COMPARATIVE ANALYSIS OF MARKETING OF BRANDED AND UNBRANDED LOCAL RICE IN BIDA, NIGER STATE, NIGERIA

Abraham FALOLA[1], Tohib Oyeyode OBALOLA[2], Ridwan MUKAILA[3], Sofiyyah Titilope ABIDOYE[1]

[1]University of Ilorin, Department of Agricultural Economics and Farm Management, Nigeria, E-mails: falola.a@unilorin.edu.ng, sofiyyahabidoye@gmail.com
[2]Usmanu Danfodiyo University, Department of Agricultural Economics, Sokoto, Nigeria, E-mail: oyeyodeobalola@yahoo.com
[3]University of Nigeria, Nsukka, Department of Agricultural Economics, Enugu State, Nigeria, E-mail: ridwan.mukaila@unn.edu.ng

Corresponding author: oyeyodeobalola@yahoo.com, falola.a@unilorin.edu.ng

Abstract

The profit accruing to local rice especially through a well branded package generally depends on the market share of the marketers as it connotes the fastness of the time to sell off the product. The study examined the marketing of branded and unbranded local rice in Niger State, considering a data set obtained through a three stage sampling technique from 150 local rice marketers. Several analyses were conducted on the data using the descriptive statistics, marketing margin and efficiency and the binary logistic regression. A figure of ₦25, 795.40 and ₦15, 778.80 were estimated as the returns to branding and unbranded local marketing respectively. Apparently, the branded marketers are more efficient in the marketing of local rice as they have a higher marketing efficiency of 190.61 %. The enterprise is therefore concluded to be profitable and economically efficient. Educational level, marketing experience, access to grant, and cooperative society involvement were the determining factors that significantly influence branding among the local rice marketers. The recommends branding be encouraged among local rice marketers, as they stand to make more profit that their counterparts. Consequently, financial institutions such as agricultural banks should provide access to funds and facilities that would help local marketers cover for their marketing cost.

*Key words***:** *rice, marketing, profitability, branded, un-branded, efficiency*

INTRODUCTION

The agricultural sector of Nigeria provides food for the growing population and income for millions of smallholders farmers. Considering the rate at which the country's population increases, the need arise to match the population increase with food production [15]. However, a consumer's demand deficit exists as only 60 % of such demand is met through local production and the rest via importation [21], making Nigeria the largest importer of rice in Africa [5, 7] and second in the world [3, 16].

As rice has become an important component of Nigeria's food and imported rice represents a major share of the nation's food products imports, policymakers have an increasing urge to increase the local level of rice production. Assuring technical efficiency in rice production will boost productivity and increase rice supply in Nigerian market and diminish import [1].

This is in response to the prevailing production and consumption deficit situation and attempt to achieve that, successive governments had intervened by increasing tariffs so that local production could be encouraged and a broad range of policies have been implemented in the sector aimed at self-sufficiency in the production as such high priority was given to rice production in the Agricultural Transformation Agenda (ATA) due to the growing concern about the foreign currency drains resulting from rice import [15].

Rice is a highly marketable staple and its marketing covers the performance of all business activity in the flow of paddy and milled rice from the point of production to the consumer in the right place and form. Though, with some peculiar difficulties linked to the

awareness of grading, information on market, lack of group marketing choices (coops/unions), storage as a strategy of marketing, unnecessary intermediaries, seasonal prices, limited buyers, market deficits as well as low production. Improving local rice quality by the stakeholders plays a key role in the development of the local rice market through enhanced marketing efficiency [8].

Customer acceptance through improved rice quality is germane for increased efficiency. This becomes apt as most rice in West Africa is milled by small, often portable milling machines which produces mainly low-quality, impure, mixed whole and broken grains [6]. Often times, there is lack of stock homogeneity, as the final milled rice appears discolored with stones, sand and other contaminants and with grain damaged [11]. This decreases rice quality and customer acceptance [4].

Variations exist between local rice processing and imported rice ranging from color, swelling, taste, and uniformity, thus, consumers of local rice brands prefers it because of the flavour, availability and limited use of ingredients. These variations form the major price factors between local branded rice, local unbranded rice and imported rice [3, 12]. Over time, there have been little or no changes in consumer's preferences as regards local rice. This came to bear as a result no branding as evident from products that has undergone little or no processing and packaging. In addition to the physical and sensory attributes, branding is an important determinant of consumer's preference. It is pertinent that manufacturers in the rice production industry become familiar with the concept of branding. It is against this backdrop that the study analyzed the marketing of branded and unbranded local rice in Nigeria.

In this context, the purpose of the paper was to examine the marketing of branded and unbranded local rice in Niger State, considering a data set obtained through a three stage sampling technique from 150 local rice marketers.

MATERIALS AND METHODS

Study area

Bida doubles as a city and a Local Government Area. Bida town is a Local Government Headquarter in Niger State, North-Central zone, Nigeria, located on the A124 highway (a regional road) that linked Ilorin to Minna and the Federal Capital Territory [13]. The LGA has an area of $1.698km^2$ and a population of 266,008 persons [14]. It is situated between Latitudes 9°05′ and 9°083′N and Longitudes 6°01′ and 6°017′E. Located southwest of Minna, capital of Niger State is Bida, the second largest city in the State. The major ethnic group is the Nupe and the town serves as the headquarters of the Nupe Kingdom led by the Etsu Nupe. The city experiences extreme seasonal variation. Widely cultivated in Bida, is paddy rice which is grown as a cash crop.

Sampling Procedure and Sample Size

The target population for the study was the branded and unbranded rice marketers. A three stage sampling technique was used to select the sample for the study. The first stage comprised the purposive selection of four marketing clusters within the Local Government Area. This was due to the preponderance of local rice marketers in these markets. From each cluster, a snowballing technique was employed in the identification of marketers that branded their rice and those that did not. In the final stage, rice traders were randomly selected for the study across the cluster markets, giving a total of 150 marketers as shown in Table 1.

Table 1. Sample size selection across the markets

Name of markets	Number of selected marketers
Doko	65
Etsu Musa	34
Makwala	30
Union Bank Rice Traders	21
TOTAL	**150**

Source: Authors computation.

Method of Data Collection

Primary data were used in the study. This was obtained with the aid of semi-structured

questionnaire designed to elicit relevant information on the socioeconomics characteristics of the marketers such as age, sex, marital status, educational status and so on. Information was also sourced on costs and returns accruing to the marketing of rice in the area.

Analytical technique

Descriptive statistical tools such as frequencies and percentages; marketing margin and efficiency; and binary logistic regression were used.

Marketing margin and efficiency

The performance of the marketers was analyzed via marketing margin and marketing efficiency, as adopted by [17, 18]. The marketing costs and profits of market participants are both integrated. The marketing margin is mathematically expressed as:

Marketing Margin =
Retail price – Farm gate price   (1)

Marketing Efficiency is as the maximization of the ratio of output to input in marketing [19]. Marketing efficiency is calculated as:

$$\text{Marketing Efficiency} = \frac{\text{Value added by marketing (Net profit)}}{\text{Total marketing cost}} \times 100 \qquad (2)$$

where:
$$\text{Value added by marketing activities} = \text{Selling price} - \text{Cost price} \qquad (3)$$

Binary logistic regression

Ensuing the work of [2, 10], the model was expressed implicitly as:

$$Log \left[P_i / (1 - P_i) \right] = Z\beta + E \qquad (4)$$

where:
Z = matrix of observations of the explanatory variables, β = column vector of the coefficients; and E = disturbance term.
Pi = probability that a particular condition occurs.
Explicitly, the model is written thus:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + E \qquad (5)$$

where:
Y = $Log \left[P_i / (1 - P_i) \right]$ = Branding status of the marketers (1 if marketer brands and 0, otherwise)
X_1= Educational status of the processors (years);
X_2 = Experience (years);
X_3 = Age (years);
X_4 = Access to grant (dummy);
X_5= Credit (naira);
X_6 = Market barriers (dummy);
X_7 = Membership of cooperative (dummy);
Ɛ = error term;
$\beta_0 – \beta_7$ = regression estimate.

RESULTS AND DISCUSSIONS

The socio-economic characteristics of the two categories of marketers are presented in Table 2. Majority (66.67 % and 80.55 %) of the branded and un-branded marketers were within the age range of 31-50 years. This is an indication that marketers in the study area are still young and in their active age. This possibly will influence their ability to undergo the stress involved in the marketing activities while at the same time making rational decisions. Female marketers dominated the enterprise as the majority reported to that. This however, does not corroborate the work of [9] who reported that males are better positioned than females. The level of literacy in terms of marketers' education revealed that 65.28 % of the un-branded marketers had no formal education, with the others having primary education (23.61 %); secondary education (4.17 %) and tertiary education (6.94 %). This can however, explain their decision on not branding. The marketers who brand their rice tend to be more educated than their counterpart. Married marketers dominated the business, the likelihood of having access to a larger proportion of family labor to work for them. Experience which serves as an indicator to the marketers efficiency, showed that majority of them had an experience range of 1-10 years. This is

quite enough as they are expected to be well grounded in the activities of the business. A quite surprising report was observed that majority of the marketers belong to a cooperative society or the other and their source of fund were not reported to come from such society, rather, personal savings was the major means of sourcing for funds by the marketers.

Table 2. Socioeconomic characteristics of the local rice marketers

Variables	Branded Marketers		Unbranded Marketers	
	Frequency	Percentage	Frequency	Percentage
Age (years)				
≤ 30	16	20.51	10	13.89
31-40	28	35.90	23	31.94
41-50	24	30.77	35	48.61
51 years and above	10	12.82	4	5.56
Sex (dummy)				
Male	36	46.15	29	40.28
Female	42	53.85	43	59.72
Educational status (dummy)				
No formal education	25	32.05	47	65.28
Primary education	27	34.61	17	23.61
Secondary education	14	17.95	3	4.17
Tertiary education	12	15.39	5	6.94
Marital status (dummy)				
Single	7	8.97	2	2.78
Married	49	62.82	69	95.83
Widowed	22	28.21	1	1.39
Experience (years)				
1-10	68	87.19	50	69.44
11-20	6	7.69	11	15.29
21-30	2	2.56	5	6.94
>30	2	2.56	6	8.33
Cooperative society				
Yes	63	80.77	40	55.56
No	15	19.23	32	44.44
Source of fund				
Personal savings	23	29.49	55	76.39
Relatives and friends	55	70.51	17	23.61

Source: Survey Data, 2020.

Profitability and efficiency of the marketers

In any marketing process, costs are incurred in producing output and returns are earned from the sales of such output. Table 3 presents the summary of average costs and returns to the marketing of branded and unbranded local rice expressed in naira/tonne, which is usually used for marketing of rice in the study area.

Efforts were made to determine the cost associated with marketing of local rice and the revenue accruing to the marketers' efforts, considering the variable and fixed costs components with the profitability measured as the net marketing margin.

A difference of ₦59,088.80 was observed on the purchasing price for local rice. In the same vein, the total marketing cost incurred by the marketers of branded local rice was ₦13,533.00/tonne. This was quite lesser on the part of the marketers who didn't brand their rice. Consequently, the total cost incurred by marketers not branding the rice were computed using the total marketing cost and the cost of the purchase of rice and was valued at ₦341,065.60/tonne, against a higher value of at ₦402,251.00 for those that

branded. This was however attributed the cost for branding materials incurred by those who branded their product which was missing in those that didn't brand.

An average of ₦428,047.40 and ₦356,844.40 accrued to a typical local rice marketer that branded and those that didn't brand respectively and ₦25,795.40 and ₦15,778.80 is left as the net marketing margin after the removal of the total cost component respectively.

This signifies higher margin for the branded local rice marketers.

Table 3. Average marketing margin per tonne of unbranded and branded local rice

Cost Items	Unbranded local rice	Branded local rice
Purchase price of local rice (A)	329,629.20	388,718.00
Marketing Costs		
Variable costs (a)		
Bagging	4,222.20	4,661.60
Loading	791.60	666.60
Transport	3,133.40	5,302.60
Levies	569.40	153.80
Offloading	791.60	1,051.20
Fixed costs (b)		
Rent	1,000.00	1,000.00
Sanitation fee	100.00	100.00
Security fee	500.00	500.00
Storage	328.20	297.20
Total marketing cost (a+b) = (B)	11,436.40	13,533.00
Total Cost	341,065.60	402,251.00
Selling price (C)	356,844.40	428,047.40
Gross marketing margin (D) (C-A)	27,215.20	39,328.40
Net marketing margin (D-B)	15,778.80	25,795.40

Source: Survey Data, 2020.

The result in Table 4 showed the marketing efficiency for unbranded and branded local rice marketers in the study area.

For the unbranded marketers, marketing cost was ₦11,436.40, values added were ₦15,778.80 and a marketing efficiency of 137.97 % was recorded.

For the branded marketers on the other hand, marketing cost was ₦ 13,533.00, the values added to marketing of was ₦25,795.40 and190.61 % was recorded as the marketing efficiency.

This implies that marketing of local rice was efficient in the study area, though, more efficient among the branded marketers compared to the unbranded marketers.

Table 4. Marketing efficiency of unbranded and branded local rice marketers

Marketers Status	Estimates	Average cost/tone
Unbranded local rice	Marketing cost (₦)	11,436.40
	Value added (₦)	15,778.80
	Marketing efficiency (%)	137.97 %
Branded local rice	Marketing cost (₦)	13,533.00
	Value added (₦)	25,795.40
	Marketing efficiency (%)	190.61 %

Source: Survey Data, 2020.

Status of the local rice marketers
The marketers were disaggregated into two mutually exclusive groups as branded and unbranded marketers and presented in Table 5.

Table 5. Distribution of the status of rice marketers

Status	Frequency	Percentage
Unbranded	72	48.00
Branded	78	52.00
Total	150	100.00

Source: Survey Data, 2020.

Considering the snowballing approached outlined in the methodology, findings revealed that majority (52.0 %) of the marketers were those that branded their rice. The unbranded marketers constituted 48.00 % of the sampled marketers.

Factors influencing local rice marketing
The factors influencing marketing by local marketers is presented in table 6 and it states the different level of significant of the different variables.

The effects of the exogenous variables on the marketing status of the local rice marketers were investigated. Given the cross-sectional statistical nature of the data, the overall power of the model was modest with a pseudo R^2 value of 56 %. The log likelihood ratio test indicated that the overall model was statistically significant (for rejecting the null hypothesis of zero slopes). Based on the

statistical significance level for the parameters used for the study, four out of the seven modelled exogenous variables were significant. The significant independent variables influencing the marketing status of the local rice marketers were educational level, experience, access to grants and membership of cooperative society.

Table 6. Determinants of local rice marketing

Variable	Coefficient	Standard error	P value
Constant	-5.049*	3.058	0.099
Educational level	0.599**	0.256	0.020
Experience	0.135***	0.043	0.002
Age	0.052	0.043	0.221
Access to grant	0.029**	0.013	0.028
Credit	0.533	1.287	0.678
Market barrier	-0.498	0.372	0.180
Cooperative society	4.456***	0.973	0.000
Diagnostic statistics			
LR Chi^2 (7) = 115.99			
Prob > Chi^2 = 0.00			
Log likelihood = - 45.86			
Pseudo R^2 = 0.56			

Source: Survey Data, 2020.
Note: *, **, *** Significant at 10%, 5% and 1 % respectively

The respective positive signs of the regression coefficients tend to explain the relationship between the variables and the branding as a status of marketing. Educational level was positive and significantly (5 %) influenced the extent of branding amongst the rice marketers. Higher educational attainment reflects on the marketers' probability of going into branding of product. The result is consistent with the findings of [20]. The likelihood exists for improvement on means of marketing via experience as this was found to be statistically significant at 1 % level. The more the numbers of years that marketers have being engaged in marketing, the higher the likelihood of incorporating branding into their marketing activities.

Access to fund and membership of cooperative society significantly influences branding by local rice marketers. By implication capital becomes an important asset that influences marketers' decision to brand. Likewise, the latter increases the probability of a marketer's propensity to brand their product.

CONCLUSIONS

Local rice marketing in the study area is profitable as revealed, having an average net margin of ₦15,778.80 and ₦25,795.40 for the un-branding and branding status respectively. This is an indication that the performance of local rice marketing based on profit is good and equally viable. Consequently, educational attainments of the marketers and their experience coupled with access to grant and their involvement in cooperative society were found to influence branding positively. Based on the findings, it was recommended that local rice marketers enlightened on the importance of branding as this will serve as a means to increase their market efficiency.

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