

## Original Article

# Marketing analysis of garri among wholesalers in three selected markets in Kaduna metropolis, Kaduna state, Nigeria

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### ABSTRACT

The study examined the analysis of garri marketing among wholesalers in three selected markets in Kaduna metropolis. Purposive and random sampling techniques were used to select the 45 garri wholesalers used for this study. Data were collected from the garri wholesalers using structural questionnaires. The data were then analyzed using descriptive statistics, market margin analysis, and marketing efficiency analysis. The result indicated that about 55.6% of wholesalers are female and about 97.8% are between the ages of 21–60 years. The market margin analysis values that ranged 16.00–16.13% showed that garri marketing among the wholesalers has fair profitable margins in the study area, the result of marketing efficiency coefficient that ranged between 4.0% and 5.0% revealed that the garri marketing among the wholesalers in the study area is highly inefficient. The wholesalers are also faced with diverse constraints such as spoilage of garri, bulkiness nature of garri, and high cost of both transport militating against them in the marketing of garri in the study area. It is, therefore, recommended that garri wholesalers should form cooperative society in order to pool their resources together to enable them address the identified problems to be more efficient in marketing their garri.

**Keywords:** Constraints, efficiency, garri, margin, marketing, selected markets, wholesalers

**Submitted:** 28-05-2022, **Accepted:** 10-06-2022, **Published:** 30-06-2022

## INTRODUCTION

Production and processing of cassava in Nigeria is still predominantly local yet Nigeria is one of the largest producers of cassava and cassava products in Africa.<sup>[1]</sup> Cassava is a basic food staple contributing about 40% of the food calories consumed in Africa.<sup>[2]</sup> It is the third largest source of food carbohydrates in the tropics, after rice and maize. A major and most popular form in which cassava is processed and marketed in Nigeria is garri.<sup>[3]</sup> According to Nyerhovwo,<sup>[4]</sup> among the starch staples, cassava gives a carbohydrate production which is about 40% higher than rice and 25% more than maize with the result that cassava is the cheapest source of calories for both human nutrition and animal feeding. It is processed into various products such as lafu and garri but garri is the most commonly consumed in Nigeria.

Garri is the most popular form in which cassava (*Manihot esculenta*) is consumed by several millions of people in Africa

continent, especially in the West Africa sub-region,<sup>[5]</sup> and it is a staple food in Nigeria, Ghana, Benin, and Togo. Its either eaten in the household as a refreshing light meal when soaked in cold water and eaten with coconut, banana, smoked fish or peanut, or as a major meal when made into thick paste called “Eba” and eaten with various types of African soups which make it the most popular diet among the rich and the poor, with acceptability cutting across the various socioeconomic and multi-ethnic groups in Africa.<sup>[5]</sup> Garri is a fermented and roasted granular product from cassava which was hitherto considered a poor man’s food until recently. It is now elevated to an urban convenient food; it is a cheap and ready source of vital energy. Ingawa *et al.*<sup>[6]</sup> reported that cassava (garri) is truly a national food with urban market presence. It is mainly produced for domestic markets but presently some of the products from cassava such as garri and fufu flour are known to be finding their ways to emigrant Nigerian communities in United State and Europe.<sup>[7]</sup> Garri is a granulated and dehydrated cassava product. It is classified or grouped based on texture, length

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of fermentation, and region of place where it is produced and color impacted by the addition/non-addition of palm oil. Garri has a high swelling capability and can absorb up to 4 times its volume in water. Obtainable in the market is the dry form of post-processed garri which can be consumed, soaked in cold water. Sugar can also be added to the soaked garri and can be eaten with meat, roasted groundnuts, smoked fish, boiled beans, coconut, and groundnut cake “kuli kuli”.<sup>[8]</sup> Beverages and milk may also be added as compliments. “Eba” is another food prepared from garri, the granules are added into hot water and stirred to form a stiff paste which can be eaten with Indigenous soups or stew.<sup>[8]</sup>

Inadequate marketing system for garri and other food commodities has been identified as a constraint to agricultural development in Nigeria, particularly in rural communities.<sup>[1]</sup> EEA<sup>[9]</sup> observed that in Nigeria, garri prices exhibit cyclical peaks and troughs due mainly to the inability of markets to absorb supplies. As a result in the years when cassava is scarce the price goes up and farmers are encouraged to plant; production goes up in subsequent years and the price comes down prompting farmers to plant less until the price goes up again in a cycle of approximately 2–3 years. Such cyclical changes cause price instability and significantly increase that the income risk to producers, processors, and other players in the cassava-garri value chain. High product price variations coupled with high transaction costs and risks in the cassava-garri marketing system predisposes it to poor linkage with the nonagricultural sectors which can cause disincentives for production and reduce export earnings.<sup>[9]</sup> Studies have shown that efficient marketing system stimulates agricultural production.<sup>[10]</sup> However, marketing of food in Nigeria has been characterized by a lot of deficiencies.<sup>[11]</sup> These deficiencies have constrained sustainable agricultural development in one way or the other. In Nigeria, several policies related to the development of cassava production and processing have been initiated such as the Presidential Initiative on Cassava and the FADAMA projects. However, these initiatives have failed to adequately incorporate strategies for combating perennial constraints to effective and efficient cassava product marketing in Nigeria. There is also the problem of the exploitative tendencies of the middle men in the cassava product marketing chain<sup>[12]</sup> observed that inadequate storage system has contributed to the persistence of the exploitation of the farmers by the middlemen. This has contributed to increased marketing costs and hence market inefficiency. It is also important to note that the more the number of the middlemen in the marketing chain (common scenario in Nigeria), the longer the length of the chain and the greater the difference in the price paid between consumers at the end of the chain and farm gate price at the beginning of the chain. This leads to greater or wider marketing margin between producers and final consumers. If the marketing margin is high, it may be used to argue that consumers are being

exploited. However, high margin cannot often be fully justified unless costs are rational and fully understood.<sup>[13]</sup> In Nigeria, the previous studies have focused on production efficiency and there have been scanty empirical studies on marketing efficiency of agricultural commodities such as garri. It is a known fact that market-driven production is imperative for sustainable growth. The study, therefore, aimed at carrying out marketing analysis of garri among wholesalers in selected markets in Kaduna metropolis.

## METHODOLOGY

### Study Area

The study was conducted in Central, Sabo, and Mando markets. The three markets are located within Kaduna metropolitan town. Kaduna state is located within the Guinea Savannah Region on latitude 10° 32' E and longitude 7° 17' N. It has an estimated annual rainfall of about 1000–1500 mm/annum and a land mass area of about 3174.5 sq kilometers. The state has contributed immensely to the Nigerian economy especially in the area of agricultural production of major crops such as tomato, yam, cassava, maize, millet, and pepper. The selected markets are known for marketing of various agricultural products and by-products such as garri, cassava flour, yam flour, tomatoes, pepper, maize, beans, yam, sweet potatoes, irish potatoes, onions, okra, and other vegetables. The markets have several tribes and ethnic groups i such as Yoruba, Hausa, Ibo, and Fulani land other locals interacting together harmoniously.

### Sampling Procedures

Two stage sampling techniques were used for the study. The first of sampling technique is the purposive selection of three markets in Kaduna metropolis. The markets selected purposively are Central, Sabo, and Mando markets, respectively. The second stage of sampling is the random sampling of garri wholesalers in the selected markets. Fifteen wholesalers were selected from each market making a total of 45 garri wholesalers that were used for the study.

### Method of Collecting Data

Primary data were used for this study. The primary data were obtained by administering a well-structured questionnaire to the respondents.

### Analytical Tools

The data collected were analyzed using descriptive statistics such as frequency percentages and tables to described the socio-economic characteristics of the marketers and constraints militating against marketing of garri, while marketing margin analysis was used to achieved the margins between the producers and the marketers and marketing efficiency coefficient was used to described how efficient is the marketers in marketing garri in the selected markets.

**Marketing Margin**

It was employed to determine the fraction of consumer’s expenditure on a commodity that is received by producer and each of the marketing agents. The formula that was used for marketing margin is specify as:

$$\text{Marketing margin (\%)} = \frac{\text{Wholesales price of garri} - \text{Supply price of garri}}{\text{Wholesale price of garri}} \times 100$$

**Marketing Efficiency**

Marketing efficiency is maximization of the consumer satisfaction or utilities created and the value added to the commodities as it passes through the market.<sup>[14]</sup> The study adopted the definition of marketing efficiency as given by Shepherd and Ilboudo.<sup>[15]</sup>

$$ME = WP/TMC^{-1}$$

Where, M.E = Marketing efficiency of different markets  
 WP = Wholesales price of garri in different markets  
 TMC = Total marketing cost that is supply cost plus cost of marketing services such as cost of processing, transporting, loading and off-loading, and commission charges in different markets

**RESULTS AND DISCUSSIONS**

**Socio-economic Characteristics of the Respondents**

*Age of the respondents*

Table 1 shows the distribution of respondents based on their age. About 66.7% of the respondents are between the age of 41–50 years, 13.3% range between the ages of 31–40 years, 8.9% of the garri wholesalers age ranges between 21–30 years and 51–60 years, respectively while 2.2% of the respondents are below 21 years of age. The result revealed that 97.8% of garri wholesalers in the study area are in their active and working age group of between 21–60 years. African Farm Management<sup>[16]</sup> recorded age influence managerial decision-making.

*Gender of the respondents*

Table 1 also indicated that 55.6% of the respondents were females while 44.4% were male. This shows that garri marketing is gender sensitive in the study area. This result revealed that the females are more involved garri marketing than the males in Kaduna metropolis which implies that the males are involved in activities that requires exertion of strength such as farming of cassava used for making the garri than the females. The result was not in agreement with the findings of Rahman *et al.*<sup>[17]</sup> which stated that men were the main providers for the household and support the family more than women.

**Table 1: Socio-economic characteristics distribution of the respondents**

Variable	Frequency (F)	Percentage (%)
Age range		
Below 21 years	1	2.2
21–30 years	4	8.9
31–40 years	6	13.3
41–50 years	30	66.7
51–60 years	4	8.9
Gender		
Female	25	55.6
Male	20	44.4
Marital status		
Single	8	17.8
Married	31	68.9
Widow	6	13.3
Household size		
1–5 persons	26	57.8
6–10 persons	15	33.3
11–15 persons	4	8.9
Educational level		
No formal education	3	6.7
Arabic education	7	15.6
Primary education	9	20.0
Secondary education	17	37.7
Tertiary education	9	20.0
Year of experience		
1–5 years	8	17.8
6–10 years	0	0.0
11–15 years	12	26.7
16–20 years	25	55.5
Total	45	100.0

Source: Field Survey, 2019

*Marital status of respondents*

The result of marital status of the garri sellers was also presented in Table 1, which shows that 13.3% of the respondents were widow, 17.8% were single, and 68.9% were married. This reveals that married people are more into marketing of garri than the singles. This might be as a result of the singles migrating from place to place while the married is looking for income to sponsor their children to schools, settle medical bills, feeding, and shelter. The result was in line with the study of Olagunju *et al.*<sup>[18]</sup> that reported that the majority of garri marketers in South Western Nigeria were married.

*Household size of respondents*

Table 1 also revealed that about 57.8% of the respondents had household size that ranges between 1 and 5 persons, 33.3% of

the respondents had a household size that ranges between 6 and 10 persons and 8.9% of the respondents had household size that ranges between 11 and 15 persons, respectively. The results revealed that the majority of the respondents have a large household size that is above six people which shows that their labor need may be provided by the family. Rahman *et al.*<sup>[17]</sup> stated that family size or household size is the total number of individuals who live within and feed in the household. A household is made up of head, wives, and children and to some extent family relatives.

**Educational status of the respondents**

Table 1 also presents the result of educational background of the respondents. The table shows that 6.7% of the respondents had no formal education, 15.6% of the respondents received Arabic education, 20.0% of the garri wholesalers attended primary school and tertiary institutions, respectively, while 37.7% of the respondents attended secondary school. The result revealed that 93.3% of the garri wholesalers had one form of education ranging from Arabic school to tertiary education which might have positive effect on their rate of accepting new innovations concerning marketing strategies. This implies that the majority of the garri wholesalers are educated and due to their education level, it will be easier to adopt new technologies in marketing and deal with problems of risk and uncertainty in marketing.<sup>[17]</sup>

**Year of experience in garri marketing by the respondents**

The result of years of experience gained by the wholesalers of garri in marketing garri in the study area is presented in Table 1. The table shows that about 17.8% of the respondents had experience in garri marketing that ranges between 1 and 5 years, 26.7% of the respondents had been selling garri for as long as between 11 and 15 years, while 55.5% of the respondents had been in garri marketing for the past 16 years and above. The result revealed that the majority of the respondents has long years of garri retailing business. This result is in conformity with the work of Solomon *et al.*<sup>[19]</sup> in which the majority of garri marketers in Delta state had been in garri marketing business for long years.

**Sources of garri**

The result showing how the respondents buy their garri for sale is presented in Table 2. The table revealed that the majority (100.0%) of the garri wholesalers got their supply from the producers directly.

**Marketing Margin Analysis of Garri Marketing among the Wholsalers in Selected Markets in Kaduna Metropolis**

The result of marketing margin analysis of garri among the wholesalers in the three selected markets in Kaduna metropolis is presented in Table 3. The result shows that the marketing margin of the markets ranges from 16.0–16.13% with wholesalers in

**Table 2: Distribution of the respondents based on sources of garri**

Source	Frequency (F)	Percentage (%)
Producers	45	100.0
Total	45	100.0

Source: Field Survey, 2019

**Table 3: Marketing margin of garri in the three selected markets in Kaduna metropolis per number of bags sold per month**

	SP (Naira)	WP (Naira)	MM	MM ( %)
Central	1,008,000.00	1,200,000.00	0.1600	16.00
Sabo	520,000.00	620,000.00	0.1613	16.13
Mando	453,600.00	540,000.00	0.1600	16.00

Source: Field survey 2019. SP: Supply price for number of garri bags sold per month in Naira; WP: Wholesales price for number of garri bags sold per month in Naira; MM: Marketing margin

Sabo market having the highest marketing margin of 16.13% while those in Central and Mando markets having the lowest market margin of 16.00% each, respectively. The result revealed that the entire market margin was all low which signifies that garri wholesalers in the study area have a fair share of the profit margin. This result, however, was not in line with the work of Ekwe and Ike<sup>[20]</sup> that reported higher marketing margin values for garri enterprises in Southern Nigeria.

**Marketing Efficiency for Garri among Wholesalers in the Three Selected Markets in Kaduna Metropolis per Number of Bags Sold per Month**

The result of marketing efficiency for garri among wholesalers in the three selected markets in Kaduna metropolis is presented in Table 4. The coefficient of marketing efficiency for garri marketing among the wholesalers in the study area was calculated to be 5.0%.for wholesalers in Central market, 4.0% for wholesalers in Sabo and Mando markets, respectively. This result indicates that the efficiency of garri marketing among the wholesalers at Central market is the highest, followed by those of Sabo and Mando markets were the least. This indicates that the wholesalers of garri in Central market are more efficient. The coefficient of marketing efficiency across the four markets was actually <100% indicating that there is a lot of inefficiency in garri marketing among the wholesalers in the study area. A market that is efficient does not only bring sellers and buyers together, it enables entrepreneurs to take advantage of opportunities, to innovate and improve in response to demand and price changes.<sup>[21]</sup>

**Constraints Militating Against Garri Marketing among Wholesalers in Kaduna Metropolis**

The result of Table 5 shows that the various constraints encountered in selling of garri by the respondents. Spoilage of

**Table 4: Marketing efficiency for garri among wholesalers in three selected markets in Kaduna metropolis**

Market	WP (Naira)	SP (Naira)	MC (Naira)	TMC (Naira)	M.E
Central	1,200,000.00	1,008,000.00	132,000.00	1,140,000.00	0.05
Sabo	620,000.00	520,000.00	74,000.00	594,000.00	0.04
Mando	540,000.00	453,600.00	66,000.00	519,000.00	0.04

Source: Field survey, 2019. WP: Wholesales price for number of garri bags sold per month in Naira, SP: Supply price for number of garri bags sold per month in Naira, MC: Marketing costs of bags of garri sold per month in Naira, TMC: Total marketing costs of bags of garri sold per months in Naira, and ME: Marketing efficiency of garri marketing among the wholesalers in different markets

**Table 5: Constraints encountered in garri marketing among the wholesalers in Kaduna metropolis**

Constraint	Frequency (F)*	Percentage (%)
Garri spoilage	45	100.0
Bulkiness of garri	39	86.7
Irregular supply of garri	9	20.0
High storage cost	9	20.0
High transportation cost	36	80.0

Source: Field Survey, 2019. \*Multiple response

garri was reported by 100.0% of the respondents to be a major constraint which was closely followed by 86.7% of the garri wholesalers who identified bulkiness of garri as a constraint to them and high cost of transportation was identified by 80.0% of the wholesalers as the third constraint confronting them in their business. High cost of storage and irregularities in garri supply was lesser constraint as identified by 20.0% of the marketers each, respectively. The result shows that the supply of garri to meet the demand of consumers in the study area is not a constraint. The spoilage of garri does not makes the marketers to store large volume of the product. The high transportation cost identified in this study was in agreement with the finding of Ayinde and Idris<sup>[22]</sup> who asserted that high transportation cost of agricultural products bring about wide variation in price between the urban and rural areas.

## CONCLUSION

The result of the study showed that 97.8% of garri wholesalers are in their active age of between 21–60 years, while 77.7% of the had formal education ranging from primary school to tertiary institutions. The respondents were mainly female marketers with the majority having marketing experience of over 5 years and above. The result of the marketing margin showed that garri marketing among the wholesalers has a fair profit margins in the study area and all the wholesalers in the three markets are highly inefficient in carrying out all activities relating to sales of garri. Based on the result, it is concluded that garri marketing among the wholesalers in the study area is a profitable venture though with little margin and the wholesalers are constrained with garri spoilage, bulkiness nature of garri,

and high cost of transportation among others. Based on the result gotten from this study, the following recommendations are therefore suggested: There is a need for the wholesalers to form a cooperative society so that they can pool their resources together to solve some of the identified problems, government should come to the aid of the wholesalers so that solution to the various constraints such as spoilage of garri and high transportation cost which affects garri marketing among the wholesalers in the study area can be sought for to increase their level of marketing efficiency.

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