61-. ₦ 80	≥ ₦80	Average
Fadama	Na	NA	NA	NA	NA
	1.12km	NA	NA	NA	NA
	NA	NA	NA	NA	NA
Non-fadama	Na		NA	NA	
	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA
All					
	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA
Average Amount Spent on Possessing unit in the study Area					
Status	≤ ₦ 40	₦ 41- ₦ 60	₦ 61-. ₦ 80	≥ ₦80	Average
Fadama	₦ 8.42	₦52.00	₦74.29	₦133.5	₦44.44
	0.55km	27 km	3.36 km	24.25km	22.27km
	0 mins	0.82mins	19.23 min	61.25min	27.02min
Non-fadama	₦20.86	₦53.57	₦80.00	₦100.00	₦55.23
	1.47 km	3.00km	3.00km	4.71km	2.56km
	0.16 min	6.67 min	NA	16.67min	7.03min
All	₦ 12.97	₦52.65	₦74.69	₦126.80	₦32.39
	1.1 km	2.24 km	2.0 km	2.66 km	1.50km
	3.53 min	20.58min	22.01min	27.60min	9.05min

Note: NA – NOT AVAILABLE

Table 3: Average time taken to wait for motor vehicle transport

Status	Average waiting time (Minute)	Standard Deviation (Minute)
Fadama	5.70	4.5462
Non – Fadama	10.44	4.8452
All	6.80	5.0182

Table 4: Distribution of Villages by Degree of Infrastructure Development

Range of index Number	Number of Villages			Percentages			Ranking Level
	Fadama	Non-Fadama	All	Fadama	Non-Fadama	All	
≤0.10	20	3	23	29.41	4.41	32.35	Highly developed
0.11-0.3	13	8	21	19.12	11.76	32.35	Moderately developed
0.31-0.5	9	12	21	13.24	17.64	30.88	Moderately Under-developed
≥0.51	2	1	3	2.94	1.47	4.41	Highly Under-developed
Total	44	24	68	64.71	35.28	100	