ECONOMIC ANALYSIS OF RICE MARKETING IN SOME SELECTED LOCAL GOVERNMENT AREAS OF EKITI STATE, NIGERIA

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ABSTRACT: *This study examined economic analysis of rice marketing in some selected Local Government Areas (LGAs) of Ekiti State, Nigeria. A total of one hundred and twenty respondents were sampled for the study in three (LGAs) in Ekiti State. A multi-stage random sampling technique was used to collect the sample. The result of the socio-economic characteristics of the marketers in the study area showed that the marketers were experienced. The results also indicated that majority of the respondents involved in marketing of food items (95%) while only 5% also practiced farming. The result of the findings showed that rice availability is very regular (80%) in the study area. The marketing margin was highest in Ijero (LGA) with ₦900 per 50kg of rice and the marketing efficiency was highest in Ado (LGA) (0.93). The gross margin analysis obtained was ₦106,207.80, revealing that rice marketing is a profitable business in the study area.*

KEYWORDS: economic, analysis, rice, marketing

INTRODUCTION

Rice constitutes principal food for half of the human race (Encarta, 2004). Rice is significant to the economy of many nations. It is a major source of revenue in the United States and Southern Europe; a staple diet in Japan and mainstay of the economies of China, Indonesia, Thailand and Vietnam (Encarta, 2004). In sub-Saharan Africa, West African is the leading producer and consumer of rice (WARDA, 2006). In Senegal, for instance, rice consumption now exceeds 70 Kg per capita, per year, having replaced millet as the most important staple food in urban households since the 1970s (Bruntrup, 2006). In Bangladesh, a 2Kg bag of rice now consumes almost half of the daily income of a poor family (Ugwu and Adepetun, 2008). The average Nigerian consumes 21Kg of rice per year (WARDA, 2002). However, the rising demand for rice makes it a significant food item in the marketing scene. Rice marketing is the performance of all business activities in the flow of paddy and milled rice from the point of initial production until they are in the hands of the ultimate consumers (Ihene, 2006). High importation in Nigeria exposes local production to stiff competition with foreign rice. Nigeria ranks third with Iraq (after Philippines and China) in the group of major rice importing countries in the world (Awe, 2006). Rice is an annual crop and one of the most important staple food crops in Nigeria.

Commercially, it is widely consumed and there is hardly any country in the world where it is not utilized in one form or the other (Omofonwan and Kadiri, 2007). In 2003, Africa produced about 15.08 million

tons of paddy rice on 10.23 million hectare of land (FAO, 2000 and 2003) while Nigeria was at same period the highest rice producer in West Africa, producing an average of 3.2 million tons of paddy rice or 2.0 million tons of milled rice (Daramola, 2005). The demand for rice has been increasing at a much faster rate in Nigeria than in any other African country, since the mid 1970 (FAO, 2001). Although rice production has increased during the last two decades in Nigeria, the country's production capacity is far below the national requirement. Nigeria's inability to meet her rice consumption needs through local production has resulted in high cash outlays for importation (Fakayode, 2009). Among the explanations for the country's poor agricultural performance has been its slow adoption and low usage rates of agricultural technologies such as inorganic fertilizers and improved seeds. Hence, the nation depends on the international markets to fill the demand supply gap at a colossal amount of foreign exchange as a result of low productivity in the local production of rice.

The major constraint to domestic production of rice in Nigeria is connected to poor resource utilization, environmental and institutional factors. Rice farmers in Nigeria are not getting maximum returns from the resources committed to their enterprises leading to a decline in per capita food production (Okoruwa, Ogundele and Oyewusi 2006). Its production has also mainly been in the hands of small-scale resource poor farmers who depend heavily on the use of traditional technologies, which result in low productivity. There has been a low level of improved farm inputs usage among the small-scale farmers. This could be as a result of high cost of inputs, diversion of subsidized farm inputs, soil degradation, annual bush burning which destroys the soil organic matter, land issues, lack of capital, neglect of agricultural sector, inadequate extension agents, market failures, insufficient technical-know-how in the area of fertilizer application and improved seeds among others. All these and more have resulted in low agricultural productivity and farm incomes thus, making it increasingly difficult for the country to achieve self-sufficiency in food production and in meeting the first goal of the Millennium Development Goals (MDGs) which was to eradicate extreme poverty and hunger by 2015 (FEPSAN, 2012).

The Nigerian rice sector has seen some remarkable developments over the last quarter of the last century. Both rice production and consumption in Nigeria have vastly increased during the aforementioned period. Notwithstanding, the production increase was insufficient to match the consumption increase -with rice imports making up the shortfall. With rice now being a structural component of the Nigerian diet and rice imports making up an important share of Nigerian agricultural imports, there is considerable political interest in increasing local rice production. This has made rice a highly political commodity in Nigeria. However, past policies have not been successful in securing the market share for local rice producers. There is a need to draw lessons from these past policies – particularly by finding out what is really happening on the ground in terms of rice production and processing. The ban on its importation and encouragement in the production and its processing is envisaged to produce positive effects in both short and long run.

METHODOLOGY

The Study Area
The study was conducted in Ekiti State, Nigeria. The state is one of the states in the South Western Region of Nigeria. The state is within the tropics. The state was created on the 1st of October, 1996 and comprises of 16 Local Government Area (LGAs). Ekiti State occupies land mass of approximately 8,6028km. Ekiti State is predominantly an agricultural area whose main cash crops are cocoa, timbers, oil-palm and kolanuts. The food crops grown are cassava, yam, cocoyam and grain crops such as maize and rice. The state has two main seasons i.e. the rainy season and dry season.

Data Collection
Primary data was used for the study. Data was collected from the respondents with the aid of well-structured questionnaire. The information that was obtained include socio-economic characteristics of the respondents, quantity of the product that is available for transactions, the different marketing functions and cost and the marketing margin, efficiency and constraint facing rice marketing in the study area.

Sampling Techniques
A multi-stage sampling technique was used to select respondents for the study. At first stage, three local government area (LGAS) were selected which include Ado, Ijero and Ikole, at second stage two communities was selected from each local government, at the third stage 20 rice marketers was selected from the rice market in each of the communities. Thus a total of 120 respondents were surveyed for the study.

Data Analysis
Both descriptive statistics and quantitative methods was used in the survey. Marketing margin, according to Kohls (1985), represents the difference between the price paid by the final buyer (consumer) and the price paid to the first seller (at farm gate).

      Marketing margin = Buyer's price – seller's price

Marketing efficiency is the measure of the market performance. It is expressed like this:

Marketing efficiency, ME= $\dfrac{\text{Net margin}}{\text{Marketing cost}}$

      The net margin accruing to the wholesaler or the retailer is the difference between the marketing margin and the marketing cost. The marketing cost include the transport costs, storage cost and other costs. If marketing efficiency = 1 (highly efficient), it implies that the market is said to be efficient. But when ME >1 (over efficient), it implies that abnormal profit is being made in the trade, and some elements are unduly reaping from the efforts of others. Again, when ME <1(under efficient) implies that a sizeable loss is being recorded in the trade. A moderate level of efficiency is also achieved.

RESULTS AND DISCUSSION.

Socio-Economic characteristics of the Respondents.
The distribution of the respondent by sex indicates that 48.33% of the respondents were male while 51.67% were female. This is an indication that marketing of rice does not depend on gender as it is widely marketed by both men and women in the study area according to table 1. The ages of the respondents were between 22 and 70 years. This shows that the respondents include both young and elderly individuals who engaged in rice marketing. The average age of the respondents was 49years. This result indicates that majority of the respondent were still in their productive age. Respondents within the ages would be vibrant and energetic to carry out marketing activities in the market.

The marital status revealed that 57.5% are married, 30.83% were single and 11.67% were Divorced. The indication of this distribution is that majority of the marketers have family responsibilities. The educational level indicates that a lot of the respondents were literate. Marketers with high literacy level tends to be more efficient in terms of food items marketing activities, increasing ability to understand and evaluate market information and most of respondents surveyed are full time marketers who are involved in marketing food items other than rice alone.

The marketing experience of respondents shows that 21.67% had 2-5yrs of marketing experience, 46.67% had 6-10yrs of experience, 20% had 10-15yrs experience and 11.66% of the marketers had above 15yrs of marketing experience. This indicates that most of the rice marketers have necessary experience and have been involved in the business for over a long period of time which enable them to possess perfect information about rice marketing in the markets. Considerable numbers of the respondents are members of cooperative society thereby they can source for funds through the cooperative society to help them improve their business. Those that are not members might be involve in other means such as daily contributions which may also help them to source for funds when needed.

The table revealed that 43.33% of the respondents have access to loan while 56.67% do not have access to loan. Those that have access to loan may be as a result of their involvement in cooperative society and are able to access loan from their respective cooperative societies they belong to. Those respondents that do not have access to loan might be as a result of their non-involvement in cooperatives, hence the need for them to source for funds from other sources and they should be encouraged to form themselves into cooperative societies so as to benefit from such organizations. Table 1 also revealed that 96.67% of the rice marketers also sell other things while 3.33% sells only rice. According to observation, those rice marketers are also involved in selling other food items such as beans, *garri*, maize and other food items in other for them to maximize profit and satisfy their customers.**.**

Variable	Frequency	Percentage
Gender		
Male	58	48.33
Female	62	51.67
Age		
21 – 30	37	30.83
31 – 40	48	40.00
41 – 50	19	15.84
51 – 60	10	8.33
61 and above	06	5.00
Marital Status		
Single	37	30.83
Married	69	57.50
Divorced	14	11.67
Educational Level		
No formal Education	12	10.00
Primary Education	32	26.67
Secondary Education	58	48.33
National Diploma	06	5.00
B.Sc	12	10.00
Major occupation of respondents		
Marketing of food items	114	95.00
Farming	06	5.00
Marketing experience of respondents		
2- 5	26	21.67
6-10	56	46.67
11 – 15	24	20.00
>15	14	11.66
Membership of Cooperative Society		
Yes	58	48.33
No	62	51.67
Access to loan		
Yes	52	43.33
No	68	56.67
Selling of other product apart from rice		
Yes	116	96.67
No	04	3.33

Table 1: - Socio-Economic characteristics of the Respondents

Source: Field Survey, 2017.

MARKETING STRUCTURE, CONDUCT AND PERFORMANCE
Category of Business

The bar chart in Fig 1 below shows that 10.83% are wholesalers, 4.17% are semi-wholesalers and 85% were retailers. This indicates that most of the respondents surveyed are retailers and this might be as a result of huge capital needed to start on a wholesale scale which are not available to them and also the urge to combine other food items to their business may be some of the reasons while they are operating on a retail scale.
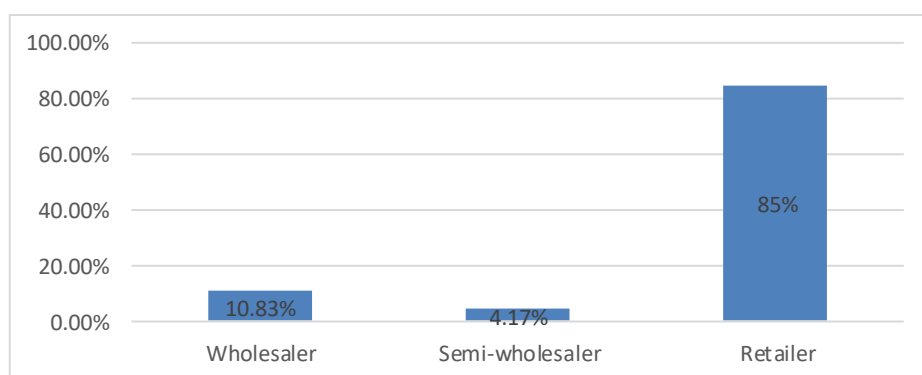

Fig 1: Category of Business of Rice Marketers

Source: Field Survey, 2017.

Ownership category of the Business

The pie chart presented in Fig. 2 revealed that 93.33% are the owners of their business while 6.67% were business assistant. This indicates that most of the rice marketers in the study area own their business and operate a sole proprietorship.
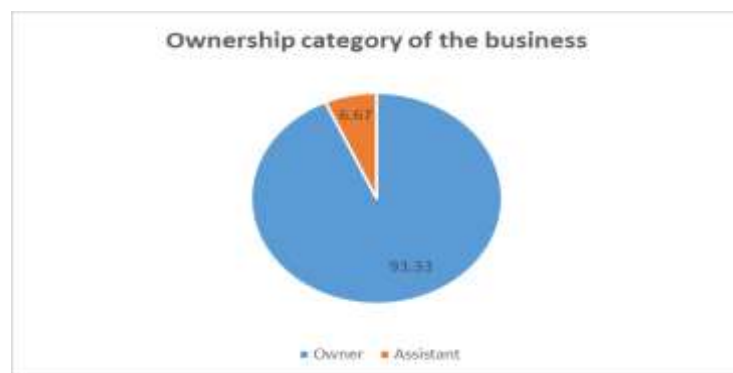

Figure 2: Ownership category of the business

Source: - Field survey, 2017.

Average prices for 50kg of the difference types of rice.
From table 2 below, it was shown that the respective prices of Igbemo, Kebbi, Kaduna and Kano rice are ₦21,000, ₦17,000, ₦16,500 and ₦17,000 respectively while imported rice are being sold for ₦15,800 for 50kg bags in the study area. The prices are uniform in the market survey because both the marketers and buyers possess perfect information about the prevailing price of rice in the market.

Rice types	Price (₦)
Igbemo rice	21,000
Kebbi rice	17,000
Kaduna rice	16, 500
Kano Rice	17,000
Imported rice	15,800

Table 2: Average prices of 50kg of rice
Source: Field survey, 2017

Availability of rice for effective operation
The bar chart in Fig. 3 below revealed that 3.33% think rice is not regular, 6.67% think rice is fairly regular, and 10% feels rice is just regular while 80% of the respondents ascertained that rice is very regular for effective operation. This result indicates that rice is regularly available in the market for effective transaction between rice marketers and rice consumers. These might be attributed to the federal government claim in first quarter of 2017 that rice production has increased to about 15million metric tonnes per annum which ensure that rice is available in every state of Nigeria.
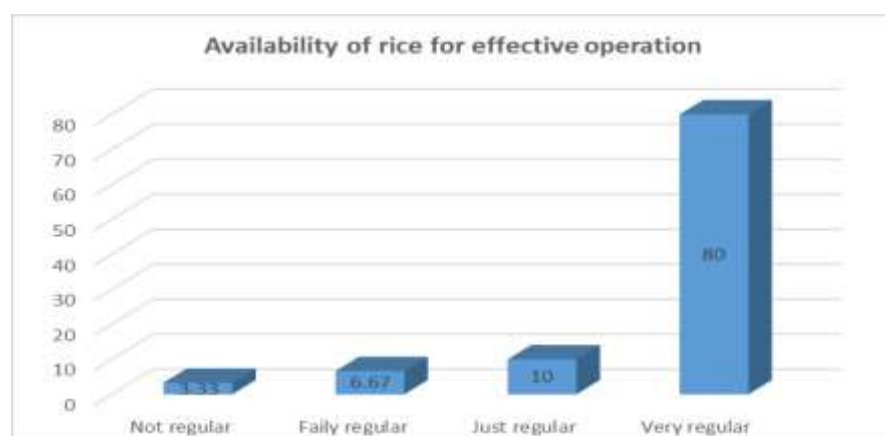
Figure 3: Availability of rice for effective operation
Source:- Field survey, 2017.

Customers' preferences of local rice to imported ones.
The pie chart in Fig. 4 shows that 28.33% prefers local rice while 71.67% prefers imported rice as indicated by rice marketers. This might be due to the better taste of imported rice and processing method compared to local rice and may also be due to price factor because consumers of rice purchase imported rice at a lower price before the ban on importation of rice compare to the present price of locally produce rice which are high.
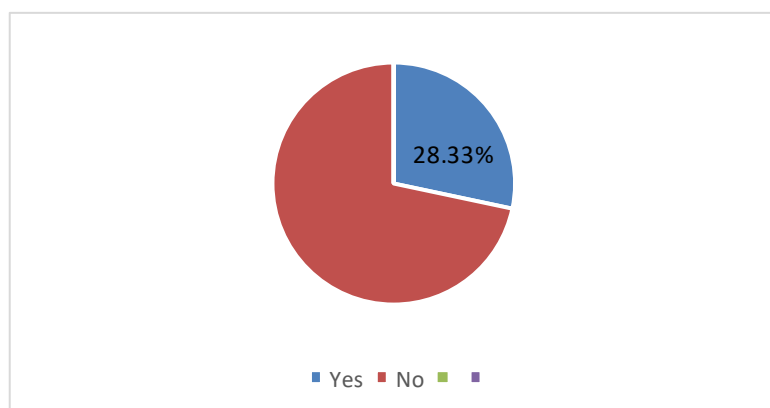
Figure 4: Customers preference for local rice to imported rice

Source: Field Survey, 2017

Marketing Costs of Respondents
Table 3 shows that 26.67% of the respondents pays a sum of 500-1000 naira/bag on transportation of their goods from place of purchase to their respective markets, 48.33% pays between 1500 -2000 Naira while 25% of the respondents pays a sum that is above 2000 naira. This indicates that marketers in the same market pay similar or same amount for the transportation of their rice from the place of purchase to their markets.
From the table, it was shown that 14.17% uses 1000-1500 naira monthly as storage cost, 65.83% uses between 2000 -2500 naira, 10.83% uses 3000 -3500 naira while 9.17% of the respondents uses above 3500 naira as storage cost on a monthly basis. The rice markets revealed that they store their product in a kiosk and pay the amount above on a monthly basis as their cost of storing the product in the kiosk.

Also from the table, 10% of the rice marketers pays a sum of between 500 -1000 naira as security cost on a monthly basis, 40% pays a sum between 1500 – 2000 naira, 39.17% pays a sum of 2500 – 3500 naira while 10.83% pays a sum above 3500 naira monthly to secured their product from theft and midnight

burglars. From this results, it was observed that marketers operating in the same market pay same amount of money as their security cost on a monthly basis.

It was also revealed that 7.5% of the marketers do not pay tax, 30 % pays a sum between 1000 – 2000 naira, 36.67% pays between 2000 – 3000, 15% pays between 3000 – 4000 naira while 10.83% pays above 4000 naira on a monthly basis. Those that do not pay tax maybe as a result of government tax official not reaching out to them and mandate it for them to pay their monthly tax. Also most of the marketers pay similar amount for tax because majority of them are operating as a retailer and therefore have similar capacity of sales.

Average cost of transportation (₦)	Frequency	Percentage
500 -1000	32	26.67
1500 – 2000	58	48.33
>2000	30	25.0
average monthly storage cost(₦)		
1000-1500	17	14.17
2000-2500	79	65.83
3000-3500	13	10.83
>3500	11	9.17
Total	120	100
Average monthly security cost (₦)		
500-1000	12	10.0
1500-2000	48	40.0
2500-3500	47	39.17
>3500	13	10.83
Total	120	100.00
Average monthly tax payment (₦)		
No tax	09	7.5
1000-2000	36	30.0
2000-3000	44	36.67
3000-4000	18	15.0
>4000	13	10.83
Total	120	100

Table 3: Marketing cost

Source: Field Survey, 2017.

Marketing functions

Table 4 revealed the marketing functions performed by respondents. 30.83% respondents stored their products on weekly bases, while 69.17% stored on monthly bases. In the same vein, 43.33% sells whole rice while 56.67% sells broken and whole rice among others.

Storage(duration of storage)	Frequency	Percentage
Weekly	37	30.83
Monthly	83	69.17
Total	120	100
Grading		
Respondents selling whole rice	52	43.33
Respondents selling broken and whole rice	68	56.67
Total	120	100
Assembling	47	39.16
Yes	73	60.84
No	120	100
Total		

Table 4: Marketing functions performed by respondents.
Source: Field Survey, 2017.

Market Concentration

The pie chart in Fig. 5 revealed the market concentration of rice market in the study area. It shows that 41.67% sells below 6 bags (50kg) of rice per month, 49.17% of them sells between 6 and 20 bags per month, while only 9.16% sells above 20 bags/month. This may be as a result of the scale the rice marketers are operating, that is, being a retailer and may also due to the fact that the volume of rice markets in each markets are high and there are many of them, hence customer have the opportunity of buying from any marketers they prefer which ensure or maintains equal sales among rice marketers in the respective markets surveyed.
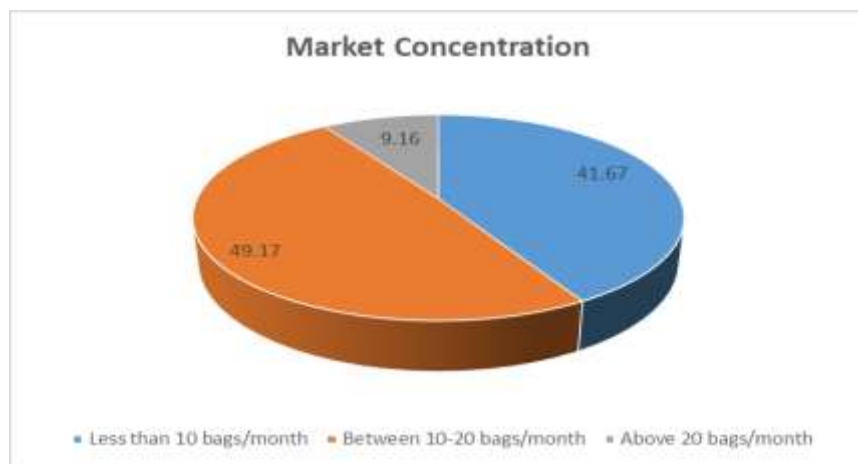
Figure 5: Market concentration
Source: - Field survey, 2017.

Major Constraints to Rice Marketing
Table 5 revealed the major constraints facing rice marketers in the study area. It revealed that 96.67% of the rice marketers are faced with the problem of low capital base, 70.83% are faced with credit recovery rate, 60.0% of the marketers are faced with inadequate supply, 98.33% are faced with lack of storage facilities while 89.17% of the rice markets are faced with high cost of transportation. The problem of low capital base may be as a result of the rice marketers having no access to loans with the exception of those that belongs to cooperative societies. The problem of low credit coverage rate may be as a result of customers not fulfilling their promise at normal time agreed on, hence affecting the rice markets whenever credit sales are extended to the customers.

The problem of storage facilities is one of the major problem facing rice markets in the study area as there are no adequate storage facilities available in the study area hence, some of the rice that are supposed to be stored under a good facilities get spoil before been sold to customer, hence making the rice marketers operating at a loss.

Table 5: Major Constraints to rice Marketing

Constraints	Frequency	Percentage
Local capital base	116	96.67
Credit recovery rate	85	70.83
Inadequate supply	72	60.0
Lack of storage facilities	118	98.33
High cost of transportation	107	89.17

Table 5: Major Constraints to rice Marketing

Source: Field Survey 2017

Marketing Margin for Rice across sampled Markets in Ekiti State.

Table 6 revealed that marketers in Ado Ekiti recorded the least margin of ₦750.00 per 50kg bag of rice. This is against the ₦850.00 margin recorded by marketers in Ikole Ekiti and ₦900.00 margin in Ijero-Ekiti respectively. A fairly moderate margin recorded in Ijero Ekiti may have been caused by the series of marketing activities involving rice and some other food items in the local government.

Local government	Unit of measure (kg)	Buyers price(₦)	Seller's price (₦)	Market margin (₦)
IJERO	50	17,000	16,100	900
IKOLE	50	17,400	16,550	850
ADO	50	17,300	16,550	750

Table 6: Marketing Margin for Rice across sampled Markets in Ekiti State.

Source: Field survey 2017.

Gross Margin Analysis
The table 7 below revealed the gross margin analysis for rice marketing in the study area. The gross margin analysis for rice marketing was ₦106,207.80 indicating that rice marketing is a profitable venture in the study area.

Gross Return	Average quantity sold	Unit price (₦)	Value (₦)
Average sales	120bags	17,350	2,082,000
Variable inputs	**Quantity**	**Price per quantity**	**Total**
Cost of rice purchased	120bags	16,400	1,968,000
Average transport cost			1,442.50
Average storage cost			2,241.60
Average security cost			2,155.00
Monthly tax			1,953.10
Total variable input cost			1,975,792.20
Gross margin			106,207.80

Table 7: Gross Margin Analysis
Source: Field Survey, 2017.

Level of Efficiency in Marketing of Rice
Marketing efficiency is used to measure the market performance. Low market efficiency could be interpreted as an inefficient marketing system. However, according to Olukosi and lsitor (1990), market efficiency is a function of both pricing and operational efficiency. From table 8 Ado local government area has the highest marketing efficiency of 0.93 while, Ikole has 0.90 and Ijero local government area has the least marketing efficiency of 0.82. The implication of this is that rice is more efficiently marketed in Ado-local government area. As a matter of concern for public policy there should be attempts by governments and non-government organization towards providing enabling environment including more efficient resource allocation and creating more infrastructural facilities necessary for market expansion, technological progressiveness and cost reductions to make the market operate more efficiently.

Local Government	Marketing margin	Marketing cost	Net Margin	Marketing Efficiency
ADO	750	12,000	11,250	0.93
IKOLE	850	8,500	7,650	0.90
IJERO	900	5,000	4,100	0.82

Table 8: - Marketing efficiencies of selected market.
Source: Field Survey, 2017.

CONCLUSION
From the study, it was found that both male and female were involved in rice marketing in the study area. It was equally found that marketers in the study area are majorly involved in marketing of food items along with rice. It was also found that majority of the rice marketers are literate and are able to read and write which make marketing activities easy for them. Majority of the rice marketers operates on retail scale which if given access to loan, they will increase the volume of their sales. The market for rice is very efficient and rice evenly distributed in the study area.

Recommendations
    As a result of the findings from the study, the following recommendations were made;
- Despite the ban on the importation of imported rice, the consumer's preference is still higher than that of locally produced ones. Government should strictly enforce the ban and at the same time improve on the processing to attract its acceptability by consumers.
- The quality and numbers of food storage facilities should be stepped up so as to extend the longevity and enhance the quality of rice in the study area.
- Credit facilities should be extended to the rice marketers in the study area through the formation of rice marketers into cooperative societies to enable them increase the volume of trade in their respective markets.

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