



**MARKETING ANALYSIS OF LOCALLY PROCESSED RICE AMONG SMALL-SCALE PROCESSORS IN LAFIA LOCAL GOVERNMENT AREA OF NASARAWA STATE, NIGERIA**

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**ABSTRACT**

The study assessed marketing analysis of locally processed rice among small-scale processors in Lafia local government area of Nasarawa State, Nigeria. A purposive and simple random sampling technique was used to select 48 small scale rice processors. Data were collected using questionnaire. Data was analyzed using frequency, mean, percentage and marketing margin analysis. The result revealed that the mean age of the respondents was 41 years, 62.5% of the respondents were female and 75% of the respondents were married. Also, 83.3% of the respondents had formal education up to tertiary level. The mean household size was 11 and the mean years of business experience was 22 years. However, 87.5% of the respondents depend on informal sources of credit for their business. The study shows that, total variable cost was ₦56,760.00 and revenue was ₦78,000.00 per 75kg with gross margin of ₦21,850.00 with marketing margin of 37.8%. The benefit cost ratio indicated 1.4 and return per naira invested was 37 kobo, which implies that rice processing and marketing was profitable in the study area. Price fluctuation, inadequate capital, and low level of improved technology among others were identified as the major constraints to rice processors and marketers in the study area. It was recommended that rice processors should form a cooperative in order to ease their accessibility to formal sources of capital and modern rice processing equipment should be subsidized for the marketers.

**Key words:** Gross - margin, Marketing, Poverty, Processing, and Rice.

**INTRODUCTION**

The agricultural sector has been the main stay of the economy since independence and despite several bottlenecks, it remains a resilient sustainer of the livelihood of the populace. The sector has several untapped potentials for growth and development in the availability of land, water, labour and large internal markets (Sale *et al.*, 2017). In spite of these opportunities, the state of agriculture in Nigerian remains poor and underdeveloped. The sector continues to rely on primitive and crude method to sustain a growing population without effort to add value. In Nigeria, food production is still at subsistence level and a lot of food are processed at the homestead for consumption and also made available for sale in the open market (Saleh *et al.*, 2017).

Rice farming is one of the most lucrative types of farming in Nigeria, although rice is classified as a cash crop for farmers, it is one of the most consumed staple foods and important cereal in Nigeria. Almost 7 million tonnes of rice are consumed per year in the country. Rice is a major staple food in Nigeria, but its domestic production has never been able to sustain the demand resulting in huge import (FAO, 2014; Erenstein *et al.*, 2003). Similarly, rice has assumed a strategic position in the food basket of the rural and urban households in Nigeria. It has changed from being a luxury to a necessity. The status of rice as being a necessity in the household's food basket is a pointer to the growing consumer preference for rice in Nigeria. It



has become a staple food in Nigeria such that every household, both rich and poor consumes a greater quantity (Oyinbo, 2014).

Rice processing involved several operations such as paddy cleaning, husking and milling. Parboiling is an ancient method of rice processing, widely used in developing countries like Bangladesh, India, and Sri Lanka and in some rice exporting countries. In addition, processing of rice adds value to the grain and reduces post-harvest losses. In view of that, involvement in rice processing and marketing activities helps in reducing the poverty level and engaging one in economic activity that improves his/her income status (CBN, 2014). In economics, the term poverty has been defined by developing a poverty line using the minimum wage/income concepts like the one developed by the MURGAN Commission in Nigeria (Jonathan *et al.*, 2013). Anyone earning below the minimum wage/income is believed to be living below the poverty line. This concept seems to be the most commonly used in relation to the least income anyone in the society needs for decent living. Poverty is said to exist when people lack the means to satisfy their basic needs. Lançon *et al.* (2003) classified rice processors as –small scale is below 150kg, large scale is between 500 – 5000kg per time while medium is 150 – 300kg.

Furthermore, agricultural marketing is a driving force for economic growth and development and has a guiding and stimulating impact on production and distribution of agricultural produce. The increased proportion of the population living in urban areas and rising level of income required more organized channels for processing and distributing agricultural products. Agricultural marketing acts as an agent of rural development and also plays a coordinating role, steering supply and demand with respect to place, time, form and possession utilities. It was discovered that much was not done on the aspect of small scale or individuals who go to rural areas and purchase paddy rice, store and thereafter process one to three bags at a time when prices increase in the study area. It was on the basis of this that this research was carried out in order to ascertain the profitability of the business. The objective of this study was to describe the socio-economic characteristics of the respondents, determine the cost and returns on rice processing and marketing, marketing margin and to identify the constraints faced by the rice processors in the study area. Objectives of the study should be later part of introduction with hypothesis if any.

## **MATERIALS AND METHODS**

### **The Study Area**

The research was carried out in Lafia Local Government Area of Nasarawa State, Nigeria. Lafia is located within longitude 08°32' East of Greenwich Meridians and Latitude 08°33' North of the Equator. It has a land area of 2,73755Sqm and altitude of 181.53m (570FT) and shares boundaries with Obi local Government Area to the south, Nasarawa-Eggon Local Government Area to the north, Doma Local Government Area to the west and Quan pan Local Government Area in Plateau State to the east (Nasarawa State, 2007).

### **Sampling Technique and Sampling Size**

A purposive sampling technique was used to 6 rice processing/milling centres (Rice mill Lafia metropolis, Kwandere, Barkin Abdullahi, Ashangwa, Shabu, and Assakio) based on the concentration of millers. However, 48 local rice processors were randomly selected for the study. In addition, processors capacity ranges between less than 50kg to 150kg of paddy rice business.

### **Data Analysis**

Data collected were analyzed using descriptive statistics such as percentage, frequency and mean and gross margin analysis and marketing margin. Gross margin (GM) analysis was used to determine the difference between the total revenue and total variable cost for the processors.

$$GM = TR - TVC \quad \dots (1)$$

Where: GM = Gross Margin

TR= Total Revenue

TVC = Total variable cost

**Marketing margin** is the difference between the price paid by consumers and that received by producers (Olukosi *et al.*, 2005). It is expressed as:

$$MM = \frac{\text{Selling price} - \text{purchase price}}{\text{Selling price}} \times \frac{100}{1}$$

The Net Income (NI) or profit is the difference between the gross margin and total fixed cost of the rice processors.

$$NI = GM - TFC \quad \dots (2)$$

Where: NI = Net income

TFC = Total fixed cost

## RESULTS AND DISCUSSION

### Socioeconomic Characteristics of the Respondents

Data in Table 1 shows the socio-economic characteristics of the respondents. The result in Table 1 revealed that 45.8% fall within the age of 41 – 45 years with a mean of 41 years. This implies that the respondents are young and energetic in carrying out their business activities effectively. The age of respondent affects the organization, planning and behaviour of an individual (Aasa, 2006). This result is in agreement with the findings of Ikpoza *et al.* (2020), who revealed that most of the catfish farmers in Nigeria were young people within the productive age of 40 – 49 years. Data in Table 1 further revealed that 62.5% of the respondents were female while 37.5% were male which implies that rice value-chain activities are dominated by women in the study area. This shows that women play a tremendous role in agricultural produce processing and marketing and this result was in agreement with the findings of Oyesola (2018) who said women are more involved in the production and marketing of agricultural produce. As can be seen in Table 1 also indicated that 75% of the respondents were married while 25% were single. Marriage is a sign of greater responsibility.

In addition, Table 1 shows that 70.8% of the respondents had formal education while 29.2% had no formal education. This implies that education is very vital in decision-making particularly in business strategies and managerial ability. Data in Table 1 shows that the mean household size was 11 people per household, this is important as processing activities will require a large labour force in various activities. Experience in rice business is a measure of the period an individual has been involved in the business/trading. Data in Table 1 shows that a mean year of business experience was 22 years. This agreed with Tyabo *et al.* (2010) who discovered that rice processors had experience of 11 – 15 years and above 20 years. This implies that women processors in the study area have a fairly long period of processing experience which will in no doubt lead to increase in specialization of skills and knowledge

required in facilitating their process ability. The result further shows that 87.5% of the respondents depend on their personal savings and other informal sources of credit for their business while only 12.5% got their capital from the formal sources. This was in line with Tyabo *et al.* (2010) that 65.7% of rice processors lack access to credit facilities.

**Table 1: Socio-economic characteristics of the respondents (n = 48)**

| Variable                      | Frequency | Percentage | Mean |
|-------------------------------|-----------|------------|------|
| <b>Age:(years)</b>            |           |            |      |
| 30 – 35                       | 6         | 12.5       | 41   |
| 36 – 40                       | 15        | 31.3       |      |
| 41 – 45                       | 22        | 45.8       |      |
| > 45                          | 5         | 10.4       |      |
| <b>Sex:</b>                   |           |            |      |
| Male                          | 18        | 37.5       |      |
| Female                        | 30        | 62.5       |      |
| <b>Marital Status:</b>        |           |            |      |
| Married                       | 36        | 75.0       |      |
| Single                        | 12        | 25.0       |      |
| <b>Educational level:</b>     |           |            |      |
| No formal                     | 8         | 16.7       | 11   |
| Primary                       | 14        | 29.2       |      |
| Secondary                     | 18        | 37.5       |      |
| Tertiary                      | 8         | 16.7       |      |
| <b>Household size:</b>        |           |            |      |
| 1 – 5                         | 7         | 14.6       | 22   |
| 6 – 10                        | 14        | 29.2       |      |
| 11 – 15                       | 18        | 37.5       |      |
| > 15                          | 9         | 18.8       |      |
| <b>Years of Experience:</b>   |           |            |      |
| 1 – 10                        | 8         | 16.7       | 22   |
| 11 – 20                       | 11        | 22.9       |      |
| 21 – 30                       | 20        | 41.7       |      |
| > 30                          | 9         | 18.8       |      |
| <b>Sources of Credit:</b>     |           |            |      |
| Personal savings              | 38        | 79.2       |      |
| Friends/relatives             | 12        | 25.0       |      |
| Cooperative                   | 20        | 41.7       |      |
| Bank                          | 6         | 12.5       |      |
| <b>Cooperative membership</b> |           |            |      |
| Yes                           | 40        | 83.3       |      |
| No                            | 8         | 16.7       |      |

**Source:** Field survey (2025)

### Cost and returns on rice (100kg/bag)

The result in Table 2 shows the cost and return on 100 kg of paddy rice processed and sell in the study area. The results in Table 2 revealed that the total variable cost was ₦56,760.34 and the total cost was ₦56,760.34 with a revenue of ₦78,000.00 per 75kg. Table 2 further shows that the gross margin was ₦21,850.00 with a net income of ₦21,239.66 per processor. Marketing margin indicated 37.8%. The average rate of return (defined as the cost per100kg) was 0.37, implying that the processing and marketing of rice in the study area realized a profit of about 37 kobo for every naira invested per 100kg. The study also revealed a benefit cost ratio of 1.4. The result obviously indicates that the rice business enterprise was a profitable venture that would help in increasing household income and reducing the level of poverty

among the populace. This is in line with the findings of Inuwa *et al.* (2011) that rice processing and marketing in Kano State was a profitable venture.

**Table 2: Cost and returns on rice (100kg/bag)**

| Variable                                     | Cost (₦)         |
|--|------------------|
| Purchase cost (paddy) 100Kg                  | 48,500.00        |
| <b>A: Processing Cost:</b>                   |                  |
| Firewood                                     | 3000.00          |
| water  | 400.00           |
| labour                                       | 2000.00          |
| Total Processing cost                        | <b>5,400.00</b>  |
| <b>B: Marketing Cost:</b>                    |                  |
| Transportation                               | 550.00           |
| Government tax                               | 200.00           |
| Union dues/levy                              | 300.00           |
| Polythene (Nylon)                            | 450.00           |
| miscellaneous                                | 750.00           |
| Total marketing cost                         | <b>2,250.00</b>  |
| Total Variable Cost (TVC)                    | 56,150.00        |
| <b>C: Fixed Cost:</b>                        |                  |
| Depreciation (Bushel, Basin, etc)            | 450.00           |
| Drying Tarpaulin                             | 160.34           |
| Total Fixed Cost:                            | <b>610.34</b>    |
| Total Cost (A+B+C+ Purchase price)           | 56,760.34        |
| <b>Revenue:</b> 3 Bushel @ ₦26,000.00 (75kg) | 78,000.00        |
| Gross Marketing Margin                       | <b>21,850.00</b> |
| Marketing Margin                             | <b>37.8%</b>     |
| Net Income                                   | <b>21,239.66</b> |
| Benefit Cost Ratio                           | 1.37             |
| Return per naira invested (RNI)              | 0.37             |

Source: Field survey (2025)

### Constraints faced by rice processors and marketers in Lafia

Data in Table 3 shows the several challenges facing rice processors and marketers in the study area. The result revealed that the majority (89.6%) of the respondents identified inadequate capital to boost their business as their constraint which was followed by 45.8% of the respondents who identified unstable prices of rice in the market as their constraint. In addition, the result in Table 3 also indicated that 31.3% of the respondents said high cost of firewood while 20.8% of them identified double market charges as one of their problems. This is in agreement with the finding of Ajala and Gana (2015) on the challenges facing rice processing in Nigeria.

**Table 3: Constraints faced by rice processors and marketers in Lafia**

| Variable                      | Frequency* | Percentage |
|-------------------------------|------------|------------|
| Unstable prices               | 22         | 45.8       |
| High of firewood              | 15         | 31.3       |
| Inadequate capital            | 43         | 89.6       |
| Double marketing charges      | 10         | 20.8       |
| Sporadic electricity supply   | 9          | 18.8       |
| Low level improved technology | 13         | 27.1       |

Source: Field survey 2025 \* = Multiple choice was allowed

### CONCLUSION AND RECOMMENDATIONS





Rice processing and marketing in Nasarawa State contributes a lot to food security, employment, poverty reduction and restiveness. However, Rice processing and marketing was Profitable in the study area. Profitability of any enterprise depends on the managerial ability of the investor to control cost of the variable or operational expenses. It was recommended that rice marketers should form a cooperative in order to ease their accessibility to formal sources of capital and modern rice processing equipment should be subsidized for the processors.

#### **Acknowledgement:**

The authors wish to acknowledge the Rector, Management and the Research and Development Committee of College of Agriculture, Science and Technology Lafia, Nasarawa State and particularly TETFUND for approving the Institution Based Research grant for this research work.

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