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Impact of Millennium Village Project (MVP) Intervention in Agricultural Infrastructure in Ikara Local Government, Nigeria

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ABSTARCT

The role of infrastructural facilities in agricultural development and poverty reduction cannot be over-emphasized whether in urban or rural environments. When infrastructure works, productivity and labour increases. When it does not work, citizens suffer, particularly the poor. The study examined empirically the impact of Milleniun Village Project (MVP) intervention in agricultural infrastructure in Ikara Local Government Area, Kaduna State, Nigeria. The study specifically carried out a comparative survey of eight infrastructures: Health centers, schools, markets centers, extension centers, portable water, credit facilities, agro services, and their influence on the agricultural productivity. It determined the extent of rural infrastructural development, effects of components of rural infrastructure on farm output and the determinants of agricultural productivity. A multi stage sampling procedure was adopted for the study through purposive selection of two out of the seven districts in Ikara local government namely Saulawa, and Furana based on the MVP intervention district and the Non-intervention district. The next stage was random selection of communities from the selected districts. Lastly, was another purposive selection of 10 farming households each from the chosen communities. Data were gathered from eighty farm households and three discussant groups selected across the study area. The study data were analyzed using the descriptive statistics, infrastructures index analysis, Production Function Analysis and Gross Margin Analysis. Findings indicated that the average income of the farmers was N219556.00 and N101632.00 for MVPs and Non-MVPs respectively. There was a significant difference in the estimated mean income from the sale of farm products for both MVPs and Non-MVPs. The implication of these findings is that, the project made an appreciable impact on annual income of the MVP farmers. The respective Average gross margin was ₦193564.0 and ₦816400 for the most developed (MVP farmers), and under-developed (Non-MVP farmers) respectively. More so, findings showed a higher return on output in the developed districts, which could be attributed to the presence of more infrastructural facilities in the developed districts compared to the less developed one. The difference in the gross margin (economic productivity) of the farmers in the districts was established with the use of paired t-test as revealed. The test shows a significant difference between the gross margins of farmers that make up the MVP and non-MVP farmers, which could be attributed to the poor state of infrastructure variation amongst the districts. The empirical estimation of the Probit analysis result revealed a log likelihood of -96.160222, pseudo R2 of 0.0875 and LR statistic of 18.44, all significant at 5 percent probability level; this shows that the model has a good fit. Results of technical efficiency of crop farmers showed that only education is significant among the efficient variables, all (age, sex, household size and marital status) are directly related to farmers' technical efficiency. The findings also indicated a significant increase in agricultural productivity as a result of the MVP intervention. This increase in agricultural productivity could be attributed to higher input usage (mainly improved seeds and fertilizer). Nevertheless, the overall household income effect was insignificant. These results have great implications for the achievement of the objective of poverty reduction as envisaged by the MVP and the "big push" proponents.

Keywords: Rural infrastructure, Agricultural productivity, Millennium Village Project and Farm output

1. Introduction

Over several decades, agriculture has been seen as a vital development tool that can be used to reduce rural poverty, particularly in sub-Sahara Africa (World Development Report, 2008). Agriculture plays an important role in economic development in many ways. Smallholder cultivation and high intensity and density of poverty levels are the main characteristic of rural areas in sub-Saharan Africa, Latin America and South Asia. Most of these smallholders practice subsistence farming which limits them to local markets due to lack of connectivity to more lucrative markets at provincial, national or global levels. Consequently, incentives remain weak, investments remain low, and so does the level of technology adoption and productivity, resulting into a low level equilibrium poverty trap. The instrument critical to breaking this deadlock for the small holders is physical infrastructure –such as roads, electricity, potable water and drainage, water for irrigation and telecommunications - that connects smallholders to markets, credit markets and market information systems. In Nigeria, the rural areas are inhabited by the bulk of the national population. It is estimated that about 61% of the country's population are rural dwellers, and predominantly small scale farmers (World Resources, 1997: 150), and over 90% of the Nigeria's total food produce comes from these small farmers and at least 60% of the nation's population earn their living from these small scale farming (Olayemi, 1980). However, larger percentage of these small scale farmers will remain poor unless basic infrastructures are provided in these rural areas (Ale et al, 2011).

The role of infrastructural facilities in grassroots development and poverty reduction cannot be over-emphasized whether in urban or rural environments. When infrastructure works, productivity and labour increases. When it does not work, citizens suffer, particularly the poor. Thus, economic renewal and societal welfare become postponed or halted (Akinola, 2007). The provision of adequate and cost effective infrastructure will clearly therefore underpin the development of agriculture in general and in particular facilitate lower cost of production. Moreover, the provision of basic rural infrastructures is also a pre-requisite for enabling African countries to stimulate economic growth and to reach the targets for economic recovery and poverty alleviation by 2015 through increasing and diversifying agricultural output (Fakayode et al. 2008).

In this study, agricultural infrastructure is defined as physical structures that aid the competitiveness of the productive agricultural sector, and the related organizational systems that support their planning, procurement, design, construction, regulation, operation and maintenance. Alaba (2001) pointed out that individuals are poor because they do not have access to infrastructure services of necessary quality. The belief in principle is that rural infrastructures, if adequately provided, can enhance the quality of rural life. However, rural people have benefited very little as most programmes failed to meet the desired goal of rural socio-economic transformation hence, rural areas have shown little or no improvement (Yila, 1993). Therefore a strategy to reduce rural poverty needs to incorporate policies to develop both production-oriented infrastructures in order to improve poor people's productive capacity and quality of life.

A number of policy recommendations towards infrastructure development have been made in the past in Nigeria. One of these is the adoption of national rural basic need programmes, which consist of rural welfare base line, and identification of appropriate rural development strategies, programmes and projects. Others are establishment of Directorate of Food, Road and Rural Infrastructure (DFRRI), River Basin Development Authorities (RBDA), Nigerian Building and Road Research Institute (NBRRI) as well as Rural Water Supply and Sanitation Programme (RWATSAN). The most recent is the Fadama project that is expected to help in improving productive capacity of rural farmers through provision of farm assets and rural infrastructures.

Majority of the works on impact of infrastructure on agricultural productivity holistically captures infrastructure elements that have indirect impact on agricultural productivity. Therefore, the need to localize, update and capture key infrastructure facilities that impacts on and off-farm efficiency by evaluating their effects on productivity of farmers in Nigeria and particularly in Kaduna state becomes imperative in the context of inadequate, dilapidating infrastructure facilities coupled with inconsistent policies towards the development of such facilities.

2. Problem Statement

The role of infrastructure is complex and its effects are indirect. The establishment and existence of a well-functioning and efficient basic infrastructure is essential for economic development and growth. For any economy to grow and prosper, it is necessary that the factors and agents of growth within the economy are facilitated by basic infrastructure like power, roads, schools, primary health facilities, storage, market yards etc.

Several studies (Fan, Hazell and Thorat, 2000; Mundlak et al, 2002; Fan and Zhang, 2004) have also revealed that investment in infrastructure is essential to increase farmers' access to input and output markets, stimulation of rural non-farm economy and vitalize rural towns. It also increases consumers' demand in rural areas and facilitate the integration of less favoured rural areas into national and international economies. In many communities in Nigeria, inadequate or low quality infrastructure has been known to have serious implication for welfare and persistence of poverty.

Realizing the important role infrastructure would play in the development of Nigerian agriculture, government efforts and some international interventions in particular the Millennium Village Project (MVP) has made efforts in providing some infrastructure to increase agricultural productivity and output in Pampaida and Ikaram both from Kaduna and Ondo States respectively. All these are in the effort to improve the infrastructure base of rural Nigeria. The present study seeks to carry out an impact evaluation of MVP, aiming at determining whether MVP has achieved the desired outcome of reducing poverty through increase agricultural productivity (hence increased food security) from its agricultural infrastructure. The extent to which these have helped in increasing the productivity of rural farmers is a major area for research.

3. Objectives of the Study

The main aim of this study is to study the effect of rural infrastructure on the production (output) of some crop farmers in Ikara Local government, the specific objectives are to:

i) examine the socio-economic characteristics of farm households in the study area,

ii) determine the extent of rural infrastructural development in the selected districts

iii) determine the effects of components of rural infrastructure on farm output,

iv) Identify the determinants of agricultural productivity in the area of study.

4. The Millennium Village Project

The Millennium Village Project (MVP) was introduced in 2004 following the realization that Sub-Saharan Africa was unlikely to meet the Millennium Development Goals (MDGs) by 2015. The project was based on the concept that Africa's poverty trap could be overcome and the MDGs achieved by 2015 by means of raising the capital stock to the point of self-sustaining growth (UN Millennium Project, 2005; Sachs et al, 2004). Targeted public sector investments in Millennium Villages can be used to raise rural productivity, which would increase private savings and investments. This requires a big push of basic investments in key infrastructure, human capital and public administration, which are regarded as the key foundations of economic development.

The investments that are targeted under MVP include: natural (soil nutrients), human (skills and health), infrastructure (roads, power, and telecommunication) and financial (household assets, collateral and micro finance), (Sanchez et al, 2007). One of the key underlying assumptions of the MVP is that the increase in agricultural productivity would lead to an increase in income, which would reduce poverty and lead to rural development (Sachs, 2005). This will be achieved through three main channels – (i) by increasing food supply there will be an improvement in food security and therefore a reduction in hunger (MDG one) (ii) by increasing household income through boosting revenues from agricultural sales (iii) by indirectly impacting on real income through lower food prices, employment and wage effects in agriculture, and employment, wage and income effects in other sectors through production, consumption and savings linkages.

5. Materials and Methods

5.1. Study area

The study area is Ikara Local Government Area of Kaduna state; it is located on 8º6! E, 11º16! N; with a broad low lying topography and extensive marshland for fadama farming. It is a crest land which has a water shed that feed most of the tributaries of river Bambami. It lies within the northern guinea savannah of Nigeria, and receives an annual rainfall of 1,500-2000mm, which last for about 6-7 months and sometimes starts at April or May and end in October. This area has an average temperature of 26ºC. Ikara consists of primary and secondary roads and footpaths for transportation of goods. The place is dominated by Hausa-Fulani whose major occupation is farming and livestock (rain-fed farming) and also the cultivation of millet, sorghum, onions, tomatoes, pepper and ginger. A good percentage of the people engage in agro-based commercial activities with the main market located at the major roadside. The main economic activities are: agriculture, small scale industries such as blacksmith, milling and mud block construction. Ikara has a nucleated settlement in remote areas as dispersed settlements structure in other parts of the town.

Most of the houses are made of mud blocks, corroded zinc roofs, and thatched roofs and in some compound we can find silos built of mud blocks for storage of harvested food crops. The variation in housing depends on the people's social class. We can find places for religious worship like churches and mosques.

5.2. Data collection and Sampling Procedure

The data collected was from primary and secondary sources. The primary data were collected with the aid of well-structured questionnaire, containing information such as the socio economic characteristics; output and income levels of farmers. Other information used in ranking districts according to their level of infrastructure development included distance and transportation cost to the nearest infrastructure; family labour; farm size and household size. The infrastructures considered are farm to market roads, water for irrigation, wholesale markets and trading centres, pre and post-harvest facilities, credit centres, agro service centre and extension service centre.

A multi stage sampling procedure was adopted for the study. The first stage involved purposive selection of two out of the seven districts in Ikara local government namely Saulawa, and Furana base on the MVP intervention district and the Non-intervention district. The second stage involves random selection of villages from the two districts. Three villages were selected each from Furuna i.e. the non-intervention district (Furana, Angwan-Ango and Angwan-Baragwaje); while five villages were however selected from Saulawa i.e. the intervention district (Pampiada-Dutse, Kurmi-barkono, Nakala, Kwari and Ungwantoka) this is because of the presence of more farming households that have benefited from MV intervention. The last stage was another random selection of 10 farming households from each of the selected villages, giving a total number of 80 respondents

5.3. Method of Data Analysis

Descriptive statistics was used to analyse the socio-economic characteristics of the faming households.

Composite Measure of Market Infrastructure Development (infrastructures index) was used to determine the extent of rural infrastructural development in both intervention and non-intervention districts. The information used in calculating the infrastructure index includes distances and costs from the village to the nearest elements of market infrastructure. These elements are farm to market roads, agro-processing facilities, irrigation works and pre and post-harvest facilities. A total cost of infrastructure availability (TC) was computed by summing the average costs (ACi) of getting to a particular infrastructure facility in the 8 villages. ACi was however obtained as an average individual transportation cost (IDCi) of the respondents in each of the 8 villages. The use of transportation cost was based on the interaction that exists between transportation facilities and institutional infrastructures, (Ahmed and Hossain, 1990).

An Average Total Cost (ATC) of getting to each of the market infrastructure elements across the villages was obtained by dividing the total cost (TC) by the total number of village (N). ACi was finally weighted with ATC to obtain the weight (Wi) for each infrastructure and across the entire village. The infrastructure index (I) was finally obtained by finding the average of the Wis of the infrastructure facilities for each of the district.

The infrastructural index (INF) indicates the degree of underdevelopment, thus, the higher the value of infrastructural index, the less developed the village is considered. The villages in each district selected will be pulled together and infrastructural index (INF) calculated on district level. The higher the value of INF obtained for any district the less developed the district.

Further more, approach to grouping the districts into developed and underdeveloped areas will be to sum up the infrastructural index for all the districts and obtained average. The local districts with value above the average will be said to be underdeveloped and those below average were regarded as being developed. This procedure of measuring the degree of infrastructure development follows that adopted by Ahmed and Hossain (1990)

Production Function Analysis: This was used to assess the impact of infrastructure on output of crop farmers. Its parameters were estimated by the method of maximum likelihood. The method considers frontier production as a parametric function of the input. Conversion factor was used to convert the crops produced by farmers in the study area to their grain equivalent. The major crops in the study area are maize, soya bean, rice and vegetables and their respective conversion factor are 1.00, 0.30, 0.25 and 0.06.

Ajibefun and Daramola (2003) represented the production function as:

Qi = f (Xi,β) + Vi-Ui…………………………………….. Equation 1

Where Qi= output of the ith farm

Xi = Vectors of inputs

B = Vector of parameters to be estimated

Vi = The symmetrical disturbance which captures the random error effects on output.

Ui = the asymmetric error component

The value of output (Q) was estimated thus;

Q1= f (x1, x2, x3, x4, x5, x6, x7, x8, x9, x10, x11, x12)

$1\text{nQ} = \text{lnbo} + b_1 \ln x_1 \ldots\ldots\ldots\ldots + b_{12} \ln x_{12} + \quad (\Delta_1 + \ldots\ldots\ldots \Delta_3) + e$

Q1= Output (Q) (grain equivalent)

x1 = Farm size in hectares

x2 = Family labour (in mandays)

x3 =Number of children (mandays)

x4 = Fertilizer (kilograms)

x5 = Distance to major roads(kilometers)

x6 = Distance to markets (kilometers)

x7 = Distance to rural energy (kilometers)

x8 = Distance to pre and post-harvest facilities (kilometers)

x9 = Distance to extension infrastructure (kilometers)

x10 = Distance to potable irrigation works (kilometers)

x11 = Distance to credit infrastructure (kilometers)

x12= Distance to agro service centre infrastructure (kilometers)
Where $\Delta_1 \ldots \Delta_3$ are efficiency variables
Δ_1= Age (years)
Δ_2= Sex
Δ_3 = Religion
bo = constant term
e = Stochastic error term
$b_1 - b_{12}$= coefficients of production variable

Gross Margin Analysis: The gross margin analysis (economic productivity) was used to compare the profitability of farmers in infrastructural developed and undeveloped districts.

Gross margin = Total revenue - total variable cost
GM = TVP – TVC
TVP = Total value of produce
TVC = Total variable cost

Paired t-test was also used to determine if there is significant difference between the average gross margins of the three selected districts in the study area.

6. Results and Discussion

6.1. Socio-economic characteristics of the respondents

The result of descriptive statistics of the socio-economic variables of the difference in means between the MVP and non-MVP (control group) households reveals that there are statistically significant differences on certain socio-economic characteristics (Table 1). The average age of the respondents for MVPS and non-MVPs were 58 and 57 years, respectively. The results further show that there was no significant difference ($t = 0.31$; $p \leq 0.05$) between their ages. The average number of years spent between MVPs and non-MVPs in school was 6 years. This shows that there was no significant different ($t = -1.79$; $p \leq 0.05$) between the number of years spent in school for both MVPS and non-MVPs. The average household size is 8. Also, there was no significant difference ($t = -4.61$; $p \leq 0.05$) between household size of respondents. The total farm size for both MVPs and Non-MVPs was put at 7.67 and 6.93 ha respectively, showing no significant difference ($t = 0.34$; $p \leq 0.05$), while the total output was about 3308.2041 and 1201.236 grain equivalent respectively. There was also significant difference ($t = 1.54$; $p \leq 0.05$) between the total farm output of MVPs and Non-MVPs. The average income of the farmers was N219556.00 and N101632.00 for MVPs and Non-MVPs respectively. There was a significant difference in the estimated mean income from the sale of farm products for both MVPs and Non-MVPs. The implication of these findings is that, the project made an appreciable impact on annual income of the MVP farmers.

Table 1 Socioeconomic characteristic of Crop Farmers

Variable	MVP Household		Non-MVP Household		
	Mean X	STD	Mean X	STD	T-test Value
Sex	0.72	0.45	-0.01	0.000	-0.19
Age	58.03	12.57	57.03	12.41	0.31
Marital Status	0.70	0.41	0.66	0.48	-0.83
Education	6.64	2.03	6.53	3.79	-1.79
Household size	8.35	2.74	8.00	2.90	-4.61*
Total farm size (hectare)	7.67	3.57	6.93	11.10	0.34
Farm income	125753.1	78959.55	101632.00	59174.19	3.54*
Farm Output (grain equivalent)	3308.2041	2102.0911	1201.236	882.02	1.54*
***Significant (P≤0.05).**					

Source: Researcher survey 2013

6.2. Extent of Rural Infrastructural Development

Infrastructure index was computed to have an understanding of the degree of development MVP clusters and non-MVP clusters (table 2). Infrastructure Index was generated by considering the distance from the villages in each area to each of the infrastructures considered. The average distance of the villages to each infrastructure element in each of the districts in the study area were used to compute the infrastructure index on district basis. As shown in table 3, the districts in the MVP developed with infrastructure index of 0.479; compared with 1.3621 for the non-MVP districts

Table 2 Degree of Infrastructure Development

Infrastructure	Weight of average transpiration cost (wt)	
	MVP Households (wt)	Non-MVP Households (wt)
Health	0.6392	0.9236
School	0.7825	1.2664
Market	0.2356	1.1645
Extension	0.1245	1.3681
Portable water	0.3658	1.0235
Credit	0.1247	0.3262
Agro service	0.2365	1.5124
Road	0.3339	2.0751
Sum	2.8427	9.6598
Infrastructure index	0.479	1.3621

Source: Researcher survey 2013

6.3. Effect of component of rural infrastructure on farm output

Table 3 shows and compares profitability analysis (economic productivity) of farmers' output in the study area. The respective Average gross margin was ₦193564.0 and ₦816400 for the most developed (MVP farmers), and under-developed (Non-MVP farmers) respectively. This result, therefore, shows a higher return on output in the developed districts, which could be attributed to the presence of more infrastructural facilities in the developed districts compared to the least, developed one.

Table 3 Gross Margin Analysis

	Infrastructure Status	Average Gross Margin
MVP	Developed	N 193564.0
Non MVP	Under developed	N 816400.0

Source: Researcher survey 2013

The difference in the gross margin (economic productivity) of the farmers in the districts was established with the use of paired t-test as revealed in table 4. The test shows a significant difference between the gross margins of farmers in that make up the MVP and non-MVP farmers, which could be attributed to the poor state of infrastructure variation amongst the districts

Table 4 Paired Sample Test between Average Gross Margins of the farmers

	Mean	Std. deviation	T	Df
MVP	25314.632	72237.1542	0.025	1.145
Non MVP	-221422.21	963521.0342	-3.635	-3.635

Source: Researcher survey 2013

6.4. Determinants of agricultural productivity

The empirical estimation of the Probit analysis result as presented in Table 5 reveals a log likelihood of -96.160222, pseudo R2 of 0.0875 and LR statistic of 18.44, all significant at 5 percent probability level; this shows that the model has a good fit. Considering p>|z| values for all the variables included in the model as shown in table 5, only farm size, fertilizer, distance to major roads and distance to credit are significant and they are all significant at 5 percent α-levels; having confidence interval of 95 percent each. The implication of these from the finding is that increase in the level of any of the explanatory variables with positive sign, farm size and fertilizer access in this case will have a positive effect on farmers output, whereas those explanatory variables with negative sign, distance to major roads and distance to credit exert a negative relationship on farmers output. According to Ojo (1998), one problem confronting small scale enterprise including that in agriculture is inadequate capital. Inadequate finance has remained the most limiting problem of agricultural production. This is because capital is the most important input in agricultural production and its availability has remain a major problem to small scale farmers who account for the bulk of agricultural produce of the nation. In Nigeria, credit has long been identified as a major input in the development of the agricultural sector (Balogun, 1990). Credit is considered the catalyst that activates other factors of production and make under used capacities functional for increased production (Ijere, 1998). Booth et al., find that higher road density promotes specialization, enabling farmers to develop a more intensive agriculture based on modern inputs

Table 5: Results of Production Frontier Analysis

Variable	Coefficient	Standard error	T static	Probability
Constant	1.797291	1.1019832	1.76	0.078
Farm size (hectare)	0.5673548	0.277094	2.05	0.041**
Family labour (manday)	0.2279989	0.1708957	1.33	0.182
Number of children	-0.017307	0.0216464	-0.80	0.422
Fertilizer (kilograms)	0.1750536	0.0774877	2.26	0.025**
Distance to major roads (kilometres)	-0.3293294	0.170241	-1.93	0.053**
Distance to markets (kilometers)	-0.0730558	0.2783172	-0.26	0.793
Distance to health (kilometres)	0.1143045	0.1664658	0.69	0.492
Distance to school (Kilometers)	-0.0363675	0.194804	-0.19	0.852
Distance to extension (kilometres)	0.0176362	0.2374294	0.07	0.941
Distance to portable water(kilometres)	0.3985417	0.2938333	1.36	0.175
Distance to credit (kilometres)	-1.797291	0.3126904	-2.19	0.029**
Distance to agro service centre (kilometres)	0.1854	0.7406	0.486	0.6267

Log likelihood = -96.160222, LR statistic = 18.44, Pseudo R2 = 0.0875, Prob> chi2 = 0.0719 ** Significant at 5% probability level
Source: Researcher survey 2013

Results of technical efficiency reveal that the crop farmers in the study area show that only education is significant among the efficient variables is significant, all (age, sex, household size and marital status) are directly related to farmers' technical efficiency.

Table 6: Technical efficiency analysis

Variable	Coefficient	Standard error	t-ratio	probability
Constant				
Age	0.0526131	0.0380617	1.38	0.167
Sex	-0.4889	0.9609	-0.509	0.6121
Household size	1.041005	1.60454	0.65	0.516
Marital Status	1.6609	1.9597	0.848	0.3989
Education	0.7992571	0.852384	0.94	0.010

Source: Researcher survey 2013

7. Recommendations

There are clear indications that the "big push" approach is far increasing agricultural output in the MVP infrastructural intervention in communities, effort should be intensified to reach other non-intervention communities to balance development in the area of study.

Farm input delivery at both MVP clusters should be improved so that they are both timely, of an acceptable standard and quality, and sufficient to cover the demand.

As much as the MVP doe not seek to encourage a dependency syndrome in agricultural inputs provision to the farmers, they need to develop a more subtle demand driven approach, whereby the inputs provided will be sustainable and do not provide shocks to the farming community.

Most importantly, there is a need to build more feeder roads network linking these settlements to the main access road if the potential for agricultural and natural-resource based development is to have any overall impact on the economic and social development of the locality.

8. Conclusion

This study sought to analyze the effect of MVP interventions in rural infrastructure on crop farmers' productivity. The results show that there was a significant increase in agricultural productivity, by an as a result of the MVP. This increase in agricultural productivity could be attributed to higher input usage (mainly improved seeds and fertilizer). Nevertheless, the overall household income effect was insignificant. These results have great implications for the achievement of the objective of poverty reduction as envisaged by the MVP and the "big push" proponents.

The lack of a significant effect on income can be mainly explained by two factors: (i) the small size of land and large families, which makes that the additional outcomes derived from productivity gains are mainly allocated to self-consumption; and (ii) over-reliance on agriculture, which, prevented the creation of positive synergies with other sectors for income generation. Our results call for paying considerable attention to the diversification of economic activities among smallholders and for revising the basic assumptions (about the relationship between productivity, income, savings and investments) on which the MVP, and many other rural development policies, rely.

For Nigeria to combat food crisis and food insecurity and rural-urban migration, policies targeted towards rural infrastructural development most especially rural roads should be formulated because bulk of farm produce still comes from the rural areas.

Provision of adequate and quality infrastructure in rural areas is necessary for increasing the productivity and efficiency of agriculture in the form of improving the credit absorbing capacity, enhancing the productivity of crops and livestock, generating employment and increasing farmers" income etc. and in the process, it makes a direct attack on minimizing the incidence of rural poverty. Integration of Nigerian economy with the global economy has put forth enormous opportunities as well as challenges to agricultural sector to become resilient, cost effective, competitive and quality conscious in the international market. This challenge can be met only with a well-conceived perspective plan on rural infrastructure development.

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