

**ANALYSIS OF CONSUMERS' PREFERENCE FOR LOCAL RICE AMONG  
HOUSEHOLDS IN EKITI STATE, NIGERIA**

**Abstract**

Consumers' preference for local rice determines its demand. Therefore, the study was carried out to analyze consumers' preference for local rice among households in Ekiti State. A multi-stage sampling procedure was used to select respondents for this study. A total of 240 women were randomly selected from three Local Government Areas (LGAs) in the State. Primary data were obtained with the use of a well-structured interview schedule. Data collected were analyzed using descriptive statistics as well as Logistic regression. The mean age of the respondents was 38 years and more than half (53.3%) of the respondents were females. Most (70.0%) of the respondents had a mean family size of 7 persons. Most (87.0%) preferred local rice and factors influencing consumers' preference for local rice include good nutritional value, quality of rice and good taste. Local rice was very much preferred by the respondents. Logistic regression shows that significant relationships exist between price, taste, availability of rice and presence of particles and preferred choice of rice. Therefore, efforts should be made by the government to formulate price control policy on local rice for its affordability by the consumers and encourage farmers to produce more local rice.

**Keywords:** Consumers' preference; Local rice; Households

## 29 1.0 Introduction

30 Rice (*Oryza sativa*) as a cereal is an important staple food in most Africa countries. In most  
31 developing countries in Africa, rice accounts for 715kcal/caput/day, 27 percent of nutritional  
32 supply of energy, 20 percent of nutritional protein and 3 percent of nutritional fat (Kassali *et al.*,  
33 2010). In Nigeria, different ethnic groups consume rice. Rice is easy and convenient to prepare  
34 and it also allows for wide range of dishes which contribute to high consumption and demand by  
35 people. Rice provides a nation's population with the nationally required food security minimum  
36 of 2,400 calories per person per day (Bamidele *et al.*, 2010). Diako *et al.* (2010) noted that an  
37 increase in production of local rice will improve the food security situation and lead to higher  
38 incomes for farmers and hence reduce poverty.

39 Local rice is produced mostly by farm households at a subsistence level mainly for family  
40 consumption while the surplus is reserved for the market. Different types of imported rice  
41 compete with the locally processed rice in both urban and rural areas. Imported rice is different  
42 from local rice based on taste, flavor, ease of cooking as well as the price offered. Despite the  
43 price and quality differential, however, there is still an overall acknowledgment of higher  
44 organoleptic properties of local rice (Lançon *et al.*, 2003). One of the challenges in Nigeria is  
45 that rice importation is still required to meet the national demand despite the massive  
46 diversification to local rice production of rice in Nigeria, rice importation is still required to meet  
47 the national demand.

48 Low supply of local rice could partially be attributed to challenges facing local rice farmers such  
49 as unpredictable weather, shortage of storage facilities and low farm returns. Several efforts and  
50 policies have been put in place by the government towards making the country self-sufficient in  
51 rice production. However, consumer's choice is generally governed by taste, price, convenience,  
52 variety, and quality (Tetteh *et al.*, 2011). Consumer preference studies show that taste is an  
53 important attribute that tends to favour local rice, but it is not the most decisive attribute in many  
54 cases (Demont *et al.*, 2012). Hence, consumer's preference for local rice may vary from one  
55 consumer to the other which determines demand for it.

56 Household food security exists when all members, at all times, have access to enough food for  
57 an active, healthy life. This is possible when individual household member has access to various

58 choices of food items for their consumption. Knowledge of preference for local rice and its  
59 determinants will improve food security of people and enhance consumers' satisfaction in the  
60 nation which in turn will re-direct efforts towards the achievement of the government's policy  
61 objective of becoming self-sufficient in rice production. The potential demand of a good depends  
62 on its attributes and consumers' characteristics (Dagsvik *et al.*, 2002; Potoglou and Kanaoglou,  
63 2007). Local rice is a one the most staple food in Ekiti State. The study therefore, analyses  
64 consumers' preference for local rice among households in Ekiti State. Specifically to; identify  
65 the preferred choice of rices; determine the extent of preference for local rice brand; and identify  
66 factors that influence consumers' preference for local rice in the study area. The research  
67 hypothesis was stated in a null form as below:

68 **H<sub>0</sub>:** There is no significant relationship between the factors that influence consumers' preference  
69 and preferred choice of rice.

## 70 **2.0 Materials and Methods**

71 The study area was carried out in Ekiti State. Ekiti State is located in the Southwest of Nigeria. It  
72 has 16 Local Government Areas (LGAs). The State enjoys tropical climate with two distinct  
73 seasons. These are the rainy season (April–October) and the dry season (November–March).  
74 Temperature ranges between 21° and 28 °C with high humidity.

75 The primary data were obtained through the use of pre-tested structured interview schedule. The  
76 instrument used was designed to achieve the specific objectives of the study. A multi-stage  
77 random sampling procedure was employed for this study. At this first stage, four (4) ADP zones  
78 were randomly selected. In the second stage, three (3) Local Government Areas out of the ADP  
79 zones were randomly selected. Then, two (2) communities were randomly selected from each  
80 Local Government Areas. Finally, ten (10) households were randomly selected from each  
81 community, making a sample size of two hundred and forty (240) households for this study.

82 Descriptive statistics analysis such as frequency counts, percentages and mean were used to  
83 analyse data collected on the respondents' socioeconomic characteristics and the specific  
84 objectives. Objective 2 was measured using 4-point Likert scale as Very much prefer (3), Much  
85 prefer (2), Less prefer (1) and Not prefer (0). A binary logistic model was used to analyse the  
86 hypothesis.

## 87 2.1 Logistic Regression

88 Logistic regression is a statistical model employed in a binary dependent variable

$$89 \log\left[\frac{P_i}{1-P_i}\right] = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \beta_6x_6 + \beta_7x_7 + \beta_8x_8 + \beta_9x_9 + \varepsilon_1$$

90 The logit model allows for a relatively straight forward computation of the relative mean of the  
91 dependent variable or elasticity given the estimated coefficient of the regressors. The binary  
92 response in the study is whether the respondent prefers local rice or does not prefer local rice.

93 If Y is a random variable (dichotomous), it can then be assumed that Y takes the value of 0 or 1,  
94 where 0 denotes not prefer and 1 denotes prefer.

95 Where,

96  $\log$  = logit function

97  $P_i$  = dependent variable

98  $\beta$  = logistic coefficient for the independent variables.

99  $x_1 \dots x_9$  = price, packaging, texture, taste, availability of the product, flavor, colour, presence  
100 particles, stickiness

101  $\varepsilon_1$  = error term

## 102 3.0 Results and Discussion

### 103 3.1 Socioeconomic Characteristics of the Respondents

104 The results from Table 1 revealed the socioeconomic characteristics of the respondents in the  
105 study area. The mean age of the respondents was 38years. This indicates that the respondents in  
106 the study area were in their active age. The study further revealed that 53.3 percent of the  
107 respondents were female while 46.7 percent were male. The mean household size was seven (7)  
108 persons. This depicts that most of respondents had moderate household size. Most of the  
109 respondents (42.5%) earned between ₦61,000 - ₦90,000 as monthly income. The implication is  
110 that the respondents had moderate income.

111 **Table 1: Distribution of Respondents' Socioeconomic Characteristics**

<b>Variables</b>	<b>Frequency</b>	<b>Percentages</b>	<b>Mean</b>	<b>112</b>
<b>Age (years)</b>				
< 30	80	33.3	38	113
30- 40	62	25.8		114
41-50	40	16.7		
> 50	58	24.2		115
<b>Sex</b>				
Male	112	46.7		116
Female	128	53.3		117
<b>Marital Status</b>				
Single	93.6	39.0		118
Married	117.6	49.0		
Divorced	12	5.0		119
Widowed	16.8	7.0		120
<b>Household size</b>				
< 5	50	20.8	7	121
5- 10	168	70.0		
11- 15	22	9.2		122
<b>Educational level</b>				
Non formal education	16.8	7.0		123
Primary education	45.6	19.0		124
Secondary education	88.8	37.0		
Tertiary education	88.8	37.0		125
<b>Occupation</b>				
Farming	48	20.0		126
Public service	54	22.5		127
Trading	64	26.7		
Artisan	30	12.5		128
Private service	44	18.3		
<b>Monthly income (₦)</b>				129
< 30000	22	9.2		130
30000- 60000	84	35.0		
61000- 90000	102	42.5		131
100000 and above	32	13.3		
				132

133 Source: Field survey, 2018

134 **3.2 Preferred Choice of Rice**

135 The findings revealed that most of the respondent (87.0%) preferred local rice to imported rice.

136 This implies that local rice was most specified choice by the respondents. This finding supports

137 Musa *et al.* (2011) who reported that almost all household respondents preferred local to  
138 imported rice.

139

140 **Table 2: Preferred Choice of Rice**

Preferred Choice of Rice	Frequency	Percentage
Local rice	208.8	87.0
Imported rice	31.2	13.0
Total	240	100.0

141 Source: Field survey, 2018

### 142 3.3 Extent of Consumer' Preference for Local Rice Brand

143 The study revealed that 26.7 percent of the respondents very much preferred both igbemo and  
144 ofada rice, 20.8 percent of the respondents much preferred igbemo and ofada rice. Also, it was  
145 revealed that 19.2 percent of the respondents much preferred ofada rice only while 3.3 percent  
146 very much preferred igbemo rice only. This implies that the respondents had high preference for  
147 ofada rice in the study area. This finding corroborates the finding of Sowunmi *et al.* (2014) who  
148 asserted that high preference for ofada among the respondents.

149

150 **Table 3: Extent of Consumers' Preference for Local Rice Brand**

Local rice brand	Very much prefer	Much prefer	Less prefer	Not prefer
Igbemo	7.92(3.3)	0(0)	0(0)	0(0)
Ofada	40.08(16.7)	46.08(19.2)	0(0)	0(0)
Both	64.08(26.7)	49.92(20.8)	7.92(3.3)	24(10.0)

151 Source: Field survey, 2018

152 Percentages are in parenthesis

153

### 154 3.4 Factors that Influence Consumers' Preference for Local Rice

155 As shown from Table 4, it was revealed that 95.0%, 92.5% and 90.0% of the respondents  
156 identified that good nutritional value, quality of rice and good taste as factors influencing  
157 preference for local rice. This means that good nutritional value, quality of rice and good taste

158 determine choice of local rice preferred. This finding is line with Oyinbo (2013) who asserted  
159 that quality of rice increases local rice consumption preference. Also, the study supports Danso-  
160 Abbeam *et al.* (2014) and Opeyemi *et al.* (2015) that good quality and taste of rice influence  
161 consumers' preference for local rice.

162

163 **Table 4: Factors that Influence Consumers' Preference for Local Rice**

Factors	Frequency	Percentage
Quality of rice	222	92.5
Size of grain	138	57.5
Good taste	216	90
Aroma of the rice	140	58.3
Easy to cook	106	44.2
Expands well when cooked	132	55.0
Has good nutritional value	228	95.0
Relative price of rice	140	58.3

164 Source: Field survey, 2018

165 \*Multiple responses

166

### 167 **3.5 Estimates of the Logistic Regression**

168 The results revealed that there is a significant positive relationship between the preferred choice  
169 of rice and taste and availability of the commodity. This implies that the increase in taste and its  
170 availability would increase the probability of consumers' preference for choice of rice. This  
171 finding corroborates the finding of Opeyemi *et al.* (2015) that taste and availability all year round  
172 had positive influence on the preferred choice of rice.

173 There is a negative relationship between preferred choice of rice and price of the commodity and  
174 presence of particles. This implies that decrease in price and presence of particles would elicit an  
175 increase in preferred choice of rice. This finding confirms the finding of Ogundele (2014) who  
176 reported that price and presence of particles had negative influence on the preferred choice of  
177 rice.

178

180 **Table 5: Estimates of the Logistic Regression**

Factors	Coefficient	Standard error	Z	P-value
Price	-0.2380478***	-0.07928345	-3.00	0.000
Packaging of rice	-0.644035	0.932654	-0.69	0.490
Texture	0.2297338	0.7560311	0.30	0.761
Taste	0.8362681***	0.2873135	2.91	0.004
Availability	0.4018687***	0.1388029	2.14	0.037
Flavour	1.003259	0.811328	1.24	0.216
Colour	-0.805685	0.7000986	-1.15	0.025
Presence of particles	-1.17e-07**	4.65e-08	2.21	0.014
Stickiness	0.1541395	0.7686054	0.20	0.841
Constant	0.1011647	1.785151	0.06	0.955

181 Source: Field survey, 2018

182 \*\*, \*\*\* denotes Significant at 0.05 and 0.01 probability level

183

184 **4.0 Conclusion and Recommendation**

185 The study analyzed consumers' preference for local rice among households in Ekiti State,  
 186 Nigeria. Most of respondents (87.0%) preferred local rice to imported rice and this could be due  
 187 to its nutritional value, quality and good taste. It was revealed that ofada rice and igbemo rice are  
 188 very much preferred (26.0%) by the respondents and also, preferred ofada rice to igbemo rice in  
 189 the study area. The results further revealed that price, taste, availability all year round and  
 190 presence of particles as factors that significantly influence the preferred choice of rice.

191 High preference for local rice by the consumers especially, ofada rice justifies the need for the  
 192 government to make more efforts towards encouraging demand for local rice through improved  
 193 technology. This will enhance its quality and good taste as a result of better processing in the  
 194 study area. Farmers should also, be encouraged to produce more local rice for its availability all  
 195 year round to the consumers through the provision of irrigation facilities. Efforts should  
 196 however, be made by the government to formulate price control policy on local rice for its  
 197 affordability by the consumers.

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