

RURAL FARMERS' INVOLVEMENT IN THE IDENTIFICATION AND PRIORITIZATION OF THEIR INFRASTRUCTURE NEEDS IN OJU LOCAL GOVERNMENT AREA OF BENUE STATE

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Abstract

This study analyzed rural farmers' involvement in the identification and prioritization of infrastructure needs in Oju Local Government Area of Benue State. Data were obtained from 70 rural farmers who were randomly selected. The data were analyzed using frequency, percentages, ranking and chi-square. The analysis showed that farmers in the study area lacked the necessary rural infrastructures. The most needed rural infrastructures in order of priority as ranked by farmers include good road networks, storage facilities, power supply, health care facilities, irrigation, schools and telephone services. Farmers' age, education and farm size were found to be significantly related to their willingness to contribute to infrastructure development. Government and Non Governmental Organizations should partner with farmers in the provision of rural infrastructures. This will help to improve agricultural output, increase rural income and reduce poverty.

Introduction

Agricultural production to date remains the mainstay of the Nigerian economy, providing the means of livelihood for over 70% of the population. Agriculture is also a major source of raw materials for agro-allied industries as well as a potent source of much-needed foreign exchange (Okuneye, 2001). However, over the years, the sector has witnessed a tremendous decline in its contribution to national development. For instance, the percentage of economically active population in agriculture nose-dived to 50 – 52% in the late 1990s. Development economists have in fact attributed the present economic downturn in Nigeria to

the poor performance of the agricultural sector.

Most Nigerian farmers are small-scale, living in rural areas and producing about 85% of the total food production (Okuneye,1995). These resource-poor farmers are beset by long standing problems impeding their productivity and contributions to national aggregate output. These problems include the lack of infrastructure facilities, poor manpower/skill development, and the influence of some socio-cultural factors, economic factors, poor government /regulatory policies and a harsh environment.

Rural Infrastructure and Agricultural Development

Ekong (2000) defined rural infrastructure as those basic physical, social and institutional forms of capital, which enhance rural dwellers' production, distribution and consumption activities and ultimately the quality of life. These infrastructures include transportation, storage facilities, power supply, communication facilities, water supply, health facilities and other community services. According to Abubakar (1999), the availability of rural infrastructures is critical to the optimum performance of small-scale farmers. Studies by Ajayi (1997) and Amechi (2005) have demonstrated the positive impact of rural infrastructures on the socio-economic lives of rural farmers. Rural farmers need usable road networks for timely and efficient transportation of their inputs to the farm as well as the transference of their farm produce out of the farm. Also, a near by and accessible marketing center is needed for easy marketing of their farm

produce. An effective health center provides sound healthcare for the farm-family while an operational communication facility ensures quick and easy contact within and outside the community.

In Nigeria, the major policy instrument for rural road construction and maintenance is the World Bank assisted Agricultural Development Project (ADP). Umeh *et al* (2006) had observed the poor distribution and maintenance of network of rural roads by ADPs. The Directorate of Food, Roads and Rural Infrastructure (DFRRI) was also another policy instrument for the provision of rural roads, water and electricity. Because of its poor performance, DFRRI has since been scrapped. Furthermore, the River Basin Development Authorities (RBDAs) were rural projects mandated with the development of surface and underground water sources for both irrigated farming and domestic use. Unfortunately, the impact of the RBDAs could hardly be felt in most rural areas. Okuneye (2000) summarized the poor state of rural infrastructures in Nigeria as including (i) poor feeder roads and inadequate road networks between the rural areas where agricultural production takes place and the urban areas; (ii) lack of appropriate on-farm and off-farm storage facilities; (iii) lack of electricity; (iv) poor irrigation facilities; (v) lack of functional health facilities in rural areas leading to loss of man days due to ill-health which could have been easily treated; (vi) existence of very few schools (primary and secondary) in rural areas leading to the migration of youths to urban areas.

The present administration in Benue State has promised to address the infrastructural needs of farmers. For farmers to maximally benefit from such infrastructures if provided, it is important to involve them in identifying and prioritizing their needs. In most developing countries, it has been observed that development agents usually take a finished package to rural farmers without giving them the opportunity of being involved in the diagnosis, design or implementation stage

(Apantaku *et al*, 2002). Therefore, the purpose of this study was to examine rural farmers' involvement in the identification and prioritization of their infrastructural needs. Specifically, the study sought to:

- (i) Identify and prioritize the infrastructural needs of farmers within the study area.
- (ii) Determine the farmers' level of satisfaction with the available infrastructures and
- (iii) Determine the relationship between farmers' socio-economic characteristics and their willingness to contribute to infrastructural development

Methodology

Study Area. The study was conducted in Oju Local Government Area (LGA) of Benue State, which is located between latitude 6° N, and 48° N and longitude 8° E and 30° E. Oju LGA occupies a land area of about 2,229 km² with a population of about 177,270 (NPC, 1991). It is inhabited mainly by the "Igede" speaking people and other ethnic groups whose main occupation is farming. Oju is a rural LGA lacking virtually all the necessary rural infrastructures.

Data collection. A three-stage sampling procedure was adopted. First, 5 of the 11 council wards were randomly selected, followed by the random selection of 2 villages from each of the council wards. Thirdly, 8 farmers from each of the 10 villages were selected randomly. This process produced 80 respondents but only 70 structured interview schedules were found useful for analysis.

Data Analysis. Data were analyzed using frequency counts, percentages and ranking. Chi-square was also used to determine the relationship between variables. The degree of farmers' satisfaction with the rural infrastructure was determined by the use of five-point likert-type scale. In this scale, sources with mean 3.5 and above were treated as "Satisfied" while those with mean less than 3.5 were treated as "Not satisfied".

Results and Discussion

The socio-economic and demographic profiles of respondents are shown in Table 1. Results indicate that over 68% of the farmers were males, with over 71% of them falling below 51 years of age. The farmers' level of education is generally low as 28.6% had no formal education and another 40% obtaining only primary education. Most respondents were small-scale farmers with over 75% cultivating below 3.1 hectares of cropland. About 70% of the respondents earned below N101,000 as annual income. It can be inferred from the foregoing that the sampled farmers generally fall within the active farming age bracket but had low levels of education, small farm sizes and low farm incomes. Given these profiles, the availability of infrastructures might help to improve their farm output and productivity.

Table 2 identified the infrastructure needs of farmers in order of priority. A road network is most needed (100%), followed by storage facilities (88.2%), power supply (61.9%) and health care (53.5%). Telephone services, schools and irrigation facilities were in low demand in the study area. This finding agrees with Umeh *et al* (2006) that poor road network is the most critical infrastructural problem facing farmers in Nigeria.

Table 3 assessed the degree of farmers' satisfaction with available rural infrastructures. Road network and power supply recorded zero satisfaction. This may be attributed to the poor condition of rural roads as well as the non-existence of electric power supply in the entire LGA since its creation in 1976. The farmers were also not satisfied with storage facilities, the health care system and irrigation facilities. This may be because of the non-existence of modern storage and irrigation facilities as well as the poor condition of the few available health clinics in the study area. However, farmers expressed satisfaction with the available number of primary and secondary schools

Results of the chi-square testing the relationship between selected characteristics of farmers and their willingness to contribute to rural infrastructure are found in Table 4. They show that the age, education and farm size of farmers had a significant relationship with their willingness to contribute to infrastructure development while gender and annual income were insignificant. The contingency coefficient, which shows the strength of relationship, reveals that education and age had a strong association with farmers' willingness to participate in infrastructure development while gender and income had little association. This result suggests that as farmers' age, education and farm size increases; their participation in infrastructure development may also improve.

Conclusion: This study demonstrated the priority needs of farmers with regards to rural infrastructures, which were almost non-existent in the study area. Good road networks, storage facilities, power supply and a good health care system were their most preferred infrastructure needs. Based on these findings, it is suggested that government and Non Governmental Organizations (NGOs) should collaborate with farmers with a view to providing the needed infrastructures in order of their priorities. This might help farmers to produce higher output, increase their income and reduce rural poverty.

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Table 1: Socio-demographic characteristics of Respondents

Variables	Categories	Frequency	Percentage
Gender	Male	48	68.6
	Female	22	31.4
	Total	70	100.0
Age (years)	20-30	10	14.3
	31-40	22	31.4
	41-50	18	25.7
	51-60	13	18.6
	Above 60	7	10.0
	Total	70	100.0
Education	None	20	28.6
	Primary	28	40.0
	Secondary	10	14.3
	Tertiary	12	17.1
	Total	70	100.0
Farm Size (hectare)	0 - 1.0	19	27.1
	1.1 - 3.0	34	48.6
	3.1 - 6.0	11	15.7
	Above 6.0	6	8.6
	Total	70	100.0
Annual Income (N)	0 – 50000	27	38.6
	51000-100000	22	31.4
	101000-150000	12	17.1
	151000-200000	7	10.0
	Above 200000	2	2.9
	Total	70	100.0

(Source: Field Survey, 2006)

Table 2: Preferred Infrastructure Needs of farmers in Oju LGA

Preferred Infrastructure	Percentage**	Rank*
Road network	100.0	1
Storage facilities	88.2	2
Power supply	61.9	3
Health care facilities	53.5	4
Irrigation facilities	31.0	5
Schools	27.8	6
Telephone services	15.5	7

Source: Field Survey, 2006

*Rank: The ranking is in order of importance; Rank 1 is considered major while 8 is considered minor.

** Total observations > 100% due to multiple responses.

Table 3: Degree of Satisfaction of Farmers with Rural Infrastructures

Infrastructures	Degree of satisfaction*	Remarks
Road network	0.00	Not satisfied
Storage facilities	1.69	Not satisfied
Power supply	0.00	Not satisfied
Health care facilities	2.54	Not satisfied
Irrigation facilities	1.46	Not satisfied
Schools	3.96	Satisfied
Telephone services	2.89	Not satisfied

Source: Field Survey, 2006

Mean of 3.5 or above was taken as "satisfied" while less than 3.5 was "Not satisfied".

Table 4: Relationship between selected socio-demographic characteristics of farmers and their willingness to contribute to rural infrastructures.

Characteristics	X ²	df	Contingency Coefficient
Age	20.34*	4	0.47
Gender	0.64 ^{NS}	1	0.09
Education	29.28*	3	0.54
Farm Size	18.81*	3	0.21
Annual Income	1.44 ^{NS}	4	0.14

Source: Field Survey, 2006

*Significant at 5% probability level; NS = Not Significant at 5% level.