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Marketing Margins for Imported and Local Rice in Akure, Ondo State, Nigeria- A Comparative Analysis.

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Abstract: -

The study was carried out in Akure, Ondo State. Multi stage and sampling technique procedure was used which involved purposive and random sampling methods in selecting the respondents with the aid of well-structured questionnaire with interview schedule. Descriptive statistical analysis, budgetary techniques, marketing margin analysis as well as Gini-coefficient and Herfindahl Hirshman Index was used for the analysis of variables. The result reviewed that more of the imported brands of rice in all the four market sampled than the local rice, with local rice margin as percentage of total marketing margin (16.95%) lower than that of local rice (17.78%) the average marketing efficiency of 349.91% and 467.89% were obtained from imported and local rice respectively while the Gini- coefficient (GC) Herfindahl Hirshman Index (HHI) values of 0.68 and 0.28 were obtained reviewing that rice marketing were highly concentrated with non-competitive practices showing disparity in earnings. The prevailing duration stocks were held in shops by trader was three to four weeks and the major sources of obtaining market information was mobile phone. The study recommends provision of storage facilities for the traders and also improvement in the quality of local rice with policy implementation that discourage importation of commodity as a way out of boosting and encouraging local rice production and its consumption.

Indexing terms/Keywords: Marketing Margins, Imported, local, rice, Comparative, Analysis.

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Introduction.

Rice (*Oryza sativa*) has become a strategic food security crop in Nigeria today with the country being the largest producer and consumer in west Africa, producing an average of 3.4 million metric tons (MT) of paddy rice equivalent to 1.8 million metric tons of milled rice (Daramola 2005, UNEP, 2005). Before independence, Nigeria was self-sufficient in rice production, hence, the commodity failed to attract attention in the various schemes, programmes and policies designed to initiate rapid transformation of the economy (Akpokodje, Lancon and Olaf, 2001; Akande, 2002). According to Daramola (2005) and WARDA (2003,2004), this situation has since changed as the status of rice in the average diet of Nigerians has been transformed from being a luxury food item being demanded only during festivity to that of staple replacing yam, cassava and maize in both the diet of the rich and the poor.

Rice consumption was on the increase after the civil war with an increase of 10.3 percent consumption per annum due to accelerated population growth rate (2.8 percent per annum) and increasing per capita consumption (7.3 percent per annum) leading to an increased domestic demand over domestic supply. To meet the shortfall in demand-supply gap, Nigerian government resolved to continued importation of milled rice, hence making Nigeria the highest importer of rice in Africa (Daramola, 2005). The shift from self-sufficiency nation to an importing one made rice to become a strategic commodity in Nigerian economy (Nkeng NM, Abang SO, Akpan OE and KJ Offem: 2006). Cho and Moon (2002), said further that result of an excessive importation leads to huge drains on the country's foreign exchange earnings over time. To ameliorate this, led to the desire by successive governments to reverse the trend through implementation of various programmes and policies.

Coy (2006), emphasized that the measures adopted include trade policies, such as tariffs, quotas and subsidies on inputs designed for trade enhancement and price supports designed to increase farm income. Some of the Agricultural Programmes puts in place include the Agricultural Development project (ADP), Abakaliki Rice Project (ARP), and the Presidential Initiative on rice (PI) were among those directed towards increasing the output of rice. Despite all these government intervention programmes aimed at achieving self-sufficiency in rice production, the demand-supply gap continues to widen (Odoemenem and Inakwu, 2011).

With the present initiative of government to increase the production of rice through the outright ban on the importation of foreign rice to the country and the efforts of various governments at the state level to encourage its production in the states, even in some states where the production is impossible, the collaboration with other state to produce rice such as the case of Lagos State and Kebbi State coming together for rice production, where Lake rice is been produced in Kebbi State and the procurement of modern rice processing machineries by the federal government and its distribution to all the rice producing areas of the country to assist in better rice processing to boost their productivity and improved output thereby contributing to the improvement of rural income.

In spite of the central position occupied by rice in solving rural hunger and providing multiple jobs for numerous unemployed, Nigerian government and other stakeholders continue to pay less attention to its marketing system which is still undeveloped and lack institutional support, coupled with weak infrastructure, bad trade policies and inefficient pricing that translates into low margins which renders the system malfunctioning and uncompetitive. The few policy initiatives focus on rice by successive government of Nigeria have been on the supply side (intensive production) with little emphasis on marketing and distribution. Increasing production without a corresponding efficient marketing strategy to ensure its accessibility would not stimulate farmers to enhance production since excess production would be wasted through post-harvest losses. Majority of the previous researches on market performance and pricing policy of rice concluded inefficiency of the system while few researches lend credence to the importance of adequate marketing system. Therefore, this study will contribute to the pool of knowledge on marketing margin and pricing efficiency of rice in the country.

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Objectives of The Study: - The main objective of this study is to compare the marketing margin of local and imported rice in Akure, Ondo State, Nigeria, while the specific objectives are to:

(i). ascertain the socio-economic characteristics of the rice marketers in the study area.

(ii). examine the market structure, conduct and performance of local and imported rice.

(iii). estimate the marketing efficiency and profitability of local and imported rice in the study area.

(iv). identify the major rice marketing constraints in the area.

Methodology: -

The Study Area: - The research work was carried out in Akure, Ondo State, Nigeria. Ondo Stature has 18 local government areas and Akure the capital city of the State. the total land area of the state is about 20,595ha with the population of about 2,455,723 persons (NPC 2006). The State is characterized by heavy rainfall with climate following usual tropical pattern. The State is predominantly an agrarian one with about 70% of the inhabitant are farmers engaging primarily in production of food crops (Akinsorotan, 1997).

Sampling Technique and Sample Size: - Multistage sampling technique was used. The first stage involved purposive selection of four markets in Akure metropolis. The second stage is the random selection of thirty rice sellers using snow balling method in each of the markets. A total sample size of one hundred and twenty (120) respondents was used.

Instrument of Data Collection: - Primary and secondary data was used in the course of carrying out this study. Primary data was collected through a well-structured questionnaire with interview schedule and general observation while the secondary data was collected through the use of textbooks, journals and periodical magazines.

Data Analysis: - Descriptive statistical analysis such as frequency tables, percentages and mean were used to summarize socio-economic factors of the respondents while budgetary technique analysis, marketing margin analysis and Herfindahl Hirshman Index was used to calculate the market performance of both local and imported rice.

(i). Budgetary Technique Analysis: - This was used to measure the market performance of both the local and imported rice.

This can be expressed mathematically as: GM = GR – TVC

Where GM = Gross margin in Naira per 50Kg bag.

GR = Gross Revenue in Naira per 50Kg bag.

TVC = Total Variable Cost Naira per 50Kg bag.

(ii). Marketing Margin Analysis: - This was used to calculate the market performance of both ` local and imported rice.

It can be represented mathematically as: - MM = Bp – Sp

Where MM = Marketing Margin

Bp = Average final price to consumers

Sp = Average selling price (Farm gate price)

(iii). Marketing Efficiency: - Is the measure of marketing performance and it is expressed mathematically as:

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$$ME = \frac{Net\ Margin}{Marketing\ Cost} \times 100$$

$$i.e. \quad ME = \frac{N\ M}{M\ C} \times 100$$

Where: - ME = MM – MC

= Marketing Margin – Marketing Cost.

Marketing Cost (MC) is the money spent by producer from farm to the final point of sale.

(iv). Herfindahl Hirshman Index: - This was used to estimate the market structure or share of the local and imported rice dealers.

Mathematically expressed as: - HHI = $\sum S_i^2$

Where: - S_i = Market share for respondent i calculated as: $S_i = q_i/q$

q_i = bags of rice sold per month by the respondent I and

q = total number of bags sold per month by all respondents.

Results and Discussions

The socio-economic characteristics of the respondents are presented in table 1. The table revealed that female dominated rice selling in the study area as 76.2% were female against 23.8 who were males. The respondents had their ages spread within the age categorization but from the result, it was evident that 64.2% of the rice sellers had their ages below 40 years which might be attributed to the level of unemployment in the country. The distribution according to marital status shows that majority (51.7) were married with only 28.3 single. About 57% of the respondents had primary education and above, this would enable them to communicate effectively in their course of selling. The average years of level of education attained by the respondents were 6.20 with standard deviation of 6.06 years.

The household size ranges from 1-15 with the mean household size as 6. This indicated that the household size was fairly large and could enhance savings in the cost of labour utilized. The primary occupation of the respondents revealed that 65% of the respondents indicated rice selling as their main occupation while the remaining 35% practice it as secondary occupation. The table also revealed that the majority of respondents were matured and more experienced in marketing as their mean marketing experience was about 28 years with standard deviation of 13.67 years. Means of market premises acquisition revealed rent age as the most popular means of acquiring market premises in the study area while the use of family labour was the commonly type of labour utilized by the respondents.

The table also shows that personal savings dominated the major sources of finance for their marketing activities as revealed by 78.3%of the respondents followed by cooperative organizations with 11.7% and bank was least patronizing by the respondents maybe as a result of cumbersome nature of obtaining credit from the source. Marketers should be encouraged to form themselves into cooperatives to improve their credit access from the source as majority (62.5%) of them does not belong to any cooperative society.

Table 1: Socio-economic characteristics of respondents.

Variables	Frequency	Percentage
Age		
Below 30	35	29.17

30-49	42	35.00
40-59	25	20.83
50-59	8	6.67
60 and above	10	8.33
Sex		
Male	31	23.83
Female	89	76.17
Marital status		
Single	34	28.33
Married	62	51.67
Widowed	10	8.33
Divorced	14	11.67
Educational level		
No formal education	52	43.33
Primary education	20	16.67
Secondary education	36	30.00
Tertiary education	12	10.00
Household size of the Respondents		
1-4	22	18.33
5-8	65	54.17
9-12	28	23.33
Above 12	5	4.17
Primary occupation of Respondents		
Rice selling	78	65.00
Artisan	12	10.00
Civil service	21	17.50
Farming	9	7.50
Years of marketing experience		
<15 years	24	20.00

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15-20 years		32	26.67
Above 20 years	64		53.33
Means of market premises acquisition			
Inheritance	17		14.17
Purchase	21		17.50
Rentage	76		63.33
Lease		6	5.00
Type of labour utilize in marketing			
Family labour	75		62.50
Hired labour	15		12.50
Family/hired	30		25.00
Source of finance of the respondents			
Bank	4		3.30
Cooperative	14		11.70
Gifts from fixed/relatives	8		6.70
Personal saving	94		78.30
Membership of cooperative society			
Yes	45		37.5
No	75		62.50

Source: computed from market survey data, 2016.

Analysis of Rice Market Structure

The analysis of rice marketing structure was computed using the Gini-coefficient. Table 2 revealed the degree of seller's concentration with the Gini-coefficient value of 0.683. Its closeness to one shows the existence of non-competitive behavior such as disparity in earnings, which is the case within these markets because entry into the markets was been regulated by unions.

Table 2: Result of Gini-coefficient Analysis

No of 50kg bags sold	No of sellers	Proportion of sellers (X)	Cum.Prop of sellers	Av.annual sales	Cum.prop of sales (Y)	XY
>500	60	0.50	0.50	3,850,600	0.418	0.209
500-1000	32	0.26	0.76	2,221,500	0.241	0.062

1001-1500	20	0.17	0.93	2,055,100	0.223	0.038
<1500	8	0.07	1.00	1,085,850	0.118	0.008
Total				**9,213,050**		**0.317**

G.C=1-XY=1-0.317=0.683

Source: computed from market survey data, 2016.

Further analysis of the market structure presented in table 2 using Helfindahl hirshman index gave a value of 0.2783 across the market revealing a higher market concentration in the selected market implying that marketing of rice commodity product is in the hands of relatively few traders in the study area as presented in table 3.

Table 3: Herfindahl Hirshman Index for the selected markets.

Market	**Computed Herfindahl Hirshman**
Oja-oba	0.0756
Isinkan	0.0642
Arakale	0.0731
Oke Aro	0.0654
Total	**0.2783**

Source: computed from field survey data, 2016.

Analysis of Market Performance

This was analyzed in term of the volume of scales, net sales and marketing margins. Table 4 shows the mean monthly quantity of rice for local and imported rice bought in the various markets as a percentage of the total quantity of 17,650.28 unit of 50kg measure of rice were bought in oja-oba market revealing 10,360.71(58.70%) representing the imported rice while 7,289.87 (41.30%) representing local rice. In Isinkan market, 5222.10 quantity of rice was bought. From this, 4,400 representing about 84.25% was imported rice while the remaining 822.10 (21.15%) was local rice. In the same vein, Arakale market accounted for a total of 1524.21 quantity of rice sold from which about 600.21 (39.38) were local and 924 (60.62%) were imported rice and finally, in Oke-Aro market 4,291.53 quantity of 50kg measure of rice were sold, 1437.57 bags representing 33.50% were local while 2,853.57 bags which is (66.50%) were imported rice.

The sales volume in Oja-Oba and Isinkan market was because both markets where been operated on daily basis and most other traders from the rural part of the Ondo state often ordered their stocks through the major distributors from these markets. From the results, more of the imported rice were sold in all the markets which support the theory of economic development that as development takes place, per capita income increases and people would move for high quality goods which forms the rationale behind the prevalence of imported brands of rice in Akure, the study area. With the ban on importation of imported rice and increased production of local rice by various states and Federal government of Nigeria, it is assumed that the scenario will change in no distance time hence study on this needs to be undertaken to ascertain the real situation soon.

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Table 4: mean monthly market show of foreign to local rice in the selected market in Akure

Market	Total mean qty of imported and local rice	Mean qty of rice bought		Percentage of total rice bought	
		Imported	Local	Imported	Local
Oja-oba	17,650.28(2872.61)	10,360.71(1692.41)	7289.57(1080.21)	58.70	41.30
Isinkan	5222.10 (2314.60)	4400.00(102.70)	822.10(303.10)	84.25	15.75
Arakale	1524.21 (1107.25)	924.00(433.40)	600.21(321.40)	60.62	39.38
Oke-Aro	4,291.53 (1430.81)	2853.87(863.31)	1437.66(587.50)	66.50	33.50
Total across market	28688.12	18,538.58	10,149.54	64.62	3 5.38
Average across market	7172.03	4634.65	2,537.38	64.62	35.38

Note: values in brackets are standard errors.

Source: computed from market survey data, 2016.

Measurement of Market Performance

The measurement of market performance of the respondents was carried out using the net marketing margin and pricing effectively of nice as well as distributions of marketing efficiency across the selected markets in the study area using table 5.

From the table 5, the average marketing efficiency across the 349.91% and 467.89% for imported and local rice respectively. With the respect to imported rice, Arakale market had the highest marketing efficiency (390%), followed by Isinkan (379.59%) with Oja-oba with the least marketing efficiency of 305.45%. The implication of

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this was that Oja-oba was more efficient in terms of pricing for imported rice than other markets in the study area. On the other hand, with the respect to local rice, Oja oba was found to be more efficient (518.52%) than Isinkan market (465.52%) next with Oke-Aro market (450%) and with the least from Arakale market (437.5%).

The result of marketing margin and pricing efficiency were presented in table 5. The average net margins of imported and local rice sold across the markets were ₦1,370 and ₦1,250. Arakale and Oja-oba had the highest net marketing margin of ₦1,450 and ₦1,130 for imported and local rice respectively. The least net marketing margin of ₦1,130 for imported and ₦1,060 for local rice were recorded by Oja-oba and Isinkan markets. Also imported rice present a higher percentage of total marketing margin of 17.78% to that of local rice of 16.95%. This implies that rice marketing in the study area is profitable. In terms of marketing costs, structure, average marketing costs across the markets were ₦537.5 and ₦295 for both imported and local rice with Oke-Aro market having the highest marketing cost of ₦610, next to Oja-oba (₦530) and the least being that of Isinkan market with ₦490. The high marketing cost at Oke-Aro can be attributed to the transport cost, since the market is located about 2.5kilometers away from the urban area where the Oja-oba was located. The contribution of transportation to commodity marketing and the final monetary value is in consonant with the distance, nature of goods as well as the volume of the particular good.

Table 5: - Distribution of marketing margins and marketing efficiency per 50kg unit of rice in the study area.

Market	Buying price	Selling price	Handling cost	Marketing cost	Net margin	Marketing efficiency	Marketing margin
Imported rice							
Oja – Oba	8570	10250	550	1680	1130	305.45	16.39
Isinkan	8650	10500	490	1850	1360	379.59	17.71
Arakale	8700	10650	500	1950	1450	390	18.31
Oke – Aro	8600	10580	610	1980	1370	324.59	18.71
Across Markets	8630	10495	537.50	1865	1327.50	349.91	17.78
Local rice							
Oja – Oba	6800	8200	270	1400	1130	518.52	17.07
Isinkan	6650	8000	290	1350	1060	465.52	16.88
Arakale	6750	8150	320	1400	1080	437.50	17.50
Oke – Aro	6900	8250	300	1350	1050	450	16.36
Across Markets	6775	8150	295	1375	1080	467.89	16.95

Source: Computed from Field Survey data, 2016.

Analysis Of Market Conduct

This was undertaken by examining duration of stock in warehouse, means of obtaining price information, means of transportation, as well as sales or promotional strategies employed.

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Table 6 revealed a remarkable variation in the length of rice storage by respondents. Most of the respondents (60%) store their product between 3-4 weeks and 23.3% store their products above 4weeks and the remaining 16.7% are able to sell off their products within one to two weeks which is a revelation of high financial cost associated with rice storage.

With the means of obtaining price information as presented in table 6, 66.7% of the respondent make use of mobile phone while 25% acquired their information through fellow traders and none of the respondents use mass media in obtaining price information. The high use of mobile phone shows the impact of information technology in dissemination of information on rice marketing in the study. As regards the various means of transporting stock in the selected markets, table 6 revealed that majority of the traders shared hire truck with about capacity of 6 to 40 metric tons together with the view of reducing transportation cost. As a result of the long distance of purchase, majority of them prefer to procure large volume of rice per trip and only 13.3% owned their trucks.

Also, from table 6, the most prevailing promotional strategies employed by the respondents were friendly attitudes to customers (45%), closely followed by sales on credit (33.4%) while 13.3% of the respondents ensure that they sold only good quality products and 8.3% made use of trade discount to attract customers.

Table 6: Distribution of respondents according to market conduct.

Variables	No	Percentage
Stock duration in the warehouse		
1-2 weeks	20	16.7
3-4 weeks	72	60.0
Above 4 weeks	28	23.3
Total	**120**	**100**
Means of obtaining price information		
Mass media	0	0.0
Market association	10	8.3
Use of mobile phone	80	66.7
Information from fellow traders	30	25.0
Total	**120**	**100**
Means of transporting stock		
Individual hired truck	30	25.0
Shared hired truck	74	61.7
Respondents owned truck	16	13.3
Total	**120**	**100**
Promotional strategies embarked upon		
Trade discount product	10	8.3

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Credit sale	40	33.4
Sales of quality product	16	13.3
Friendly altitude to customers	54	45.0
Total	**120**	**100**

Source: computed from market survey data, 2016.

Major Constraints to Rice Marketing in The Study Area.

Table 7 revealed the major challenges to smooth rice marketing in the study area. The respondent's multiple responses show that 74.2% complaint about low capital base and that access to credit will alleviate their problem while 70% based their own constraints on high transportation cost. Inadequate supply of the products accounts for 51.7% and lack storage facilities (60.8%) were among the complaints listed. Provision of storage facilities in various major markets will reduce some of the problems encountered by the respondents.\

Table 7: - Constraints to rice marketing.

Constraints	Frequency	Percentage
Low capital base	89	74.2
High cost of transportation	84	70.0
Lack of storage facilities	82	60.8
Inadequate stock supply	62	51.7

Multiple responses

Source: computed from market survey data, 2016.

Conclusion

The rice marketers in the study area were well experienced on the job and relatively young in age. Most of the respondents do not have access to loan and cooperative as majority of them (78.3%) obtained their finances through personal savings. The study revealed that non-competitive behavior such as disparity in earnings as revealed by the market structure owing to their regulated entry into the markets by unions. Rice marketing in the study area is in the hands of relatively few traders as evidenced by Herfindahl Hirshman Index value of 0.2783 and dependency on imported rice as evidenced by 54% of average share across markets.

A remarkable variable was noticeable in the length of rice storage by respondents and mass media was very unpopular in obtaining information among respondents.

Recommendations

- It is therefore recommended that rice marketers should form themselves to cooperatives society so that they could be able to improve their capital base and overcome the credit need problem.
- Efforts should be directed towards providing storage facilities and reducing marketing costs. This can be achieved through building of ware houses in major markets, subsidizing cost of storage and transportation.
- Efforts should be directed towards improving the quality of local rice so as to compete effectively with the imported one.

- With the total and permanent enforcement of on-going ban on the importation of rice and encouragement on local production, more of the local rice will be available and at the same time be demanded hence, further study in the nearest future is imperative to ascertain the current scenario concerning the subject matter.

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