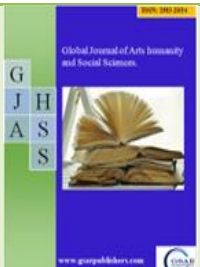


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EFFECT OF CASSAVA GRANULES (GARRI) PRODUCTION AND MARKETING ON THE PERFORMANCE OF WOMEN ENTREPRENEURS AMONG RURAL WOMEN IN BENUE SOUTH SENATORIAL DISTRICT

By

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Abstract

This study examined the effect of cassava granules (garri) production and marketing on the performance of women entrepreneurs among rural women in Benue South Senatorial District, Benue State, Nigeria. The study was anchored on the increasing importance of cassava-based enterprises as a pathway for enhancing rural livelihoods, promoting women's economic empowerment, improving household welfare, and supporting sustainable rural development. Specifically, the study assessed the contribution of garri production and marketing activities to the entrepreneurial performance of rural women engaged in cassava enterprises. A cross-sectional survey research design was adopted, with primary data collected through structured questionnaires administered to 384 women entrepreneurs involved in garri production and marketing across selected Local Government Areas in Benue South Senatorial District. Data collected were analyzed using descriptive statistics and ordinal regression analysis. The findings revealed that garri production and marketing had a significant positive effect on women entrepreneurship performance at a 5% level of significance. The results further showed that garri marketing enhanced income generation, household food security, women's economic empowerment, employment creation, access to market opportunities, and enterprise development. The study also established that improved market linkages, access to financial resources, entrepreneurial skills, and participation in women associations contributed significantly to business growth and sustainability. However, inadequate access to finance, poor transportation infrastructure, limited processing facilities, weak market information systems, and restricted access to wider markets remain major challenges affecting women-owned garri enterprises. The study concludes that strengthening garri production and marketing systems through improved financial support, modern processing technologies, entrepreneurship development, cooperative strengthening, and efficient market infrastructure is essential for enhancing the competitiveness and sustainability of rural women entrepreneurs. The study recommends that government agencies, financial institutions, and development organizations should implement targeted interventions that improve access to affordable credit, strengthen women's cooperatives, promote value addition, and establish sustainable market networks for cassava-based enterprises.

Keywords: Cassava Granules (Garri), Marketing, Women Entrepreneurship Performance, Rural Women, Value Addition, Benue South Senatorial District.

Background to the Study

Women entrepreneurship has become an important instrument for promoting rural economic transformation, poverty reduction, employment generation, and household welfare in developing economies. The increasing involvement of women in entrepreneurial activities has contributed significantly to income generation, livelihood diversification, and community development, particularly in rural areas where formal employment opportunities are limited (Agbaeze et al. 2020). Small and medium-scale enterprises (SMEs) serve as important vehicles for economic growth through employment creation, innovation, and local economic development. In developing countries, rural enterprises provide opportunities for individuals and households to generate income through agricultural processing, trading, and value-added activities (Anyoha, et al. 2023).

Within the agricultural sector, agribusiness enterprises have gained increasing recognition as important pathways for improving rural livelihoods, strengthening food security, and promoting inclusive economic development (Graffham et al. 2019). The agricultural value chain approach emphasizes the transformation of agricultural commodities from primary production into market-oriented products through processing, packaging, transportation, distribution, and marketing. Through value addition, rural entrepreneurs are able to increase product value, improve profitability, create employment opportunities, and enhance their participation in economic activities (Oteh et al., 2023).

Cassava (*Manihot esculenta* Crantz) is one of the most important food and industrial crops cultivated in tropical and subtropical regions. The crop is widely produced because of its adaptability to diverse ecological conditions, drought tolerance, and ability to produce satisfactory yields under different production environments. Cassava plays a significant role in food security due to its high carbohydrate content, flexible harvesting period, and ability to provide dietary energy for millions of households (Sanni et al., 2018; Ayetigbo et al., 2018).

Nigeria is one of the leading producers of cassava globally, and the crop contributes significantly to rural employment, household income generation, and agricultural development. However, the economic importance of cassava extends beyond primary production to include several processing and marketing activities that create entrepreneurial opportunities (Onah et al. 2024). Among the various cassava derivatives, cassava granules (garri) remain one of the most widely consumed and commercially valuable products in Nigeria and other West African countries. Garri is a fermented and roasted cassava product known for its affordability, accessibility, long shelf life, and ease of preparation, which has contributed to its widespread consumption and increasing market demand (Udoro et al., 2021, 2016; Iornongo, 2021).

Garri production involves several value-added activities, including peeling, washing, grating, fermentation, pressing, sieving, frying, packaging, and marketing (Ikpe et al. 2024). These activities provide significant entrepreneurial opportunities, especially for rural women who dominate cassava processing and marketing

activities in many Nigerian communities. Through garri enterprises, women generate income, support household needs, create employment opportunities, and contribute to rural economic development. The participation of women in cassava processing and marketing has therefore become an important pathway for promoting financial independence and improving household welfare (Ikpe, 2021).

Benue State, popularly described as the “Food Basket of the Nation,” is one of Nigeria’s major agricultural-producing states, with cassava production forming an important component of rural economic activities. The favourable ecological conditions of the state support cassava cultivation, while processing and marketing activities provide employment and income opportunities for rural households. In Benue South Senatorial District, rural women actively participate in garri production and marketing through activities such as cassava procurement, processing, packaging, transportation, and distribution to local and regional markets. These activities contribute significantly to household income generation, food security, and local economic development (Ikpe et al. 2024).

The increasing demand for garri, influenced by population growth, changing consumption patterns, and its affordability, provides opportunities for rural women entrepreneurs to expand their enterprises. However, the ability of women to benefit from garri production and marketing depends largely on access to improved processing technologies, financial resources, market information, and effective marketing networks. Value addition through improved processing techniques, quality control, packaging, and branding can enhance product competitiveness and improve profitability among women-owned garri enterprises (Saka et al., 2024).

Marketing remains a critical component of the garri value chain because it determines producers’ access to consumers and their ability to obtain favourable returns from their investments. Effective marketing requires proper identification of target markets, availability of reliable market information, consistent product quality, efficient distribution channels, and effective promotional strategies (Ikpe, 2014). Cassava products possess important market attributes, including affordability, consumer acceptance, and nutritional value, which create opportunities for enterprise expansion when properly promoted (Udoro et al., 2021). However, challenges such as poor market linkages, inadequate transportation facilities, dependence on intermediaries, price instability, and weak bargaining power continue to affect the profitability of rural women engaged in garri marketing (Eze et al., 2023).

Maintaining consistent product quality is also essential for improving customer satisfaction and sustaining market competitiveness. This involves the use of appropriate cassava varieties, improved processing methods, hygienic production practices, proper packaging, and effective customer relations. Providing quality products, ensuring timely delivery, and responding to consumer needs are important strategies for

improving the performance and sustainability of agricultural enterprises (Soetan et al., 2021).

Rural women associations and cooperative organizations play an important role in supporting women entrepreneurs engaged in agricultural value chain activities. These associations provide opportunities for collective action, access to credit facilities, entrepreneurship training, market information, and improved bargaining power. According to the Food and Agriculture Organization (FAO, 2026), rural women organizations contribute significantly to women's participation in agriculture by facilitating access to productive resources, capacity development, and market opportunities. Through cooperative arrangements, women entrepreneurs can overcome individual constraints, access wider markets, and improve the profitability of their businesses.

In Nigeria, women-focused agricultural organizations have contributed to strengthening rural women's participation in agriculture through training, advocacy, financial support, and market development initiatives. These organizations improve women's capacity to participate effectively in agricultural value chains by enhancing access to resources, technology, and business networks (Tajudeen et al., 2025). Strengthening these support systems is essential for improving the performance of rural women entrepreneurs involved in garri production and marketing in Benue South Senatorial District.

Despite the economic importance of garri production and marketing, many rural women entrepreneurs continue to operate at a subsistence level due to inadequate access to finance, limited processing facilities, poor infrastructure, weak market integration, and insufficient entrepreneurial skills. Limited access to affordable credit remains a major challenge affecting the ability of women entrepreneurs to acquire modern processing equipment, increase production capacity, and expand their businesses (Kaufmann, 2006; Yusuf & Dansu, 2013).

Although previous studies have examined cassava production, cassava value chains, agricultural marketing, and SME development in Nigeria, limited empirical attention has been given to the specific contribution of cassava granules (garri) production and marketing to women entrepreneurship performance, particularly in Benue South Senatorial District. Most existing studies have focused on general cassava production, food security, or SME development without adequately examining how participation in garri processing and marketing influences women's income generation, enterprise growth, and business sustainability.

Therefore, this study examines the effect of cassava granules (garri) production and marketing on the performance of women entrepreneurs among rural women in Benue South Senatorial District, Benue State. The study provides empirical evidence on the contribution of garri-based enterprises to women entrepreneurship development and offers useful insights for policymakers, agricultural extension agencies, financial institutions, and development organizations in designing interventions that promote sustainable women-led agribusiness development.

Statement of the Problem

Cassava granules (garri) production and marketing constitute important agricultural entrepreneurship activities among rural women in Benue South Senatorial District, providing opportunities for income generation, employment creation, household livelihood improvement, and rural economic development. Despite the increasing demand for garri as a major staple food commodity and commercial product in Nigeria, many rural women engaged in garri enterprises continue to operate at a small scale with limited profitability, low productivity, and minimal business expansion. This raises concerns about the extent to which participation in garri production and marketing contributes to women entrepreneurship performance in the study area.

Several factors constrain the ability of rural women entrepreneurs to maximize the benefits associated with garri enterprises. One major challenge is inadequate access to improved processing facilities and modern technologies. Many women still depend on traditional processing methods, which are labour-intensive, time-consuming, and often result in low production capacity and inconsistent product quality. Limited access to efficient processing equipment affects product competitiveness and reduces opportunities for women entrepreneurs to access profitable markets (Udoro et al., 2021).

In addition, poor transportation infrastructure, high transportation costs, inadequate storage facilities, and weak market linkages affect the effective marketing of garri products. Many rural women experience difficulties transporting their products to major markets, obtaining reliable market information, and accessing better prices. Consequently, some are compelled to sell through intermediaries at reduced profit margins, limiting enterprise growth and sustainability (Eze et al., 2023).

Access to finance remains another critical constraint affecting women entrepreneurs involved in garri production and marketing. Limited availability of affordable credit prevents many women from investing in improved processing technologies, purchasing cassava tubers in bulk, adopting better packaging methods, and expanding their marketing networks. As a result, many women-owned garri enterprises remain informal and small-scale with limited capacity for competitiveness and growth (Agbaeze et al., 2020).

Furthermore, inadequate entrepreneurial skills, limited knowledge of market requirements, and weak adoption of modern marketing strategies reduce the ability of rural women to effectively compete in expanding cassava markets. Although rural women associations and cooperative groups have the potential to improve access to finance, training, market information, and collective bargaining opportunities, the extent to which these support systems enhance the performance of garri entrepreneurs in Benue South Senatorial District remains insufficiently explored.

Despite existing studies on cassava production, agricultural value chains, and small-scale enterprises in Nigeria, limited empirical attention has been given to the specific effect of garri production

and marketing on the performance of rural women entrepreneurs. This knowledge gap limits the development of targeted interventions for strengthening women-led cassava enterprises.

Therefore, this study examines the effect of cassava granules (garri) production and marketing on the performance of women entrepreneurs among rural women in Benue South Senatorial District, with the aim of providing empirical evidence for improving women's participation, profitability, and sustainability in cassava-based enterprises.

Aim of the Study

The aim of this study is to examine the effect of cassava granules (garri) production and marketing on the performance of women entrepreneurs among rural women in Benue South Senatorial District.

Specific Objectives

The study seeks to:

- Examine the effect of cassava granules (garri) production activities on the performance of women entrepreneurs among rural women in Benue South Senatorial District.
- Assess the effect of cassava granules (garri) marketing activities on the performance of women entrepreneurs among rural women in Benue South Senatorial District.
- Determine the challenges affecting cassava granules (garri) production and marketing among rural women entrepreneurs in Benue South Senatorial District.

METHODOLOGY

Study Area

The study was conducted in Benue South region of the state (Fig. 1) which is made up of 9 Local Government Areas of which three Local Governments (Ador, Agatu, Apa, Obi, Oju, Ogbadibo, Ohimini, Okpokwu, and Otukpo) (Agboola et al. 2024). The area has a Tropical Savanna Climate. The rainy season starts in late March and ends in early November. It sees the most precipitation is September, with an average rainfall of 209 mm; and the least precipitation in November, with an average rainfall of 2 mm. The rainy period of the year lasts for 8 months, from March 19 to October, with a sliding 31-day rainfall of at least 0.5 inches. Most of the people are farmers while the inhabitants of the riverine areas engage in fishing as their primary or important secondary occupation.

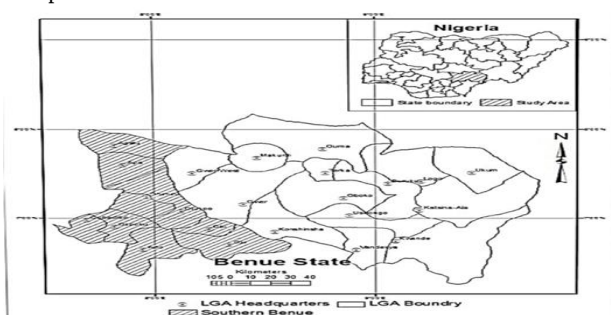


Figure 1: Map of Benue State showing the southern part of the state

Study Design and Data Collection

The study adopted a cross-sectional survey research design using a primary data collection approach. Primary data were collected through the administration of structured questionnaires to rural women entrepreneurs engaged in cassava granules (garri) production and marketing activities in Benue South Senatorial District of Benue State.

The questionnaire was carefully designed to obtain relevant information on the socio-economic characteristics of respondents, garri production activities, marketing practices, access to production resources, enterprise challenges, and women entrepreneurship performance. The instrument was structured into five sections: Sections A, B, C, D, and E.

A handheld Global Positioning System (GPS) device was also used to capture the geographical coordinates of selected garri processing clusters and enterprise locations within the study area. The spatial information generated provided additional insight into the distribution of garri-based entrepreneurial activities across Benue South Senatorial District.

Data collected from the questionnaire administration and GPS observations were subjected to appropriate statistical analyses to examine the relationship between garri production and marketing activities and the performance of women entrepreneurs.

Population, Sample Size Determination

The study applied Smith's (2013) formula for the determination of sample size involving large and unknown populations. Smith's formula becomes appropriate of the determination of the sample size for this research. The formula is based on the principle of normal probability distribution. It makes use of a confidence level which corresponds to a Z-Score. The confidence level that can be selected and their corresponding Z-scores are as follows:

- ✓ 90% confidence level corresponds to a Z- Score of 1.643
- ✓ 95% confidence level corresponds to a Z -Score of 1.96
- ✓ 99% Confidence level corresponds to a Z-score of 2.326

Suppose the study choose a different confidence level, and then find the corresponding Z-Score from the table.

There is a systematic equation that is used in this application. The equation is as follows:

Sample Size: $(Z\text{-score}) \times S(S) / (\text{margin of error})^2$

- ✓ using 95% confidence level= 1.96
- ✓ $S(S) = 0.3$ standard deviation,
- ✓ Margin of error: 5% (0.05)²

Substituting into the equation:

- ✓ $[(1.96)^2 \times 0.5 (0.5)] / (0.05)^2$
- ✓ $n = (3.8416 \times 0.25) / 0.0025$
- ✓ $n = 384.16$

It then implies that, the sample size for this study becomes 384 respondents.

Sampling Technique/Procedure

The population of the study comprised rural women entrepreneurs engaged in cassava granules (garri) production and marketing activities in selected Local Government Areas (LGAs) of Benue South Senatorial District, Benue State. Snow-balling convenience sampling technique was employed to select the sampled farmers for interview and questionnaire administration. This technique was used because the researcher wishes to select only farmers who cultivate cassava in the study area.

Method of Data Collection/Analysis

Questionnaire was used for primary data collection and 384 questionnaires were found useful for data analysis. The quantitative data was analyzed using descriptive and inferential

statistics which were presented in tables and simple percentages. Primary data collected were checked for accuracy, coded, and then entered into a computer. Analysis of quantitative data was conducted using the Software Package for statistical analysis (SPSS) Version 21. Frequencies, percentages and mean scores were computed to describe various adaptation strategies and presented in tables and figures to show the differences and options of respondents.

RESULTS AND DISCUSSION

Socio-economic characteristics of the respondents

The socio-demographic characteristics of the respondents captured in this study were: sex, age, marital status, and educational attainment, religion, estimated income and number of children of the respondents.

Table 1: Distribution of respondents according to their socio-demographic variables

SN	Variable	Frequency	Percentage
A	AGE (IN YEARS)		
	35 above	197	51.3
	26-34	151	39.3
	25 below	36	9.4
B	MARITAL STATUS		
	Married	207	53.9
	Single	152	39.6
	Divorced/Separated	25	6.5
C	EDUCATIONAL ATTAINMENT		
	Tertiary	45	11.7
	Secondary	154	40.1
	primary and below	185	48.2
D	RELIGION		
	Christianity	298	77.6
	Islam	5	1.3
	Traditional	81	21.1
E	ESTIMATED MONTHLY INCOME		
	10,000 below	223	58.1
	10,000-100,000	107	27.9
	100,000 and above	54	14.1
F	NUMBER OF CHILDREN		
	1-3	103	26.8
	4-6	199	51.8

7 and above

82

21.4

Source: Field Survey, 2025

Table 1 provides the socio-demographic characteristics of respondents where the age distribution of respondents revealed that 51% (197) were within the ages of 35 years and above, 39.6% (152) of the respondents were within the ages 26-34 years, while only 6.5% (25) of the respondents were within the ages of 25 years and below. This means that majority of the cassava marketers/entrepreneurs were within the ages of 35 years and above.

On the Marital status of respondents, 53.3% (202) were married while 40.1% (152) were single; 6.6% (25) were divorced/separated. From the findings, more married women participated in the study. A study conducted by Ikpe, (2021) in Sokoto revealed that majority of the rural households were up to 10 persons. Since farming and marketing are major economic activity for most people in rural areas, the married ones participate in farming activities to cater for family needs. On the other hand, the dependents provide labour for agricultural production activities as indicated by Ikpe et al., (2024).

The educational attainment of the respondents showed that 40.1% (154) of the respondents had Secondary education, while 48.2% (185) of the respondents had primary education and 11.7% (45) of the respondents had tertiary education. This indicated that majority of the respondents had primary education; this implied that there is

high illiteracy rate in the study area. These results conform to the findings by Ikpe et al., (2024) and Ariko et al. (2024) which implies that majority of farmers in rural areas have not gone for higher level of education. A study by Onah et al. (2024), reported that there is a negative and no significant relationship between formal education and use of information from Information Technology. It was also noted during the survey that the entrepreneurs with limited education are also not conversant in using Information Technologies for accessing agricultural information. All these situations impact to limited ability to access timely and relevant information for their entrepreneurship activities.

On the religious distribution of respondents, the study showed that 77.6% (298) of the respondents were Christians, 1.3% (5) were Muslims while 21.1% (85) of the respondents were from traditional religion. The findings showed that Christianity is the major religion in the study.

The estimated monthly income of respondents revealed that 58.1% (223) of the respondents earned ₦<10,000, 29.9% (107) earned ₦10,000- ₦100,000 while only 14.1% (54) of the respondents earned ₦100,000 and above monthly. The study revealed that 26.8% (103) respondents had 1-3 children, 51.8 % (199) respondents had 4-6 children while 21.4% (82) respondents had 7 children and above. Majority of the respondents have 1-3 children.

Table 2: Marketing Strategies Adopted by Rural Women Entrepreneurs in the Marketing of Cassava Granules (Garri) in Benue South Senatorial District

SN	Marketing Strategies	Frequency	Percentage
1	Ensuring high-quality garri products to retain customers	78	86.7
2	Selling at competitive prices with reduced profit margins to attract customers	76	84.5
3	Using attractive packaging to improve product appeal	69	76.7
4	Offering promotional discounts to regular customers	63	70.0
5	Providing limited credit facilities to trusted customers	57	63.3
6	Offering discounts to customers purchasing in bulk	55	60.8
7	Educating customers on market trends and appropriate buying periods	47	52.2
8	Using online platforms/social media to expand market reach	37	41.1

Source: Field work, 2025****Multiple responses recorded.**

Table 2 presents the marketing strategies adopted by rural women entrepreneurs in the marketing of cassava granules (garri) in Benue South Senatorial District. The result indicates that ensuring high-quality garri products was the most commonly adopted marketing strategy, with 86.7% of respondents affirming its importance. This suggests that rural women entrepreneurs recognize product quality as a critical factor influencing customer satisfaction, repeat purchases, and enterprise sustainability. Maintaining quality

through proper processing, frying, packaging, and hygienic handling enhances consumer confidence and improves market competitiveness (Eze et al., 2023).

The result further reveals that 84.5% of respondents adopted competitive pricing by selling with reduced profit margins to attract customers. This indicates that price remains a major determinant of consumer choice in the garri market, particularly because garri is a widely consumed staple food with high price sensitivity. Rural women entrepreneurs often adjust their prices to remain competitive and maintain customer loyalty, especially in

markets characterized by fluctuating cassava prices and increasing production costs.

The use of attractive packaging was reported by 76.7% of respondents, indicating increasing awareness among women entrepreneurs regarding the importance of product presentation in improving market acceptance. Proper packaging enhances product appeal, improves hygiene standards, extends shelf life, and enables producers to compete effectively in both local and urban markets (Udoro et al., 2021). However, the adoption of improved packaging practices may still be constrained by limited access to finance and packaging materials among small-scale women entrepreneurs.

Similarly, 70.0% of respondents indicated the use of promotional discounts to retain regular customers, while 60.8% offered discounts to customers purchasing in bulk. These strategies demonstrate the efforts of rural women entrepreneurs to strengthen customer relationships, increase sales volume, and maintain market presence. Customer retention strategies are particularly important in agricultural marketing where competition among producers is high.

The finding also shows that 63.3% of respondents provided limited credit facilities to trusted customers. This practice reflects the informal nature of rural marketing systems where business relationships and trust influence transactions. Although credit arrangements may help increase customer loyalty and sales volume, excessive reliance on informal credit can negatively affect cash flow and enterprise sustainability.

Furthermore, 52.2% of respondents educated customers on market trends and appropriate buying periods. This suggests that some women entrepreneurs engage in market information sharing as a strategy for improving customer relationships and influencing purchasing decisions. However, the relatively lower percentage indicates the need for improved entrepreneurial training and access to market information among rural women involved in garri marketing.

The least adopted strategy was the use of online platforms and social media to increase market share, with only 41.1% of respondents indicating its usage. This suggests that digital marketing remains underutilized among rural women entrepreneurs in Benue South Senatorial District. Limited digital literacy, poor internet access, and inadequate technological resources may hinder the adoption of online marketing strategies. Promoting digital entrepreneurship training among rural women could improve market access and expand opportunities beyond traditional local markets.

Overall, the findings indicate that rural women entrepreneurs employ several traditional and emerging marketing strategies to improve the performance of their garri enterprises. However, greater emphasis on digital marketing, improved packaging, market information systems, and cooperative marketing arrangements could further enhance their competitiveness, profitability, and enterprise growth.

Table 3: Effects of Cassava Production and Marketing on the Performances of Rural Women Entrepreneurs in Benue South Senatorial District

SN Effects of Garri Marketing to Women Entrepreneurs		Mean
1	Garri marketing provides a reliable source of income for rural women entrepreneurs and improves their financial stability	3.13**
2	Garri marketing contributes to improved household food security by providing income for meeting family nutritional needs	2.94**
3	Garri marketing promotes economic empowerment of rural women by increasing their control over income and business decisions	2.94**
4	Garri marketing provides employment opportunities for women and other community members involved in processing, transportation, and sales activities	2.93**
5	Garri marketing improves access to market information, enabling women entrepreneurs to make better business decisions	2.89**
6	Garri marketing expands business opportunities by connecting women entrepreneurs with buyers within and outside their communities	2.87**
7	Garri marketing enhances women's capacity to access credit facilities and improve their enterprise operations	2.83**
8	Garri marketing provides opportunities for skills acquisition and entrepreneurial development among rural women	2.73**
9	Garri marketing improves women's knowledge and skills in cassava processing, packaging, and enterprise management	2.63**
10	Garri marketing reduces financial losses associated with market-related challenges through collective action and support systems	2.58**
11	Garri marketing enables women entrepreneurs to increase profitability through bulk purchasing and reduction of procurement costs	2.37*
12	Garri marketing enhances access to wider markets through improved transportation and distribution networks	2.04*

SN Effects of Garri Marketing to Women Entrepreneurs

Mean

Grand Mean

2.75

Source: Field work, 2025

DecisionRule: Mean ≥ 2.50 = Agree; Mean < 2.50 = Disagree

**Agree; *Disagree.

Table 3 presents the effects of garri marketing on the performance of women entrepreneurs among rural women in Benue South Senatorial District. The grand mean score of 2.75 indicates that respondents agreed that garri marketing contributes significantly to improving women's socio-economic wellbeing and entrepreneurial performance. The findings reveal that garri marketing serves as an important livelihood activity that enhances income generation, household welfare, women empowerment, employment creation, and enterprise development.

The highest-rated effect was that garri marketing provides a reliable source of income and improves financial stability among rural women entrepreneurs (Mean = 3.13). This indicates that garri enterprises enable women to generate income, meet household needs, and reinvest in their businesses. This finding supports Saka et al. (2024), who reported that participation in small-scale garri processing and marketing improves profitability and livelihood outcomes among cassava entrepreneurs.

Respondents also agreed that garri marketing contributes to household food security by providing income for meeting family nutritional needs (Mean = 2.94) and promotes women's economic empowerment through increased control over income and business decisions (Mean = 2.94). This demonstrates the role of garri enterprises in strengthening women's financial independence and improving their participation in household economic activities, consistent with Tajudeen et al. (2025).

Furthermore, garri marketing creates employment opportunities for women and other actors involved in cassava processing, transportation, and sales (Mean = 2.93). It also improves access to market information (Mean = 2.89) and expands business opportunities through connections with buyers within and outside local communities (Mean = 2.87). Access to reliable market information and wider market networks enables women entrepreneurs to improve decision-making and profitability (Oteh et al., 2023).

The study also revealed that garri marketing enhances access to credit facilities (Mean = 2.83), provides opportunities for skills acquisition (Mean = 2.73), and improves knowledge of processing, packaging, and enterprise management (Mean = 2.63). These factors contribute to improved product quality and business competitiveness (Udoro et al., 2021).

However, lower ratings were recorded for bulk purchasing to reduce procurement costs (Mean = 2.37) and access to wider markets through transportation networks (Mean = 2.04), indicating persistent challenges relating to logistics and market integration.

Poor transportation systems increase marketing costs and limit profitability (Stephen, 2024; Ugwu et al., 2025).

Overall, the findings show that garri marketing significantly enhances women entrepreneurship performance in Benue South Senatorial District by providing income, improving household welfare, promoting empowerment, and creating employment opportunities. Strengthening access to finance, infrastructure, market linkages, and cooperative support will further improve the sustainability of women-led garri enterprises.

Conclusion

This study concludes that cassava granules (garri) production and marketing play a significant role in enhancing the performance of women entrepreneurs in Benue South Senatorial District. Garri enterprises provide rural women with reliable income sources, improve household food security, promote economic empowerment, create employment opportunities, and strengthen rural livelihoods. The findings demonstrate that effective participation in garri marketing enhances business growth through improved market access, income generation, entrepreneurial skills, and enterprise development. However, challenges such as inadequate finance, poor transportation infrastructure, limited processing facilities, and weak market linkages continue to restrict the full potential of women-led garri enterprises. Therefore, targeted interventions that improve access to credit, modern processing technologies, training, cooperative support, and sustainable markets are essential. Investing in rural women's garri enterprises is not merely supporting agricultural activities; it is empowering families, transforming communities, and building a more inclusive pathway to sustainable economic development.

Recommendations

Based on the findings of the study, the following recommendations are made:

- I. Improved Access to Finance and Enterprise Support: Government agencies, financial institutions, and development organizations should establish accessible and affordable credit schemes specifically targeted at rural women involved in garri production and marketing. Such financial support will enable women entrepreneurs to acquire improved processing equipment, increase production capacity, expand their enterprises, and improve profitability.
- II. Strengthening Market Linkages and Infrastructure Development: Relevant stakeholders should improve rural transportation networks, establish organized marketing platforms, and strengthen linkages between women garri producers and larger markets. Improved market infrastructure and access to reliable market information will reduce marketing constraints, enhance

bargaining power, and enable women entrepreneurs to obtain better returns from their products.

- III. Capacity Building and Promotion of Value Addition: Agricultural extension agencies and women cooperative associations should intensify training programmes on modern cassava processing techniques, quality control, packaging, branding, and enterprise management. Enhancing the technical and entrepreneurial skills of rural women will improve the competitiveness of garri products, increase market acceptance, and promote sustainable growth of women-owned cassava enterprises in Benue South Senatorial District.

REFERENCES

- Agbaeze, C. C., & Onwuka, O. O. (2020). Postharvest technologies and food security in sub-Saharan Africa: A review of cassava value addition strategies. *African Journal of Agricultural Research*, 15(9), 135–145. <https://doi.org/10.5897/AJAR2020.14888>
- Agbaeze, E. K., Ohunye, F. O., Obamen, J., & Ibe, G. I. (2020). Management of food crop for national development: Problems and challenges of cassava processing in Nigeria. *SAGE Open*, 10(2). <https://doi.org/10.1177/2158244020919778>
- Agboola, O. O., Abah, E. A., Andrew, O. E., Adelanwa, E., Ijimbili, S. I., Acham, N. I., Unazi, I. E., & Onyemochi, A. (2024). Assessment of waste management practices among residents of Benue South. *Lafia Journal of Scientific and Industrial Research*, 2(1), 78–82. <https://doi.org/10.62050/ljsir2024.v2n1.302>
- Anyoha, N. P. O., Udemba, C., Ogbonnaya, A., & Okoroma, E. (2023). Causes of cassava post-harvest losses among farmers in Imo State, Nigeria. *Journal of Agricultural Extension*, 27(2), 73–79. <https://doi.org/10.4314/jae.v27i2.7>
- Ariko, J. D., Ikpe, E., & Sawa, B. A. (2024). Analysis of rainfall trend and its relationship with sorghum yield in Sudan savanna region of Nigeria. *International Journal of Scientific Research in Multidisciplinary Studies*, 10(3), 1–14.
- Ayetigbo, O., Latif, S., Abass, A., & Müller, J. (2018). Comparing characteristics of root, flour and starch of biofortified yellow-flesh and white-flesh cassava varieties. *Food Science & Nutrition*, 6(2), 428–438.
- Eze, E. U., Osuji, E. E., Orji, J. E., Enyia, C. O., Nwose, R. N., Ugochukwu, G. U., Tim-Ashama, A. C., Odor, A. H., Nwogu, V. C., & Nwaizuzu-Daniel, J. C. (2023). Efficiency of marketing systems of cassava in Southeast Nigeria. *Emerging Issues in Agricultural Sciences*, 6, 1–15.
- Food and Agriculture Organization. (2026). *The future of food and agriculture: Trends and challenges*. Food and Agriculture Organization of the United Nations. <http://www.fao.org/3/i6583e/i6583e.pdf>
- Graffham, A., Naziri, D., Sergeant, A., Sanni, L., Abayomi, L., & Siwoku, B. (2019). Market opportunities for cassava in Nigeria. *Gates Open Research*, 3, 924.
- Ikpe, E. (2014). *Adaptation strategies to climate change among grain farmers in Goronyo Local Government Area of Sokoto State, Nigeria* [Unpublished master's thesis]. Department of Geography, Ahmadu Bello University, Zaria, Nigeria.
- Ikpe, E. (2021). *Effects of climate change on the yield of selected grain crops and farmers' adaptation strategies in Sokoto State, Nigeria* [Unpublished doctoral dissertation]. Department of Geography, Faculty of Physical Sciences, Ahmadu Bello University, Zaria, Nigeria.
- Ikpe, E., Sawa, B. A., Idoma, K., Ejeh, L., & Meshubi, A. O. (2016). Shift in crop production as an adaptation strategy to climate change by grain farmers in Goronyo LGA of Sokoto State, Nigeria. *International Journal of Science for Global Sustainability*, 2(1), 106–113. <https://doi.org/10.13140/RG.2.2.10444.26249>
- Ikpe, E., Ukoh, P. I., & Ikpe, J. G. (2024). Relationship between rainfall variability and yield of cassava and farmers' adaptation strategies in Otukpo Local Government Area of Benue State, Nigeria. *Sokoto Journal of the Social Sciences*, 14(2).
- Iornongo, T. (2021). *Effect of rainfall variability on yield of selected crops in Benue State, Nigeria*. Federal University of Technology, Minna Repository. <http://repository.futminna.edu.ng:8080/jspui/handle/123456789/14588>
- Kaufmann, C. (2006). The role of SMEs in providing affordable goods and services. *Development Policy Review*, 24(3), 347–365.
- Onah, M. E., Ikpe, E., & Omede, U. D. (2024). Adaptation strategies of cassava farmers in minimising post-harvest losses in Otukpo Local Government Area of Benue State, Nigeria. *African Journal of Geographical Sciences*, 5(1 & 2).
- Oteh, O. U., Osabohien, R., Mbanasor, J. A., Agwu, N. M., Oloveze, A. O., & Hefferon, K. (2023). Marketing capabilities, market orientation and food security of biofortified cassava producers in Nigeria. *Journal of Macromarketing*, 43(4), 494–506.
- Saka, J. O., Obatolu, V. A., Lawal, B. O., Idowu, A. B., Amadi, C. P., Adetumbi, J. A., & Dauda, T. O. (2024). Market participation and profitability of small-scale garri processing in Edo, Ogun and Oyo States, Nigeria. *Journal of Agriculture and Rural Development in the Tropics and Subtropics*, 125(2), 247–258. <https://doi.org/10.17170/kobra-2024121610771>
- Sanni, L. O., Onabolu, A. O., & Odukogbe, O. (2018). Adoption of cassava postharvest technologies among smallholder farmers in Nigeria. *Journal of Crop Improvement*, 32(5), 692–709. <https://doi.org/10.1080/15427528.2018.1490324>
- Soetan, T. O., Mogaji, E., & Nguyen, N. P. (2021). Financial services experience and consumption in Nigeria. *Journal of Services Marketing*, 35(7), 947–961.



21. Stephen, S. W. (2024). *The role of road transport in the marketing of agricultural products*. Kampala International University Uganda. <https://rijournals.com/the-role-of-road-transport-in-the-marketing-of-agricultural-products-2/>
22. Tajudeen, A. A., Magaji, S., & Ismail, Y. (2025). The role of women farmers' organisations in shaping gender-sensitive agricultural policies in Nigeria: Influence, impact, and challenges. *Journal of Agriculture and Veterinary*, 2(6), 1–9. <https://doi.org/10.5281/zenodo.17628347>
23. Technavio. (2023). *Cassava market by application, type, and geography—Forecast and analysis 2023–2027*. Technavio.
24. Udebuani, A. C., & Ukachukwu, C. O. (2024). Biotechnological improvement of cassava yield and processing for food sustainability in Nigeria. *International Journal on Food, Agriculture and Natural Resources*, 5(1), 72–79.
25. Udoro, E. O., Anyasi, T. A., & Jideani, A. I. O. (2021). Process-induced modifications on quality attributes of cassava (*Manihot esculenta* Crantz) flour. *Processes*, 9(11), 1891. <https://doi.org/10.3390/pr9111891>
26. Ugwu, M. C., Agunbiade, O., & Auta, G. A. (2025). Impact of road transport network on the marketing of agricultural products: A case study of Karu LGA of Nasarawa State, Nigeria. *Indiana Journal of Humanities and Social Sciences*, 6(9), 19–27.
27. Yusuf, A., & Dansu, S. F. (2013). Financial challenges of SMEs in Africa: A review. *Journal of Business Finance*, 10(4), 85–97.