

**ECONOMICS OF INFORMATION GAP OF RURAL CASSAVA FARMERS IN IMO STATE,
SOUTHEAST, NIGERIA:
A CRITICAL FACTOR IN RURAL POVERTY ALLEVIATION.**

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ABSTRACT

The study examined the effects of inadequate information on the profitability of cassava farmers in rural communities in Imo State. Of the three Agricultural Zones in the State, Owerri Agricultural Zone was purposively selected owing to the great potential in terms of natural and human resources. Using a multistage sampling technique, a total of 160 farmers were randomly selected from communities drawn from four groups of local government areas in the zone. The groups were: Mbailoti/Ikeduru, Ohaji/Egbema/Oguta, Owerri and Mbaize LGA's. Both primary and secondary data were collected for the study. The primary data were collected using questionnaire, interview schedule and personal observations and these were analyzed with descriptive statistics and multiple regression analysis. The results suggested that the farmers were found to be essentially subsistence and small-scale operators with minimal level of education. Female cassava farmers were found to outnumber their male counterparts by about 50%. Also, the youths and especially graduates of tertiary institutions were yet to make impact in cassava cultivation. Awareness of selected government programs and policies was a major concern, as 62% of the respondents were not fully aware of the selected programmes and as a result did not fully participate in them. More fundamentally, information users of cassava farmers were found to make 28% net profit more than "non-information" users. This suggested that information empowers and is therefore capable of breaking the vicious cycle of poverty as well as instilling some commercial thinking into agriculture and in the process engender the transformation of subsistence farming. Discontinuity of programmes by subsequent administration was identified as a major cause of lack of awareness of the selected programmes and policies. The study further showed that the determinants of information dissemination in the area were; socio cultural and religious factors, income levels, education and age. Efforts to enhance information dissemination and improve performance of cassava production is by ensuring gender-balancing in terms of resource distribution, education, participation in government programmes and policies, encouraging the use of multimedia, formation of cooperatives and provision of seed capital for the unemployed graduates.

Key words: Economics of Info Gap of Rural Cassava Farmers, Nigeria

INTRODUCTION

Information involves facts or details about somebody or something. Agriculture, which essentially involves the practice of farming is a dynamic profession. So is agribusiness, which is the industry concerned with the production and sale of farm inputs and products. Both are growing fields and inter-disciplinary in nature. Therefore, there is a growing need for updates in respect to the knowledge and application of inputs as well as outputs processing and its distribution. Every year huge financial and other resources are invested in researches at the national and international levels in the area of agricultural development. It is doubtful, if the outcomes of such researches are applied by farm practitioners. The situation in the rural areas is even more compounded by the level of illiteracy, poverty, diseases and near total lack of infrastructural facilities, in terms of transportation, communication and other essential utilities. The resultant effect of these deficiencies is information gap.

Information gap is lack or inability to receive adequate, relevant, reliable, balanced and timely; information for quality decision making, and in this case in the operations of farm enterprises. It is a gap, which exist between farmers on one hand and policy makers, researchers, and development agents, on the other hand. Thus, it hinders the smooth flow of information to the end users. It is a great impediment to the growth and development of the agricultural sector and in particular rural farmers. An unformed person is a deformed person. The saying goes. To be useful, information must not only be adequate, relevant, reliable, timely but also must be delivered via appropriate medium (Robbins, 1999). Lack of adequate information or information gap has led to the failure of many projects and programmes.

Various studies have shown that there are potent factors which predispose farmers to information gap. Moule (2002) linked information gap to language, literacy, education, physical location (including access to information and communication technologies such as: telephone or internet, economic factors (inability to buy newspapers, radio, television or computers), and socio-cultural norms (information

traditionally meant for men or women only, e.g. male extensionists not being able to talk to female farmers). Yondeawei (1995) observed that lack of access to agricultural information on agricultural research; training, extension and documentation constitute one of the major constraints militating against agricultural development to take place, a good number of subsistence farmers, who are essentially poor and held down by vicious cycle of poverty, requires empowerment through profitable ventures.

In Nigeria, cassava as a commodity is gradually assuming a commanding height among agricultural commodities because of its diverse use. Okonkwo (2002) opined that cassava is a major root crop in Nigerian grown throughout the country for cash, food, feed, and raw materials for agro-allied, alcohol, pharmaceuticals, gun and confectionaries. Nweke (1994) has shown that cassava production is increasing in Sub-Sahara Africa, especially in Nigeria and is displacing other crops such as yam; pasture crops, etc. in economic importance. In 2002, the President of Nigeria announced an initiative to use cassava as a foreign revenue earner of five Billion Naira (5bn) annually.

The annual production of cassava in Nigeria stands at 38.179 million metric tone and Nigeria's leadership roles in cassava production in the world had been achieved through mainly expansion of land areas devoted to cassava cultivation (FAO, 2005). The total production in cassava in Nigeria peaked at 38 million metric tonne an increase of 200% from the 1990 production of 19 million metric tonne (FAO, 2006).

The growth of cassava as a major economic and food security crop has generated significant research interest at both National and International levels. For instance, International Institute of Tropical Agriculture (IITA) and National Root Crop Research Institute (NRCRI) developed and distributed respectively, the tropical manihot selection (TMS) 30555, 30572, 30211, 50395, 60506 and Umudike (U) 41044 varieties in the early 70s and 80s (NRCRI, 1977).

All these have posed great challenges to cassava farmers in Nigeria in general and Imo State in particular. It therefore becomes imperative for the farmers to obtain accurate, cost-effective, reliable, relevant, innovative, useable and timely information on agricultural production, processing and marketing of the products. These will not only make the farmers more efficient and increase their productivity, which in turn will enhance their profit and of course their investment power.

The purpose of the study was therefore to estimate the cost and returns of both information and 'non-information users of cassava farmers in Imo State. Also, the socio-economic characteristics of the farmers; extent to which information on government agricultural programmes were known to them and factors that affected information dissemination on their enterprise were analyzed.

2.0 RESEARCH METHODOLOGY

2.1 The Study Area

The study area is Imo State, Southeast, Nigeria. The State is made up of; three Agricultural zones; namely Orlu, Okigwe and Owerri, which harbors the state capital. Owerri Agricultural zone was purposively selected out of the Agricultural zones because it is endowed with natural resources and high intensity of agricultural activities in the rural areas. The zones is made up of 11 Local Government Areas, namely; Mbaitoli, Ezinihite Mbaise, Ahiazu Mbaise, Aboh Mbaise, Ikeduru, Owerri North, Owerri Municipal, Owerri West, Ngor-Okpala, Oguta and Ohaji/Egbema. The zone has a population of about 1,480,853 which is about 38% of the population of the state i.e. 3,934,899 (NPC, 2006). Over 75% of the population are essentially small-scale farmers and are engaged in one form of agricultural production or the other. The major crops grown include; cassava, yam, cocoyam, vegetables, banana and plantain. The livestock kept include; sheep, goats, poultry and pigs. Economic trees such as Iroko, Mahogany, Obeche, Gmelina, Bamboo, Rubber and Oil Palm trees are predominantly in the area (ADP, 1996). The zone has an average rainfall of 1900mm to 2200mm annually and with two distinct seasons- rainy and dry seasons. The rainy season begins in April and ends in September (six months) while the dry season starts in October and ends in March (six months). There has been observed gradual shift in these periods attributable to climatic change. The annual mean temperature is 20°C and the relative humidity is 75% annually. The temperature, rainfall and humidity results in luxuriant plant growth. The zone is located between Latitude 4° 45' and 7°25' North of the equator and Longitude 6° 5' and 7° 25' east of the meridian.

2.2 Sample and Sampling Procedure

Multi-stage random sampling technique was used in selecting the respondents. The 11 LGAs in the zone were grouped into four sub-zones, namely; Owerri sub-zone (Owerri North, Owerri Municipal, Owerri West, and Ngor-Okpala); Ikeduru and Mbaitoli sub-zone; Mbaise sub-zone Aboh, Ahiazu and Ezinihite) and Egbema/-Ohaji sub-zone. The basis for the grouping was cultural affinity. From each sub-zone five communities were chosen, given a total of 20 communities.

From each community, eight farmers were selected randomly. Thus, giving a total of 160 farmers. The list of farmers from these communities was obtained from the extension agent and local government councils. This constituted the sample frame. The communities selected from Owerri sub-zone were Umuro/Imerienwe, Ngor/Ihittee/Umukabia; Ihiagwa, Umuguma/Avu and Obiangwu/Logara. Mbaitoli – Ikeduru sub-zone were – Ikeduru/Akabo/Amata, Afara, Amaimo, Eziana and Mbieri. Mbaise sub-zone – Amumara, Enyiogugu, Ife, Okpofe and Amuzi. Ohaji/Egbema sub-zone –

Awara/Assa, Egbema, Umuokanne, Umuagwo and Umuapu-Ohaji.

2.3 Data Collection

Both primary and secondary data were collected. The primary data were collected with interview schedule and structured questionnaire. The secondary data were collected from journals, text-books and published materials. The data collected lasted for six months, effective March, 2012.

2.4 Data Analysis

The data collected were analyzed with descriptive statistics, such as frequency tables, means and percentages. Also, use was made of the Ordinary Least Square (OLS) method of regression in establishing the relationship between information dissemination and a number of variables.

The multiple regression analysis used is implicitly specified as follows:

$$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, e)$$

Y= Information Dissemination (measured by farmers awareness of the selected 7 government programmes*¹ and 3 government policies*²)

X1= Age (No. of years)

X2= Education (No of years spent in school)

X3= Socio-Cultural and Religious media

(Likert ranking method: Churches = 1; Extension Agent = 2;

Kindred and village meeting = 3; Friends and relations = 4)

X4= Income (Naira)

X5= Communication and Information Accessibility

(Likert ranking method: Internet/Personal Computer = 1; TV = 2; Phone = 3; Radio = 4)

X6= Physical/Locational Accessibility

(Likert ranking method: Hinterland = 1; Sub-Urban = 2; Urban = 3)

*¹= Government Programmes selected

(i) National Accelerated Food Production Programme (NAFPP; 1972)

(ii) Operation Feed the Nation (OFN; 1977)

(iii) The Green Revolution Programme (GRP; 1979)

(iv) Structural Adjustment Programme (SAP; 1986)

(v) Directorate for Food, Roads and Rural Infrastructure (DFRRI; 1986)

(vi) National Directorate for Employment (NDE; 1987)

(vii) Agricultural Development Programme (ADP; 1970's)

*²= Policies

(i) Fertilizer Subsidy

(ii) National Agricultural Insurance Policies

(iii) 50 Billion Naira Agricultural Loan Scheme (2007)

In estimating the OLS multiple regression models, four functional forms were used and they are specified as follows:

*The Linear Form:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e \text{ (Eqn. 1)}$$

*The Semi Log Functional Form:

$$Y = b_0 + b_1 \log X_1 + b_2 \log X_2 + b_3 \log X_3 + b_4 \log X_4 +$$

$$b_5 \log X_5 + b_6 \log X_6 + e \dots \dots \dots \text{ (Eqn. 2)}$$

*The Double Log Form:

$$\log Y = b_0 + b_1 \log X_1 + b_2 \log X_2 + b_3 \log X_3 + b_4 \log X_4 +$$

$$b_5 \log X_5 + b_6 \log X_6 + e \dots \dots \dots \text{ (Eqn. 3)}$$

*The Exponential Form:

$$\log Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e \dots \text{ (Eqn. 4)}$$

The lead equation was chosen based on the apriority expectations of the signs and magnitude of the coefficient of the explanatory variables, Coefficient of Multiple Determination (R^2) and F-Statistics.

Use was made of Cost-Return Analysis in computing the profits of Information users and "non-information" users of the rural cassava famers.

Also, the responses of the cassava famers to past government programmes and policies were analyzed.

The apriori expectations were that age had an indirect relationship with information dissemination while the other(s) independent variables namely; education, socio-cultural and religious media, income, communication and information accessibility and physical accessibility, had direct or positive relationship with information dissemination.

3.0 RESULTS AND DISCUSSION

3.1 Socio-Economic Characteristics

Technically, the multiple regression models were used to explain the information dissemination of the rural cassava famers. Since this does not entirely explain the variations in information dissemination, socio-demographic and economic characteristics of the famers were used to complement the explanation. The socio-economic characteristic discussed were; gender, age, marital status, household size, educational attainment, farm size, farm experience and income levels of the farmers.

On gender, 60% of the 160 respondents were female and 40% were male. This implies that the cassava famers were more of female folks than male. This agrees with Adisa and Okunada (2005) which estimated that about 60-80% of agricultural production activities are carried out by women famers in the continent of Africa.

It is surprising to note that even with the crop commanding a broad spectrum of market both locally and internationally, cassava is still a female dominated crop.

The mean age of the respondents was 52 years. About 48% of the respondents fell within the age bracket of 50-60 years of age. However, the mean age of female cassava farmers was lower (45 years) than the male (56 years). This implies that the respondents were essentially of middle age group. The age factor in traditional agriculture is significantly in at least two respects. The first is increased productivity due to experience and the second is the rate of adoption of innovations (Eze et al, 2002).

Regarding marital status, about 25% of the male respondents were polygamous while 15% of the

females were from polygamous homes. There is a relationship between polygamous or monogamous homes on one side and household size on the other side- (By household size meant the number of people who feed the same pot, including father, mother, off springs and other dependants).

The mean household size for monogamous homes was 12 whereas for polygamous it was eight per house wife. In other words, household size was larger in polygamous but decrease per housewife. In monogamous homes, household size is generally smaller but higher if considered per housewife. In the past, household size was a significant factor in farm production because it means more farm lands, especially if the children are grown-ups.

However, in recent times when education is emphasized, it could be counterproductive in farm production because the family farm hands are not usually available and resources which otherwise would have been used for farming are channeled towards the cost of education. Although, this situation may appear unrewarding in the short run, but in the long run it may be beneficial because of derivable investment benefits from human capital development.

The educational background of the respondents was a mixed bag. Thirty percent of the respondents attended no school whereas 45% attended primary school (1-6 years). Twenty per cent of the famers attended secondary school (7-12 years) while only five per cent attended tertiary institution (>13 years). The mean number of years spent in school by the cassava farmers was 7 years. The number of years spent in school was higher for males (10 years) than females (5 years). Similarly, the number of years spent in school by information users was higher (7 years) than those of non-information users (2 years). The scenario suggested that education was still a problem in the rural areas and more especially female folks. This of course has far reaching implications in adopting new technology and innovations.

On farm size, farming experience and farm income, the mean figures were 0.21 ha, 18 years and ₦196, 100 per year. If the data were disaggregated it was found that farm size for males (0.60 ha) were higher than those of females (0.20 ha). Similarly, mean farming experience was 20 years for males and was higher than those of females (15 years).

All these translated to higher economic returns and hence annual income higher for males (₦236, 600) than females (₦142, 500) from cassava enterprise, even though more females were involved in the cultivation of the crop. Annual income for non-information users was ₦143, 200 while that for information users was ₦249, 000. Income in this dispensation involved cash sales realized from produce of cassava based enterprise by the family.

3.2 Awareness of Government Programmes and Policies (1972- 2007)

Table 1 is the source of information for the male and female cassava farmers. The table showed that the

three major sources of information; for the respondents were relatives and friends, various associations and radio, in order of importance. Surprisingly, change agents, such as extension work is commanded less than 20% of the sources of information and television was minimally used. Internet facilities were not used at all.

a) Programmes:

i) **National Accelerated Food Production Programme (NAFPP):**

Only 20% of the male cassava farmers in the rural area indicated that they were aware of the National Accelerated Food Production Programme while only 5% of the female respondents were aware of the programme. This finding is in tandem with Nweke (1994), Unama and Edeoge (2004) and Apu (2006). Apu in his study observed that 25% of his respondents maintain that they were aware of the availability of TMS 30572 cassava varieties introduced in the mid 1970's under NAFPP era in Abia State.

ii) **Operation Feed the Nation (OFN)**

This was launched in 1976 with the objective to mobilize the general populace and thus create increased awareness for agricultural pursuits. The strategy was to promote mass participation in agricultural production in other to enhance the country's self-sufficiency in food and cash crops, fisheries, livestock and poultry production. Input subsidies came in the form of early maturing seeds and fertilizer.

About 55% of the male respondents acknowledged having known about the project brought about boom in poultry production, especially in the south but was also short-lived because of lack of continuity as a result of change of government in 1979.

iii) **Green Revolution Programme (GRP)**

This came into being in 1980 to supersede OFN. It was planned with the view to removing the deficiencies of meeting the needs of small-scale farmers and also spread; the benefits of rural development to the local level, thereby modernizing traditional agriculture.

About 40% and 35% of the male and female respondents respectively indicated of having known about the Green Revolution Programme. Apart from inadequate awareness of the programme, political interference combined to hinder the expected results from the expected results from the programme.

iv) **The Structural Adjustment Programme (SAP)**

The Structural Adjustment Programme (SAP) was introduced by the Nigerian

Government in July 1966. The programme encompassing supply and demand management had four key objectives. They were:

- i. Restructuring and diversifying the productive base of the economy in order to reduce dependence on oil and imports;
- ii. Achieving fiscal and balance of payments viability;
- iii. Laying the basis for a sustainable non-inflationary or minimal inflationary growth;
- iv. Lessening the dominance of unproductive investments in the public sector as well as improving the sector's efficiency and intensifying the growth potential of the private sector.

The success of SAP hinged to a large extent; the success recorded by SFEM and these include; improvement in The Gross Domestic Products (GDP), boost in non-oil exports, more efficient utilization of foreign

exchange and cultivation of maintenance culture. In the agricultural sector, the abolition of the Commodity Boards, the de-regulation and liberalization of trade controls, abolition of export licenses, and exchange rate adjustment have all contributed to higher prices being offered to farmers, for their products which are usually exported as cocoa and other raw materials.

However, for the agricultural sector which depended on input importations like the livestock industry suffered great losses and were virtually out of market. About 60% and 40% of the male and female respondents, respectively indicated having known of the program. The problem of SAP included, reduced incomes, low aggregate demand, inadequate supply of foreign exchange, stagflation, and increased import of foreign goods.

TABLE 1: SOURCE OF INFORMATION FOR MALE AND FEMALE CASSAVA FARMERS:

SOURCES	MALES (%)	FEMALES (%)
Relatives and friends	35	30
Association of kindred's women, religious and August Meeting	25	40
Radio	20	14
Change Agents (e.g. Extension Officers)	15	12
Television	5	4
Cable Network/internet facilities	0	0

Source: Field Survey data, 2008.

v) Directorate for Food, Roads and Rural Infrastructure (DFRRI)

Sixty five percent of the male respondents admitted having known about the Director for food Roads and Rural Infrastructure programme while 54% of the female respondents knew about the programme. DFRRI posted impressive results in the area of road construction and rehabilitation in the rural areas. In 1992, a total of 85,592.82km of feeder roads were completed (Ekpo and Olonyi, 1995). Similar results were recorded in area of electricity project, water projects, improved seedlings, livestock, rural health and housing projects.

vi) National Directorate for Employment (NDE)

Forty-five percent of the male respondents indicated knowledge of the National Directorate for Employment programme while only 25% of the female respondents knew about the programme. The programme, in any case, recorded modest achievements in reducing unemployment. However, low funding and poor preparation of job seekers were major concerns. In addition, lack of continuity and political interference were major problems.

vii) Agricultural Development Programme (ADP)

Sixty percent of the male respondents confirmed being aware of ADP, while 55% of the female knew it. The programme no doubt has made significant contribution to agricultural development. Successes were recorded in linkage between research and extension, capacity building, rural infrastructural development and technology.

It is one government programme that has defied the discontinuity syndrome, undue political interference, under-funding and staff turnover have been major concerns for over three decades of its existence.

The problem of lack of awareness of the respondents was even more pronounced in the policy framework of government. For National Agricultural Insurance Scheme, about 25% of the male respondents knew about it while only 5% of the female indicated knowledge of it.

For the ₦50 billion naira Agricultural Loan Scheme, only 15% of the male respondents knew about it and 2% of female respondents confirmed knowledge about the policy.

The exception of lack of awareness was recorded in the area of fertilizer subsidy. About 70% of the male rural cassava farmers acknowledged

awareness of the existence of “government fertilizer subsidy” while the figure for females was 60%. The major problem with the subsidy programme is how to ensure proper targeting so that benefits do not leak to unintended beneficiaries.

In general, it is estimated that about 38% of the respondents were information users while 62% were not aware of government programmes and policies and for the purpose of study were tagged “non-information” users. The major bane in information dissemination of the programmes and policies were discontinuity, under-funding of programmes and political encumbrances.

3.3 Cost and Return of Information and Non-Information Users of Cassava Farmers

a) Cost and Returns of Non-Information Users of Cassava Farmers.

Table 2 is cost and return analysis for non-information users of cassava farmers. It showed that total farm income for the farmers was ₦111, 640 per annum out of which production of garri was 56% while sales from other ancillary crops (like maize, melon and vegetables) gave 44%.

The total cost in the production of garri by these respondents was ₦51, 800 out of which the variable cost constituted 67.56% while the fixed cost was 32.43%. Of the variable cost, labour constitutes the highest cost centre (48.66%), followed by cassava cuttings (6.38%) and wood fuel (5.79%). Palm oil and other ancillary items made up 6.75% of the total cost. The farmers in this category did not use improved varieties, credit, fertilizer and insecticides.

The gross margin was ₦76, 64 (68.65%) while the net profit was ₦59, 840. The return on every one Naira invested was 1.16 while the return on sale was 53.60%.

TABLE 2: COST AND RETURN ANALYSIS FOR NON INFORMATION USERS OF CASSAVA FARMERS

S/No	ITEM	QUANTITY (MT)	PRICE UNIT (₦)	TOTAL (₦)	(₦)	(%)	(%)
(a)	Production Output/Income						
1	Yield of cassava tubers for mean farm size of 0.21he	2.10	-	-	-		
2	Output of Garri/Land Sales	0.525	120,000/MT	63,000	-	56	
3	Income from other crops (e.g. maize, melon, vegetables etc.)	Varied	Varied	48,640	111,640	44	100
(b)	Variable Costs:						
4	Common Local variety of Cassava Cutting	600 sticks (or 6 bundles)	550/bundle	3,300		6.38	
5	Labour	42 man-days	600/man-day	25,200		48.64	
6	Fertilizer	-	-	-			
7	Interest on Loans	-	-	-			
8	Insecticides/Pesticides	-	-	-			
9	Palm Oil	½ 25litre Can	4,000/Can	2,000		3.84	
10	Wood	15 bundles	200/bundle	3,000		5.79	
11	Other (bags, twines etc)	Varied	Varied	1,500	35,000	2.89	
	Gross Margin				76,640		68.65
(c)	Fixed Cost:						
12	Depreciated value of implements	Varied	Varied	10,500		20.27	
13	Rent on Land	21 plots	300/plot	6,300	16,800	12.16	32.40
	Total Cost				51,810	100	100
	Net Profit				59,840		
	Return on every one Naira invested					1.16	
	Return on Sales						53.60

Source: Field Data, 2013

NOTES:

1. Yield for common local variety used was 10MT ha⁻¹
2. Recovery rate of cassava tubers to Garri was 25% for the local variety.
3. No fertilizer application
4. Labour from bush clearing to harvesting was estimated to be 150 man-days per at ₦ 600.00 per man-day
5. Farm implements were depreciated at 25% per annum.
6. No credit facilities were used.
7. Non-information users of cassava farmers did not adopt improved technology, nor applied fertilizer, insecticides/pesticides or used credit facilities.

b) Cost and Returns of Information Users of Cassava Farmers.

Table 3 is the cost and returns analysis for information users of cassava farmers. The table showed that the mean farm income from these groups of farmers was ₦249, 000 per annum. Out of this, sale from garri was about 76% while income from other ancillary crops in the cassava based enterprise was about 24% of sales. The yield of cassava for information users was higher (5.25 MT) than those of non-information users (2.10 MT) per annum. This, perhaps was because information users respondents used improved varieties of cassava cuttings which have potentials for higher output and greater recovery rate

(30%) of the garri from raw cassava than the local variety (20-25%).

Of the total cost of ₦82, 400 per annum, the variable cost constituted about 80% while fixed cost was about 20%. Although in terms of percentage, fixed cost information users was lower because of higher investment in terms of fertilizer use, improved varieties and other input costs. The fixed cost was the same for both information and non-information users. The implication of this is that any difference in yield of the two groups can be attributed to use of improved inputs, better management and operational techniques. The figure for labour like those of non-information users constitutes the highest cost centres of about 31%. This was followed by expenses on fertilizer (19%), interest on loan (12%), wood or fuel (4.85%) and improved variety of cassava cuttings (4.73%).

The gross margin was ₦183, 400 as against the figure for non-information users of ₦76, 640. The net profit of information users was ₦166, 600 per annum as against ₦59, 840 for non-information users; this constitutes about 78% of the former. In otherwords, information users made 28% more net profit than non-information users. The return for every naira invested was also higher (2.02) than the figure for non-information users (1.16). Similarly, the return on sales for information users was higher (67%) than those of non-information users (54%). This suggested that information users were more empowered financially to make further investments and in the process break the chain of vicious cycle of poverty and thus reduce poverty.

TABLE 3: COST AND RETURN ANALYSIS FOR INFORMATION USRES OF CASSAVA FARMERS

S/No.	ITEM	QUANTITY (MT)	PRICE/ UNIT (₦)	TOTAL (₦)	(₦)	(%)	(%)
(a)	Production Output/Income						
1	Yield of Cassava tubers for mean farm size of 0.21ha	5.250	-	-	-	-	-
2	Output of Garri and Sales	1.575	120,000/ MT	189,000	-	75.90	
3	Income from other crop (e.g. melon, maize, vegetables etc.	Varied	Varied	60,000	249,000	24.10	100
(b)	Variable cost:						
4	Improved variety of cassava Cuttings	600 sticks or (6 bundles)	650/bundle	3,900		4.73	
5	Labour	42 Man-days	600/Man-day	25,200		30.58	
6	Fertilizer (NPK and Potash)	0.2	80,000/MT	16,000		19.42	
7	Interest on Loans	-	10%	10,000		12.14	
8	Insecticides/Pesticides	-	-	2,500		3.03	

9	Palm Oil	½	25Litre	4,000/Can	2,000		2.42	
10	Wood		20 Bundles	200/Bundl	4,000		4.85	
11	Others (Bags, twines, etc)		Varied	Varied	2,000	65,600	2.47	79.61
	Gross Margin					183,400		
(c)	Fixed Costs:							
12	Depreciated value of implements		Varied	Varied	10,500		12.74	
13	Rent on land		21 Plots	300/plot	6,300	16,800	7.65	20.39
	Total Cost					82,400		100
	Net Profit					166,600		
	Return on every one naira Invested					2.02		
	Return on Sales					66.91		

Source: Field Data, 2013

NOTE: (INFORMATION USERS)

1. Yield for improved variety used was estimated to be 25MT ha⁻¹
2. Recovery rate of Cassava tubers to Garri was 30% for improved variety.
3. Fertilizer application was 1.5 MT ha⁻ⁱⁱ
4. Labour from bush clearing to harvesting was estimated to be 150 man-days per ha at ₦600.00 per man-day
5. Farm implements were depreciated at 25% per annum
6. Mean Loan of ₦100,000 at 10% Interest rate per annum
7. Informed and enlightened cassava farmers used improved varieties, adopt improved technology, apply fertilizer, insecticides or pesticides and used credit facilities.

3.3 Factors Affecting Information Dissemination

As remarked earlier, socio-economic characteristics influenced information dissemination of the respondents. Some of these were subjected to Ordinary Least Square (OLS) methods of regression for the technical dimension so as to highlight the determinants of information dissemination. Of the four functional forms employed, the Semi-log function was chosen as the lead equation on the basis of highest R², F-ratio, number of the significant variables, lowest standard error as well as consonance with apriori expectation. The result of these analyses is presented in Table 4. It showed that of the six variables used, four were significant of 5%. The variables were; ages, level of education, socio-cultural/religious sources and income.

The other two variables which affected information dissemination in the study areas, though not so potent were communication and information accessibility; and physical/ locational accessibility.

Age of the cassava farmers was found to be significant and negatively signed in contrast to the apriori expectation. It was hypothesized

that it has a direct relationship with information gathering and spread. In other words, as the farmers gets older, the more information he has on farm operations and government programme. The result of the analysis suggested the reverse, that is, that the younger farmers knew more of government programmes and about farm operations. This perhaps may be linked to the level of education of the younger farmers, which was higher and they are more familiar with televisions, internet facilities, radios, etc. Moreover, the level of education was found to be significant at 5% level, was positively signed, and in consonance with apriori expectation. This is in agreement with several works. Educational attainment of a farmer raises his productivity and increases his ability to understand and evaluate the information on new techniques and processes being disseminated (Nwaoru, 2004; Feder, et al (1985) and Khan, 1987). Another independent variable used was socio-cultural and religious source, which is composite in character. The variable was found to be significant at 5% level and positively signed as hypothesized. This was not surprising as the interaction with extension agents, friends and relation, churches, kindred and Women August meetings were constituted in this variable.

Income or economic factors was found to be significant at 5% level and positively signed as hypothesized. The variable elicited that the more the income received by the farmer, the more the ability to procure information dissemination facilities such as radios, televisions and newspapers. Radio has been a powerful source of information, especially for the populace. There is a positive perception of farmers on the use of mass media as source of agricultural information (Adejoh et al, 2006).

Communication and information accessibility, which include television, phones and radios, unfortunately were found not to be potent factors in this study contrary to the apriori expectation and the findings of (Moemeka, 1989). Perhaps the group effect of the other source masked the effect of radios in this composite variable. If the variable is disaggregated the result is likely to be different.

Similarly, physical/ locational accessibility, which are made of hinterland, sub-urban and urban were not strong factors for information dissemination in the study area. This may be perhaps Imo State is a very small state in terms in terms of land mass. The R^2 of 0.6677 suggested that these independent variables

synergistically contributed about 67% of the variations in the information dissemination in the study area. The balance or unexplained variations may be due to un-included variables or aggregated variables as captured by the error term.

TABLE 4: REGRESSION ESTIMATION OF DETERMINANTS OF INFORMATION DISSEMINATION OF THE CASSAVA FARMERS FOR THE SEMI-LOG FUNCTIONS:

VARIABLE	COEFFICIENT	STANDARAD ERROR	T-VALUE
Constant	-187038.92527	49,085.1810	-3.8104973
Age(X_1)	-5837.2207	3217.1630	-1.8144*
Education (X_2)	2590.7614	1539.9199	1.6824*
Socio-Cultural and Religious Factors (X_3)	21349.6334	4363.2120	4.8931*
Income (X_4)			
Communication and Information Technology (X_5)	4851.5000	2610.3121	1.85859*
Physical/Locational Accessibility (X_4)	13206.7725	10216.4240	1.2927
$R^2= 0.6677$, Adjusted $R^2= 0.6107$, F-Ratio= 11.72177	4913.7844	10948.7170	0.4488
* = Level of significant at 5%			

Source: Field data, 2013

4.0 CONCLUSION AND RECOMMENDATIONS

The study showed that the information users of the cassava farmers made about 97% more profit than “non-information” users. The total cost of operations for the information users was 59% more than those of “non-information” users. This suggested an increase in gain more proportionate than the increase in cost in favour of information users.

The socio-economic characteristics indicated that the farmers were essentially subsistence small scale farmers. Female cassava farmers were more in number than the male farmers by 50% suggesting that cassava cultivation is still a female dominated crop notwithstanding the rapid growth profile of cassava in commerce. The farmers were typically of middle-age bracket and the participation of youths and graduates of tertiary institution were still minimal. Further, education was still a problem for the respondents as mean number of years spent in school was 6.8 years. Information users of the farmers spent more years in school than “non-information” users.

In connection to the government programmes and policies, about 62% of the farmers were not fully aware of the selected programmes and policies. The female farmers who constituted more of the respondents were worse-off in this respect. The major sources of information of the farmers were, friends and relations, kindred and family meetings, associations and radios, in order of importance. Lack of continuity of programmes by succeeding governments was a major bane in information dissemination and failure rating of programmes and policies.

It was therefore not surprising that socio-cultural and religious sources were crucial part of the main determinants of information dissemination. The

other three critical factors were economic factors as captured by the level of income, education and age.

The foregoing therefore suggested that information is a critical input in the viability of rural cassava farm operators and in the process serve as a veritable poverty reduction and transformation strategies. Accordingly, non-information users were not only deformed in knowledge but also deformed in their profit margin and economic power. This suggested that information really empowers.

Therefore, efforts should be made by the government and all stakeholders to acquaint the farmers at least informally, with the use of multimedia network especially; phones, radios etc perhaps in line with the current Federal Ministry of Agriculture initiative. However, for this to be propitious, education of the farmers, especially the females must be enhanced through informal and extension agent's network. Continuity and sustainability of Government Programs and Policies must be reasonably maintained. It is vitally important to stimulate the interest of the youths, especially the multitudes of unemployed graduates to take to farming by providing seed capital, soft loans, and subsidized fertilizer, training programmes and information sources of all these. Of course, provision of infrastructural facilities (power, water, good road, etc) to rural areas to reverse the rural-urban exodus. Cooperative societies for the rural farmers must be transformed to get the rural farmers more interested.

REFERENCES

- Adejoh, S.O.; O.J. Saliu and G.H. Ogaji (2006) Perception of Farmers on the Use of Mass Media as Sources of Agricultural Information in Dokina Local Government Area of Kogi

- State. In: Asumugha, G.N., A.O. Olojide, J.C. Ikeorgu, A.O., Awo, U. Herbert (eds.); Proceeding of the 40th Conference of Agricultural Society of Nigeria (ASN), Abia, 2006 pp 235-237.
- Adisa, B and E.D. Okunade, (2005); Women in Agricultural Extension; In: Adedpyin S.F.(ed.); Agricultural Extension in Nigeria, ARMTI, Ilorin.
- ADP Agricultural Development Programme (1996).
- Apu Uchechi (2006); Evaluation of Land Resource Allocation to Cassava Cultivation in Abia State, Nigeria. In: Proceedings of 40th Conference of ASN, Abia, 2006, pp94-96.
- Eze, C.C and U.C. Ibekwe (2007); Determinants of Loan Repayment under the Indigenous Financial System in South-East, Nigeria, Medwell Journals Faisalabad, Pakistan. The Social Science 2 (2): Pp 116-120, URL: <http://www.medwelljournals.com>
- Feder, G.; R.E. Just and T. Zilberman (1985). "Adoption of Agricultural Innovations in Developing Countries: A Survey Economic Development and Cultural Change". Vol 33; Pp 255-298
- FAO United Nations for Food and Agricultural Organization (2005). The State of Food and Agricultural, Rome.
- FAO United Nations for Food and Agricultural Organization (2006) FAOSTAT data <http://faostat.fao.org/faostat/Collection>.
- Khan, A.D. (1987); The Journalist Handbook, Vikas Publishing House, New Delhi, Pp 130-131.
- Moemeka, A.A. (1989); Perspective on Development Communication, National Theater, Lagos Pp 201-207.
- NPC National Population Commission (2006)
- FRN (2006) Federal Republic of Nigeria; National Population Census Result, 2006; Abuja, Nigeria.
- NRCRI National Root Crop Research Institute (1997), A Report on Cassava: Proceedings of 1st NAFPP (National Accelerated Food Production Programme and NCC (National Cassava Centre) Workshop, Umudike, Umuahia, Nigeria.
- Nweke, F. I. (1994); Cassava Distribution in Sub-Saharan Africa, Cassava working paper No 12, IITA, Ibadan, Nigeria P 136.
- Okonkwo, J. C. (200), Evaluation of cassava Genotypes for Yield and Response to Biotic Stree in Jos, Plateau State, Nigeria, Journal of Sustainable Agriculture and the Environment, Vol. 4 Pp 20-60
- Unama, R.P.A. and Edeoga, H. O. (2004); "FSR and D (Farming Systems Research and Development) – The situation in Nigeria"; In: Unama, R.P.A.; Onwudike O. C., Uwaegbute, A.C.; Edeoga, H.O.; and wosu, A. C. (eds). Farming Systems Research and Development in Nigeria. Principles and Practice in Humid and Derived Savanna, S.E. Zone; Milcheal Okpara University of Agriculture, Umudike, Abia State, Nigeria. P 67
- Youdeowei, A. (1995). The Role of information for Rural Development in ACP Countries, France Pp 123-16.

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