

Analysis of Garri Marketing in Atiba Local Government Area, Oyo State Nigeria

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Abstract

The study was conducted in Atiba Local Government Area of Oyo State in the south west zone of Nigeria. The main of the study is to examine the profitability of garri in the study. Specifically, to describe the socio economic characteristics; marketing practices and experience and costs and returns of garri marketers in the study area. Simple random sampling techniques was used to select representative samples with a total of 120 respondents. Budgetary analysis and regression analysis was used to estimate the cost and return and factors that determine the profitability of garri marketers in the study area.

The result revealed that majority (90%) of the respondents were female with low literacy level owing to the fact that most of the respondent had primary education has the highest level of education. Majority (53.34%) of the respondent are within the age range of 26-35years. This implies that most people who are engage in this business are in the active age. Majority of the respondent are wholesalers (65.83%) while 27.50% of the respondents are retailer. The result on cost and returns revealed that Total revenue was ₦43, 200, 000 and Total cost was ₦35,130,058 with a Gross margin of ₦8,674, 300 and Net Profit of ₦ 8,069,942 per Month. The benefit cost ratio is $\text{N}1.23$ since BCR is greater than 1, this implies that garri marketing is very profitable. The result on the constraints showed that fluctuation in price (40.83%) is the most serious problem facing garri marketing in the study area due to season of the year. This could be attributed to dry season when harvesting tends to reduce and supply becomes low as a result of caking of the soil which makes harvesting difficult and costly, other problems that also surface are customer buying on credit and not paying on time, goods not delivered on time due to poor road infrastructure and lack of capital. Based on the result obtained from regression analysis there is significant relationship between revenue generated and cost of marketing garri.

Based on my findings it is recommended that marketers should be more educated in order to help more in their business and also to make their business move form unskilled labour to skilled labour. Basic infrastructural facilities such as good rural roads network to curtail marketing cost; and credit facilities to provide financial needs of the marketers, should be in place. These will help to enhance marketing efficiency.

Keywords: Garri; Budgetary Analysis; Regression Analysis

INTRODUCTION

Background to the study

Garri is a staple food prepared from the roots of cassava (*Manihot esculenta crantz*). Its importance in bridging the food gap in Nigeria cannot be overemphasized Chukwuji, *et al*; (2007). In recent times, many rural households have anchored their livelihood on the frames of garri processing and marketing. This is because of the strategic position of garri in the food systems of Nigerians Ekwe and Ike (2010). It is the most common form in which cassava is consumed and marketed. Garri appeals mainly to low income household because it is believed to offer the cheapest source of food calories compared to other tubers. In marketing, garri passes through various market channels and exchange points before reaching the final consumer. These market intermediaries are the wholesalers and retailers, both playing important role in the marketing chain. Processed garri has to be packed and unpacked, loaded and unloaded to meet consumer demand Ali and Jampada (2007).

Ajani and Ugwu (2008) explained that the practice of agriculture is essential for human health, careless and inappropriate agricultural practices can degrade and contaminate natural resources and in so doing, harm human health. (Awokuse, 2009) reported that in recent decade, the potential contribution of agriculture to economic growth has been a subject of much controversy among development economists. While some contend that agricultural development is a precondition to industrialization. According to (Nyerhovwo, 2004), 80 percent of Nigerians reside in the rural areas and they eat cassava meal at least once a day and when compared with rice and maize, cassava has a carbohydrate content which is about 40% higher than rice and 25% more than maize. Also, it is the cheapest source of calories for both human and animal consumption. Hence, cassava plays a major role in the country's food security.

Furthermore, cassava generates income for its producers, processors, transporters and marketers and it serves as raw material in industries such as bakery, textile, paper, plywood and confectioneries (Babaleye, 2004; FAO, 2003). (FAO, 2012) testified that Cassava (*Manihot spp*) is one of the most important root crops grown in Nigeria and most other countries of low land and sub-humid tropics. Cassava production is vital to the economy of Nigeria as the country is the world's largest producer of the commodity, with about 54 million metric tonnes. (Alphonse *et al*; 2018) suggested that in order to enhance the nutritional quality of cassava, it is processed into fermented products such as garri. Garri is one of the most popular cassava products consumed in Africa, Southeast Asia, and Brazil.

In Africa, fermented foods and beverages are produced using fermentation. These products have been consumed for a long time because of their numerous nutritional values. Garri a fermented and roasted granular product from cassava was hitherto considered a poor man's food until recently. It is now elevated to an urban convenience food. It is a cheap and ready source of vital energy. Garri is produced following harvesting of cassava, peeling, grating, dewatering, fermentation (optional), sieving, frying and bagging. This process will give white or creamy white garri while addition of palm oil prior to dewatering will add yellow colour to garri. Yellow garri is preferred and can cost twice as much, making it less available to poorer households. Garri is commonly consumed either as a paste made with hot water and eaten with soup or by soaking in cold water with sugar, coconut, roasted peanut, fish, boiled cowpea as complements. A report by (Phillip *et al*; 2004) reflects that cassava (garri) is truly a national food with urban market presence.

Statement of problem

Cassava growers face variety of challenges which affect their productivity and profitability. This could also be found in processing and marketing of cassava products. (Achoja *et al*; 2012) asserted that majority of the farmers indicated that inadequate finance (35%), land fragmentation (27%), and high cost of labour (15%) were the major problems challenging export-led cassava intensification.

Despite the fact that Nigeria is the world's largest producer of cassava leading with about 21 per cent share in the global market the country still import product like starch, flour, sweeteners that can be made from cassava due to underutilization of available resources (FAO, 2013). Price is an important determinant in acreage decisions of farmers, particularly for produce intended for sale in the market (Nmadu, 1992). The existence of markets to cater for the farmer's surplus production is therefore an essential prerequisite for agricultural development. Produce must be sold at the prices that would cover the cost of production and leave a surplus to reward the farmer's efforts (Damisa, 1998). The existence of markets is however, not enough on its own, to efficiently stabilize prices, and the performance of the market is equally very important (Egware, 2009). There are indications of the existence of gap in price relationship among markets in Nigeria. Some markets have been found to affect appreciably the price of commodities in another market.

In addition to the common problems faced in cassava processing and marketing such as price fluctuation among others, processors often differ in the extent to which they experience the constraints. Inadequate marketing system for garri and other food commodities have continued to constrained agricultural development in Nigeria, particularly in rural community (Omoke, 2011). Given that the price of garri is getting beyond the reach of consumers, yet large number of marketers seems to be engaged in the marketing of garri.

The marketing and distribution has been affected by official neglect of the staple food market because policy makers have not considered it a serious bottleneck to the economic development of the nation. The consequence of this neglect or the marketing of garri and the food sub-sector has led to rising costs as a result sought to provide answer to the following research questions:

- What are the socio economic characteristics of the respondents in the study area?
- What are the marketing practices and experience of garri marketers in the study area?
- What are the cost and returns associated with the marketing of garri?
- What are the constraints to cassava flakes marketing in the study area?

Objectives of the study

The main objective of the study is to found out the profitability of Garri marketing in Atiba Local Government Oyo, State Nigeria.

Specifically to:

- describe the socio economic characteristics of the respondents
- describe the marketing practices and experience of garri marketers in the study area;
- determine the costs and returns to garri marketing
- assess the constraints to garri marketing

METHODOLOGY

Study Area

The study was conducted in Atiba Local Government Area of Oyo State in the south west zone of Nigeria. Atiba is one of the 33 local Government Areas in Oyo State with a population of

168,246 (NPC, 2006). Atiba has a land area of about 1,757square kilometres (Sq Km) and it is located between latitude $8^{\circ} 15'$ and $9^{\circ} 00'N$ of the equator with longitude of $3^{\circ}E$ on the Greenwich meridian, mainly rain forest zone and also extends forward to the derived savannah zone (NPC, 2006). The climate in the study area is of tropical type with two distinct rainfall patterns, the raining season which marks the agricultural production season is normally between the month of April and October. The heaviest rainfall is recorded between the month of June and August while the driest months are November to March. The average temperature ranges between 24° and $35^{\circ}C$, almost throughout the year with a mean annual rainfall of 1,000-1,500mm. The vegetation pattern is that of the rain forest in the south which leads to thick and canopy forest in this side of the area. The climatic condition, soil type, topography and vegetation cover in the area support the cultivation of several crops of economic importance like Cassava, Yam, Maize, Millet, Rice, Plantain, Cocoa tree, palm tree and cashew.



The population of the study

The population of this study consist of various garri marketers in the study area. They ranged from wholesaler, retailer to the final consumer.

Simple random sampling techniques were used to select representative samples. Atiba Local Government Area was purposively selected out of the 33 local governments in Oyo state due to the prevalence of cassava growers and processors in the area. Two open market was selected from the LGA, the selected are Ajegunle market and Sabo market. 87 respondents were selected from Sabo market while 33 respondents were selected from Ajegunle market making a total of 120 respondents.

Method of Data Collection

Primary data was used for this study area. Primary data were collected with the aid of a well-structured questionnaire (which were used to obtain information from 120 respondents in the study area, interview format and observations from both literate and non-literate respondents respectively. The data been collected include the socio economic characteristics of each marketers such as age, gender, marketing experience, level of education and other source of income apart from garri marketing.

Method of Data Analysis

Data obtained from the study area were analyzed with both descriptive and regression analysis in other to achieve the earlier stated specific objective. The descriptive statistics will include table, frequency counts and percentages

Budgetary Analysis

Gross margin analysis was used to assess the profitability of garri marketing of the respondent in the study area.

$$GM = TR - TVC \dots\dots\dots i$$

$$\pi = GM - TFC \dots\dots\dots ii$$

π = Profit

$$TR = P (Q) \dots\dots\dots iii$$

Where;

GM = Gross margin from garri marketing

P = price of garri sales in Congo/kg

Q = Quantity of the garri sold

TR = Total Revenue incurred in garri marketing

TC = Total Cost incurred in garri marketing

$$TC = TFC + TVC \dots\dots\dots iv$$

Where;

TFC = Total fixed cost incurred in garri marketing

TVC = Total variable cost incurred in garri marketing

Regression Analysis

Simple regression analysis was used to determine the factors affecting garri marketing in the study area.

$$R_{garri} = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + \dots\dots\dots b_nX_n + \mu_i$$

Where;

R_{garri} = Revenue

($b_0, b_1, b_2, b_3, b_4, b_5, b_6, b_7, \dots\dots b_n$) are the parameters.

X_1 = Tax payment

X_2 = Sex

X_3 = Age in years

X_4 = Educational background

X_5 = Experience in years

X_6 = Bowl price (₦)

X_7 = Labour Cost (₦)

X_8 = Transportation cost (₦)

X_9 = Trade union (₦)

μ_i = Error term.

DATA ANALYSIS AND DISCUSSION OF FINDINGS

Socio Economic Characteristics of the Respondents

Table 1 shows that majority (90%) of the respondents in the study areas were female. This implies that female generally dominated marketing of garri in Atiba and this may be as a result of the fact that garri marketing is not a tedious work.

The level of educational of the garri marketers in the study area is low owing to the fact that most of the sampled population had no formal education or primary education has their highest level of education which constituted more than 70%. This implies that most of the respondent had few literacy rate. Majority (53.34%) of the respondent are within the age range of 26-35years. This implies that most people who are engage in garri marketing in the study area are in the active age. The result obtained equally revealed that about 52% of the respondent years of marketing experience ranges between 2-10 years while 18.34% of the respondents' had 15years experienced and above. This may be as a result of their low educational level since majority of the respondents had 37.5% primary and non-formal educational level respectively.

Also, the result of the findings revealed that majority (65.83%) of the respondents are wholesalers. From the data obtained it shows majority (100%) are into unskilled labour force. This may be as a result of their low educational level. According to the result obtained most of the marketers 69.17% do not make use of family labour while 30.83% make use of family labour. This implies that the respondent in the study area make use of hired labour than family labour since majority of the respondent are wholesalers (65.83%) they adopted the use of hired labour force than family labour. More than 50% of the respondent source their garri from farmer while 45% source from processor. The result obtained analyse that most of the respondent source their product from both farmers and processors.

According to the result obtained about 23% of the respondent market garri within the state while majority (76.67%) of the respondent market their product within and outside the state. During the field work it was revealed that most marketers distribute to different states in the country like Lagos (34.17%), Ogun state (29.17%). Moreso, most of the markers in the study area supply their product to other states of the federation vis-à-vis Lagos state, Ogun, Osun and Kwara, however, Lagos state happened to be highest beneficiary of the garri market from the study area. This implies that garri marketers in the study area do not only rely the on sells of the product within the state.

Table 1: Percentage Distribution of Respondents Based on their Town

Variables	Frequency	Percentage
Sex		
Female	108	90.00
Male	12	10.00
Total	120	100.00
Educational background		
Primary education	45	37.50
Secondary education	30	25.00
Non- formal education	45	37.50
Tertiary education	0	0.00
Total	120	100.00
Age (years)		
21-25	16	13.33

26-35	64	53.34
36-45	35	29.17
46-50	5	4.17
Total	120	100.00
Mean = 33		
Years of Experience		
2-10	62	51.68
11-15	36	30.00
16-22	22	18.34
Total	120	100.00
Mean = 11		
Nature of Enterprise		
Roadside (Hawker)	8	6.67
Retail	33	27.50
Wholesale	79	65.89
Total	120	100.00
Mean =2.59		
Size of labour force		
Skilled labour	0	0.00
Unskilled	120	100.00
Total	120	100.00
Mean = 2		
Family Labour		
Yes	37	30.83
No	83	69.17
Total	120	100.00
Source of garri		
Farmer	66	55.00
Processor	54	45.00
Total	120	100.00
Mean = 1.45		
Places of marketing garri		
Within the State	28	23.33
Within and outside the state	92	76.67
Total	120	100.00
Mean =2.53		
Other states of marketing		
Within the state	26	21.67
Lagos state	41	34.17
Ogun state	35	29.17
Osun state	7	5.83
Kwara state	11	9.17
Total	120	100.00
Mean =1.47		

Source: Field Survey, 2021

Enterprise Source of Income

Table 2 shows that more than 70% of the respondent are only into cassava flakes marketing while 29.17% are into other enterprise. Other source of income they are into are tailor (5.00%), soap production (7.50%), hair dresser (4.17%), provision (7.7%) and other agricultural product (5.00%). This implies that cassava flakes' marketing is profitable enough as the only source of income. Appreciable number of the respondent strongly agree that cassava flakes is profitable enterprise worthy of invest on most especially in the study area. In the vain, majority of the respondent do not advertise their product; the only mode of advertisement been used is persuasive by calling customer to come to their side or using their sweet mouth and been friendly to customer in order to patronize from them while 1.67% of the respondent make use of advertisement using local mode.

Table 2: Analysis of Result Based on Enterprise Source of Income

Enterprise source of income	Frequency	Percentage
Enterprise only source of income	85	70.83
Tailor	6	5.00
Soap production	9	7.50
Hair dresser	5	4.17
Provision seller	9	7.50
Other Agricultural product	6	5.00
Total	120	100.00
Respondent Estimation of profitability		
Very Profitable	60	50.00
Less profitable	15	12.50
Quite Profitable	45	37.50
Total	120	100.00
Advertisement		
Yes	2	1.67
No	118	98.33
Total	120	100.00

Source: Field Survey, 2021

Cost and Returns of Garri Marketing

The result below shows the break-down of cost of garri marketing in the study area

Table 3: Total Cost

Total cost	Amount Monthly (₦)
Variable cost	
Garri	31,763,400
Hired labour	1,105,800
Packaging	120,000
Sack	120,000
Trade union	8,410
Transportation	1,407,500
Sub-Total Variable Cost	34,525,700
Fixed cost	
Congo	55,600
Bowl	190,400

Nylon	56,600
Thread	27,800
Tax	27,958
Rent	246,000
Sub-Total Fixed	604,358
Total	35,130,058

Source: Field Survey, 2021

Total Revenue

Total revenue of the respondents is determined by multiplying the total price of garri sold in a month by its quantity in kg

Total Revenue incurred by the marketers= Price * Output

A congo (1kg) of garri is sold at the rate of ₦ 120 by wholesalers while the retailers is ₦ 150 and the total output is 352500

Total Revenue = ₦43, 200, 000

Average Cost of the Respondents

The average cost of the respondents is ₦ 100 which means that each respondent used an average cost of #100 for each level of output produced.

$$AC = \frac{TC}{OUTPUT}$$

$$AC = \frac{35,130,058}{352500} = ₦100$$

Average Revenue Incurred

The average revenue of the respondent is #123 which implies that each respondent obtained average revenue of ₦ 123 on every level of output market.

$$AR = \frac{TR}{OUTPUT}$$

$$AR = \frac{43200000}{352500} = #123$$

Budgetary Analysis

Gross Margin Analysis for Marketing Garri

Gross Margin= Total Revenue – Total Cost

Total Revenue (TR) = ₦43,200,000

Total Cost (TC) = ₦ 35,130,058

Total Variable Cost = ₦ 34,525,700

Gross Margin= Total Revenue – Total Variable Cost

Gross Margin (GM) = ₦43,200,000 - ₦ 34,525,700

Gross Margin (GM) = ₦8,674,300

Net Profit = TR-TC

Net Profit = ₦ 43,200,000 – ₦ 35,130,058

Net Profit = ₦ 8,069,942 per Month

Average Profit Incurred

The average profit of the respondents is #23 which implies that each respondent accrued a profit of #23 for every level of output produced.

$$AP = \frac{PROFIT}{OUTPUT} = \frac{8069942}{352500} = ₦ 23$$

Benefit Cost Ratio

$$BCR = \frac{TOTAL REVENUE}{TOTAL COST}$$

$$BCR = \frac{43200000}{35130058} = \text{N} 1.23$$

Since BCR is greater than 1, this implies that garri marketing is very profitable because every naira spent in marketing garri in the area produces additional 50k

Constraints in Garri Marketing

Distribution of the Constraints Faced by garri marketers

Table 4 presents the summary of the constraining factors affecting garri marketing in the study area. The result shows that fluctuation in price (40.83%) is the most serious problem facing garri marketing in the study area due to season of the year. This could be attributed to dry season when harvesting tends to reduce and supply becomes low as a result of caking of the soil which makes harvesting difficult and costly (Olukosi *et al*; 2007). other problems that also surface are customer buying on credit and not paying on time, also part of the problem encountered are goods not delivered on time due to poor road infrastructure, 4.17% of the respondent face high cost of transportation this can be as a result of farms and processors not been too far from the study area. About 9.17% of the respondent lack capital this can be as a result of respondent not been into cooperative society or trade union.

Table 4: Percentage Distribution of the Constraints Faced by Cassava flakes marketers

Constraints	Frequency	Percentage
Customer buy on credit	35	29.17
Fluctuation in price	49	40.83
Poor road infrastructure	20	16.67
Lack of capital	11	9.17
High cost in transportation	5	4.17
Total	120	100.00

Source: Field Survey, 2021

Regression Analysis

Summary of Regression

Regression analysis was used to analyse the significant relationship between revenue generated and the cost of marketing garri. The result analyse in table 5 shows that the adjusted R² was found to be 0.6636, which means that 66% of the variations in revenue generated are explained by the estimated independent variables. The result revealed that five variables (Tax payment, trade union, labour, transportation cost and congo used) were significant at different levels while the garri output is the dependent variable.

Tax payment is significant at 1% level and a negative relationship with output which implies that as tax payment increases the revenue decreases and this may be as a result of high cost of taxation.

Trade union (cooperative benefit) is significant at 5% level and as a positive relationship with revenue which implies that as the benefit cooperative provides increases the revenue of garri also increases and this may be as the impact cooperative or trade union provides.

Labour is significant at 1% level and had a positive relationship with garri marketers which indicate that as labour cost increases the revenue of garri also increases and this may be as a result of effective utilization of factor of production.,

Transportation cost is significant at 1% level and had a positive relationship with revenue which means that an increase in transportation cost will not increase the level of garri marketing output.

Congo is significant at 1% level and had positive relationship with output level which implies that as the price of congo used increases revenue decreases.

Table 5: Result of regression analysis showing between revenue generated and cost of marketing garri

Revenue	t value	p value
Tax payment	-2.70***	0.008
Nylon cost	-0.08	0.938
Trade union	2.33**	0.022
Bowl price	-0.17	0.867
Labour	4.29**	0.000
Transportation	2.67***	0.009
Congo	2.43***	0.017
Constant	21.14	0.000
R-squared =0.6919		
Adj R-squared=0.6636		

***Source: Field Survey, 2021**

*** Significant at 1% level of Significance

** Significant at 5% level of Significance

Conclusion

There is significant relationship between revenue generated and cost of marketing garri. Therefore null hypothesis is rejected and alternative hypothesis is accepted.

In view of the major findings, the followings are recommended:

- Marketers should be more educated in order to help more in their business and also to make their business move from unskilled labour to skilled labour.
- Basic infrastructural facilities such as good rural roads network to curtail marketing cost; and credit facilities to provide financial needs of the marketers, should be in place. These will help to enhance marketing efficiency

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