

## **Rural and Infrastructural Development on Extension Services to Farmers in Ogba Egbema Ndoni Local Government Area, Rivers State**

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### **Abstract**

*The study examined rural and infrastructural development on extension services to farmers in Ogba Egbema Ndoni Local Government Area, Rivers State. A total of 120 farmers and six extension agents were selected from six cycles (Omoku North, Egi West, Usomini South, Ndoni, Igburu East and Okuizi) using the simple random sampling technique (20 farmers and one extension agent each). Data collected were analysed using percentage and mean scores. Findings show that factors of rural and infrastructure development in the study area were banking systems ( $\bar{x}$  = 2.60), telecommunications ( $\bar{x}$  = 2.59) and access road network ( $\bar{x}$  = 2.64). They were imitated by private agencies and government. These rural and infrastructure development have influenced effective extension delivery to farmers (100.0%), facilitated routine visitation to farmers in order to solve their problems/challenges (100.0%) and motivated extension agents to be willing to go to rural areas to live and work (83.3%). Rural and infrastructural development militating against extension services to farmers were drinking water ( $\bar{x}$  = 3.27), housing for extension agents and farmers ( $\bar{x}$  = 3.14) and transportation ( $\bar{x}$  = 3.34). The study recommends that more infrastructural facilities should be provided for extension workers and farmers to improve on their work.*

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**Keywords:** Rural and infrastructural development, extension services, farmers

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### **Introduction**

Rural areas of Nigeria are inhabited by the bulk of the nation's population (Emodi and Albert, 2016). Rural areas serve as the base for the nation production of fiber, food and raw materials. Primary activities that form the foundation for any economic development is engaged or carried out in the rural areas (Albert and Igbokwe, 2014): that is why the state of development of the rural areas is necessary. Developing the rural areas will help to increase economic and social activities that will help to eradicate poverty as it will provide employment, improve the quality of life and provide resources that will satisfy the basic needs of the rural people.

According to Isife, Nnodim and Ochomma (2009) rural people/farmers are endowed with traditional skills and knowledge but they are at the primitive levels which need to be improved upon to fit in properly with modern skills and development technology. The improvement could be done through capacity building by extension agents delivering extension services to them. Extension agents are not only concerned with teaching and securing adoption of a particular practice but also communicate interventions that are meant to improve, develop and induce innovations that are meant to solve problematic situations among farmers. Extension agents

disseminate skills, information, knowledge, techniques and ideas from sources where they were initiated such as universities, training centre, and research institutions to rural farmers (Ani, 2013; Albert and Madukwe 2012). Extension services to farmers more or less depend on the nature or quality of rural facilities available in the area.

In an attempt to solving rural problems, government over the years have set up programmes such as National Accelerated Food Production Programme (NAFPP), Directorate for Food Road and Rural Infrastructure (DFRRI), Bank of Agriculture and Rural Development, among others. However, rural people and farmers have benefitted very little from most of the programmes (Olayiwola and Adeleye, 2005). Despite the importance attached to rural areas, they are not attractive to live in; there is absence of rural infrastructural development such as potable drinking water, electricity, housing, storage facilities and good feeder roads. Farming is no longer encouraging and cherished in the rural areas. Lack of access road to the farming location, galloping and deteriorated nature of existing access roads and during rainy season, access roads to farms are flooded and muddy making it difficult to transport agricultural product to the market; thereby, reducing the supply, produce and purchasing power of rural farmers. Furthermore, visitation of extension agents was retarded as access to farm locations is restricted. Lack of human development, capacity building-use of poorly trained personnel at local levels and poor logistic support for extension agents has inhibited extension services to rural farmers. On the part of farmers, lack of infrastructural development leads to loss of interest in farming, causing people to prefer white collar jobs to farming. These factors need to be addressed properly in order to safeguard agricultural extension services in the rural areas especially in Ogba Egbema Ndoni Local Government Area of Rivers State. It is on this premise that the study was specifically designed to:

- i) Identify factors of rural and infrastructural development in the area;
- ii) Examine rural and infrastructural development initiated by government, private and community;
- iii) Identify types of extension services delivered to farmers;
- iv) Ascertain influence of rural and infrastructural development on extension services to farmers in the study area; and
- v) Identify rural and infrastructure development militating against extension services to farmers in the study area.

## Methodology

Ogba Egbema Ndoni Local Government Area (ONELGA) is made up of three (3) ethnic groups namely Ogba, Egbema and Ndoni; speaking distinct but familiar languages with their ---- and peculiar self-sustaining cultures. The LGA is the heart of the hydrocarbon industry and contributes the highest chunk feeder of natural gas to be named- Land of Black Gold (Jerrybless Integrated Services, 2007). The presence of good climate, vast arable land and vegetation, fertile soil make the people predominately farmers, fishermen and a few traders while others engage in business, politics and white collar jobs to balance her economy. There are twelve (12) cycles in Agricultural Development Programme (ADP) of ONELGA which include Omoku North, Omoku South, Egi West, Egi East, Usomini North, Usomini South, Igburu West, Igburu East, Okwuizi, Mgbede, Ndoni and Ogbongeni. Each cycle has eighty (80) farmers and one extension agent attached to oversee, making 960 farmers and 12 extension agents (Rivers State Agricultural Development Programme (RSADP) Ahoada Area, 2014). Six cycles (Omoku North, Egi West, Usomini South, Ndoni, Igburu East and Okuizi) were selected using the simple

random sampling technique and twenty (20) farmers were randomly selected from each of the selected six cycles while the six extension agents from the six cycles were purposively selected because they were few, giving a total of 126 respondents that was used for the study. Primary data with the aid of questionnaire was used. Descriptive statistics such as percentage and mean score and inferential statistics such as student t-test were used to analyse collected data.

## Results and Discussion

### Factors of rural and infrastructural development in the study area

Entries in Table 1 show that both extension workers and farmers were of the view that electricity ( $\bar{x}=2.58$ ), market ( $\bar{x}=2.66$ ), companies ( $\bar{x}=2.57$ ), banking systems ( $\bar{x}=2.60$ ), town halls ( $\bar{x}=2.55$ ), health centres ( $\bar{x}=2.54$ ), tertiary schools ( $\bar{x}=2.62$ ), telecommunications ( $\bar{x}=2.59$ ) and access road network ( $\bar{x}=2.64$ ) were factors of rural and infrastructural development in the study area. Extension workers were of the view that theatre/refreshing centre ( $\bar{x}=2.74$ ) was a factor of rural and infrastructural development while the farmers ( $\bar{x}=2.44$ ) had an opposite view. The result indicates that access road network, companies, market, tertiary schools, electricity, telecommunications and banking systems were factors of rural and infrastructural development in the study area that promote extension services delivery to farmers.

**Table 1: Factors of rural and infrastructural development in the study area**

S/N	Rural And Infrastructural Development	MEAN( $\bar{x}$ ) N=6 Ext Agents	MEAN( $\bar{x}$ ) N=120 Farmers	GRAND MEAN ( $\bar{x}$ )
1	Market	2.82	2.58	*2.66
2	Companies	2.68	2.54	*2.57
3	Insurance	1.70	1.76	1.73
4	Electricity	2.60	2.55	*2.58
5	Town Halls	2.60	2.58	*2.55
6	Social Welfare	1.65	2.45	1.52
7	Health Centre	2.50	2.57	*2.54
8	Tertiary Schools	2.60	2.68	*2.62
9	Training Centre	1.40	2.18	1.84
10	Drinking Water	2.43	2.30	2.37
11	Banking Systems	2.54	2.64	*2.60
12	Storage Facilities	1.38	1.52	1.45
13	Telecommunications	2.54	2.64	*2.59
14	Access Road Network	2.60	2.68	*2.64
15	Agricultural Development	1.83	1.98	1.86
16	Theatre/Refreshing Centre	2.78	2.44	*3.41
17	Financial Systems (Loan/Credit Facilities)	2.30	2.46	2.38
18	Housing for Extension Agents and Farmers	2.28	2.70	2.49
19	Special Economic Zones(Demonstration Farm)	2.52	2.38	2.45

**\*Source: Field Survey, 2014**

**\*> 2.50= Factor of Rural and Infrastructure Development**

**Rural and infrastructural development initiated by government, private and communities**

Entries in Table 2 show that market (40.3%), companies (30.5%), tertiary schools (26.8%), electricity (35.2%) and access road network (26.8%) were rural and infrastructural initiated by Private Agency (Non- Governmental Organizations (NGOs) and Oil companies and health centre (25.7%) and agricultural development (38.2%) were rural and infrastructural initiated by Government (Federal, State and Local Government) while primary/secondary schools were initiated by both government (40.3%) and private (42.3%) agencies. These rural and infrastructural development initiated, have helped in easy, fast and effective extension services to farmers in the study area. When there are good road networks, extension agents could conveniently visit farmers at their farms and homes at any time to deliver extension services.

**Table 2: Rural and infrastructural development initiated by government, private and communities**

S/N	Rural And Infrastructural Development	Government (Federal, State and LG)	Private (NGOs and Oil companies)	Community
1	Market	25.0	*40.3	0.0
2	Companies	10.0	*30.5	11.0
3	Insurance	2.70	2.76	0.0
4	Electricity	10.0	*35.2	0.0
5	Town Halls	2.6	25.8	2.2
6	Social Welfare	3.6	2.6	2.4
7	Health Centre	*25.7	2.57	2.7
8	Tertiary Schools	26.0	*26.8	2.1
9	Training Centre	3.4	2.3	3.3
10	Drinking Water	2.4	23.0	2.3
11	Banking Systems	2.5	26.4	2.6
12	Storage Facilities	2.3	2.5	1.4
13	Telecommunications	25.4	6.4	2.5
14	Access Road Network	26.0	*26.8	6.4
15	Agricultural Development	*38.2	23.8	19.0
16	Theatre/Refreshing Centre	2.7	24.4	3.4
17	Primary/Secondary Schools	*30.3	*42.3	0.0
18	Financial Systems (Loan/Credit Facilities)	2.7	2.2	3.2
19	Housing for Extension Agents and Farmers	5.8	2.6	2.5
20	Special Economic Zones(Demonstration Farm)	3.8	2.3	3.0

**Source: Field survey, 2014****Multiple Responses****Extension services delivered to farmers in the study area**

Table 3 shows the extension services delivered to farmers in the study area. Both the extension agents and farmers accepted that the use of improved crop varieties, use of short duration crops, use/provision of agrochemicals (Herbicides and Insecticides), use of high yielding crops and use of resistant crops were extension services delivered to farmers in the study area. However, there was a divided opinion on the use of fertilizer and training of farmers. The extension workers

accepted that the use of fertilizer and training of farmers were delivered but the farmers were of the view that they were not delivered. However, the result established that various extension services such as the use of improved crop varieties, use of short duration crops, use/provision of agrochemicals (Herbicides and Insecticides), use of high yielding crops and use of resistant crops have been delivered to farmers in the study area.

**Table 3: Extension services delivered to farmers in the study area**

S/N	Extension Services Delivered	Ext Agents N=6	Farmers N=120
1	Use of improved crop varieties	100.0	91.7
2	Use of short duration crops	83.3	86.0
3	Use/provision of agrochemicals (Herbicides and Insecticides)	83.3	82.0
4	Use of resistant crops	66.7	71.0
5	Use of high yielding crops	83.3	83.3
6	How to improve cultural practices	33.3	54.2
7	How to improve storage facilities	33.3	53.3
8	How to market products	33.3	60.1
9	Organizing cooperatives	33.3	54.2
10	Provision of cultivars	50.0	53.3
11	Training of farmers	50.0	45.0
12	Use of fertilizer	66.7	47.3
13	Use of new fishing technologies	66.7	54.2

**Source: Field survey, 2014**

**Multiple Responses**

#### **Influence of rural and infrastructural development on extension services to farmers**

Table 4 shows the influence of rural and infrastructural development on extension services to farmers. The result shows that rural and infrastructural development has led to effective extension delivery to farmers (100.0%), facilitated routine visitation to farmers in order to solve their problems/challenges (100.0%), effective dissemination of relevant information delivered to farmers (83.3%), encouraged participation of farmers leading to fast adoption of new technologies (83.3%), motivated extension agents to do their work (66.7%) and motivated extension agents to be willing to go to rural areas to live and work (83.3%). The availability of rural infrastructural facilities such as good roads, housing, electricity, health will spur extension workers to live and stay with farmers in the rural areas. This will lead to effective extension delivery to farmers, effective dissemination of relevant information delivered to farmers and facilitate routine/regular visitation to farmers in order to solve their farm problems and challenges encountered in the process of adopting an innovation.

**Table 4: Influence of rural and infrastructural development on extension services to farmers**

S/N	Extension Services Delivered	Ext Agents N=6	Farmers N=120
1	Effective extension delivery to farmers	100.0	91.7
2	Effective dissemination of relevant information delivery to farmers	83.3	86.0
3	Facilitate routine visitation of farmers	100.0	100.0

4	to solve their problems/challenges Extension agents will be willing to go to rural areas to live and work	83.3	71.0
5	Facilitate technical training facilities for farmers	83.3	83.3
6	Adequate staffing of extension agents	33.3	54.2
7	Motivate extension agents to do their work	66.7	53.3
8	New agricultural techniques to farmers using individual farming and resource conditions	33.3	60.1
9	Helping farmers to help themselves rather than doing things for them	66.7	54.2
10	Encourages participation of farmers leading to fast adoption of new technologies	83.3	83.3

Source: Field survey, 2014

Multiple Responses

**Rural and infrastructural development militating against extension services to farmers**

Entries in Table 5 show that rural and infrastructural development militating against extension services to farmers were social welfare ( $\bar{x}=2.52$ ), health centres ( $\bar{x}=2.64$ ), training centre ( $\bar{x}=3.84$ ), drinking water ( $\bar{x}=3.27$ ), banking systems, ( $\bar{x}=2.60$ ), storage facilities ( $\bar{x}=3.25$ ), theatre/refreshing centre ( $\bar{x}=2.71$ ), agricultural development ( $\bar{x}=2.86$ ), housing for extension agents and farmers ( $\bar{x}=3.14$ ), financial systems (loan/credit facilities) ( $\bar{x}=3.38$ ), Access Road Network (Transportation means) ( $\bar{x}=3.34$ ), and special economic zones (Demonstration farm) ( $\bar{x}=3.65$ ). Extension agents need good accommodation, health centres and drinking water to be able to stay alive and deliver extension services to farmers. Agricultural development, financial systems (loan/credit facilities) and special economic zones (Demonstration farm) assist in efficient and effective extension services to farmers to thrive well in the study area. This is in agreement with Agbamu (2005) who stated that Nigerian extension services are bedeviled by several problems such as poor and absent of basic infrastructural facilities for extension agents to effectively carry out their work.

**Table 5: Rural and infrastructural development militating against extension services to farmers**

S/N	Rural And Infrastructural Development	GRAND MEAN ( $\bar{x}$ )
1	Market	2.48
2	Companies	1.57
3	Insurance	1.73
4	Electricity	1.58
5	Town Halls	1.55
6	Social Welfare	*2.52
7	Health Centre	*2.64

8	Tertiary Schools	2.12
9	Training Centre	*3.84
10	Drinking Water	*3.27
11	Banking Systems	*2.60
12	Storage Facilities	*3.25
13	Telecommunications	2.29
14	Theatre/Refreshing Centre	*2.71
15	Agricultural Development	*2.86
16	Housing for Extension Agents and Farmers	*3.14
17	Financial Systems (Loan/Credit Facilities)	*3.38
18	Access Road Network(Transportation means)	*3.34
19	Special Economic Zones(Demonstration Farm)	*3.65

**\*Source: Field data, 2014**

**\*> 2.50= Militating Against**

### Conclusion and Recommendations

Rural and infrastructural development plays an important role in the improvement of extension services delivery to farmers when they are available and maintained. There are few available rural and infrastructural developments in the study area such as access road network, companies, market, tertiary schools, electricity, telecommunications and banking systems that promote extension services delivery to farmers. Majority of the rural and infrastructure development were initiated and implemented by private agencies and NGOs and government (federal, state and local). Although, some of the rural and infrastructure development are in poor state due to lack of maintenance culture, project abandonment and political selfishness. In spite of it, extension agents carry out some extension services to farmers in the study area. However, there are rural and infrastructure development militating extension services to farmers such as health centres, housing, good drinking water among others.

Based on the findings, the study recommended that more rural and infrastructural facilities such as access road network, transportation facilities and industries that will improve extension services in the study area. All necessary facilities needed for effective work performance be provided for extension workers and farmers to improve their productivity and maximize their daily income.

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