Impact of Household Income on Rice Expenditure and the Influence of Socioeconomic Status on Choice of Rice Type in Sokoto North

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ABSTRACT

The research work analysed the impact of household income on rice expenditures and the influence of socio economic status on the choice of rice in Sokoto north local government area of Sokoto state, Nigeria. Primary data were sourced using quota sampling technique to select 120 respondents from the study area with the aid of questionnaires. Statistical Package for Social Sciences (SPSS) was used for data presentation. The use of tables, percentages and frequency counts form parts of the descriptive statistics while theANOVA and Chi-Square are used for data analysis . The ANOVA results showed a significant difference in the household's portion of the income spent on rice. The output of SPSS cross tabulation showed the Pearson Chi-square value to be significant at 1%. The likelihood ratio and the linear by linear association values are respectively shown to be significant at 1%. The study found out that the size of household, household income level and level of education of the respondents hadgreat influence in their choice for foreign rice. It recommended human capital development and domestic production and milling of local rice and value addition be encouraged with a view to discouraging importation of rice, saving foreign exchange and improving consumers' real income among others.

Keywords: Expenditure, Income, Choice, Rice, Sokoto North

INTRODUCTION

In market analysis, it is an established fact that consumers have choice and that this choice is influenced by income and taste. The taste is the utility that one derives from the consumption of a particular commodity. Taste leads us to preference that is if we like or get the satisfaction that we require from consuming that commodity. This satisfaction that we derive from the consumption of a commodity generates demand for it.

According to Daniel (2001), microeconomics is concerned with consumers who face discrete alternatives. The consumer is rational and will make a perfect choice to his favour and will go for nothing other than the best. This he/she will do after weighing the utility he expect to derive from each.

Hal (2014) observed that a consumer has two consumption bundles and would rank them according to their desirability. From the ranking, he will determine which one is better than the other. With regard to the choice between local and foreign rice, consumers go for them based on individual desire. Some choose local rice over foreign rice because of it richness in natural nutrients and taste while others prefer foreign or refined rice for its purity and stone-free nature.

The nature of spending by households on both local and foreign rice and the competing nature of the demand for these rice types motivated this research in order to find out the impact of household's income on rice expenditures and the influence of socioeconomic status of respondents on their choice of these rice types.

Objective of the Study

The objective of the study is to find out the impact of household's income on rice expenditures and influence of socioeconomic status on the choice of rice type in Sokoto North Local Government Area of Sokoto state. The study specifically focused on the influence;

1. of education level on choice of rice type
2. of occupation in the choice of rice
3. of income size on the preference between local and foreign rice.
4. of family size in making choice between local and foreign rice.

REVIEW OF LITERATURE

Description of Rice

Rice is a cereal crop and from the family called poaceae. The botanical name is Oryza and the popular ones are Oryzasativa and Oryzaglaberrima (Kassaliet al, 2010). According to Ephraim et al (2020), Rice is a starchy food and contains nutrients such as vitamins, minerals and secondary metabolites. The mega nutrients contained in rice are Calcium (Ca), Iron (Fe), Magnesium (Mg), Phosphorus (P), Potassium (K), Manganese (Mn) and Selenium (Se). Bagirathy in Ephraim et al,(2020), rice is of two types depending on water requirements. One is the upland rice which requires less water and can thrive well on hillsides and upland fields and the wet land rice which is cultivated in most parts of the world and it needs much waterup to about 1200mm to 1600mm evenly distributed throughout it growing period (Ekelemeet al, 2008). This amount of rainfall is not obtainable in some parts of Nigeria. Because of the non-uniformity of raindistribution in Nigeria and consequent upon the scarcity of rain in some regions, rice is grown through irrigation practices, flooded areas, fadama and valleys.

Rice survives in all types of soil and is planted from May to June in the savannah zone and April to May in the rain forest zone (Ekeleme et al, 2008). The technological breakthrough in in research brought about new rice for Africa (NERICA), there are a number of improved varieties of upland rice with different maturity period available to farmers. Examples are faro 1, 40, 45, 54, 55 (NERICA 1) which mature between 90-100 days and 56 (NERICA 2), faro 48, 49 53 etc., maturing between 100 to 120 days while faro 25 takes much time to mature up 120 days and NERICA L41 and NERICA L42 are low land rice with long maturity period of 110 to 120 days (www.warda.org).

However, this research focused on two subdivisions of rice. One is the local rice which carries all the impurities from the field after harvest and passes through crude processes to be made available for consumption but highly nutritious. The parboiling process is poor, contains odour due to slight fermentation, stone particles and mineral and vegetable contamination which gives it low quality (Bamideleet alin Sule et al, 2022). According to Sule et al, (2022), the second subdivision of rice is the imported rice, which is well parboiled and refined without odour, stone particles or any unwanted mineral deposits. It is processedoutside the shores of Nigeria and imported into the country. Some of the varieties of imported rice are;Vikor, IRS Thai parboiled rice, Massi, Mama Africa, Peacock, Captain, PJS, Elephant, Crystal rice, Caprice, Stallion rice, tomato to mention but a few.

Profile of Rice Production in Nigeria and Role of Government

Rice is cultivated all over the world including Nigeria. It is cultivated in virtually all the mangrove and swampy forests of the coast and the dry zones of the Sahel located in the North. The average hectares of land used production in the production of rice in country have increased from 150,000 hectares in the 1960s

to 1.8 million hectares in 2005 (UNEP, 2005). The rain fed lowland rice is predominant and it is cultivated by nearly 50% of the rice growing areas in Nigeria; 30% cultivate the rain fed upland rice; 16% cultivate the high yielding irrigated systems and the remaining 4% by other production systems (UNEP, 2005). In year 2000, out of about 25 million hectares of land cultivated for various food crops, 6.37% was used for rice farming. The average national yield during this period was 1.47 tons per hectare (Akpokodjeet al 2001). Significant improvement in rice production in Nigeria was recorded in 1980 when output increased to 1 million tons while area cultivated and yield rose to 550 thousand hectares and 1.98 tons per hectarerespectively. In 1990, while output for rice increased, the yield declined, suggesting extensive cultivation of the commodity (Akpokodje et al, 2001).

Rice production in Nigeria has increased by 93% per annum in the 1970s due to expansion in rice farmland up to 7.9% per annum but, to a lesser extent through yield increase of 1.4% per anum. However, the increased production was not sufficient to meet up with the increase demand and so importation was the option to cover the shortfall. Importation stood at 300,000 metric tons in 1995 and about 1,000,000 metric tons in 2001. These imports are procured on the world market and represent a substantial cash outlay for the Nigerian economy (Akande 2000).

With the expansion in rice production and the increase in growing areas, the yield was still very low which may be due to disease, poor seedlings and other factors. The government has promoted the adoption of hybrid rice that are disease resistant, high yielding, early maturing and high protein content. Nigeria being the highest rice producer in West Africa aims to boost rice production by making sure 3 million hectares is under cultivation by 2007. Despite all these measures the country still relies on massive importation of rice. It was anticipated that Nigeria will continue to import rice for some time due to the fact that it imports one-third of its total rice supply (Omotola and Ikechukwu, 2006). The potential land area for the production of rice according to recent report, was estimated at 4.6 t0 4.9 million hectares. Only 1.7 million hectares of the estimated land is presently used for rice production and 25% of the 1.7 million hectares is used for rain fed upland rice (Oikeh et al, 2012).

Successive governments in Nigeria have over the years introduced various programs and projects with a view to boosting rice production in Nigeria. This was intended to addressing the increasing gaps between demand and supply so as to make the country more self-sufficient in rice. Some of these policy programs include the Federal Rice Research Station (FRRS) in 1970, National Accelerated Food Production Project (NAFPP) in 1972, and National Cereal Research Institute (NCRI) in 1974. Also established were the National Seed Service (NSS) with the assistance of the Food and Agricultural Organisation (FAO) in 1975 and Operation Feed the Nation (OFN) in 1976. Other important government programmes like River Basin Development Authority (RDBA), Agricultural Development Project (ADP), the National Grains Production Programmes (NGPP), the Structural Adjustment Programmes (SAP) and the presidential initiative on Increase Rice Production, Processing and Export (Bamidele et al, 2010). Despite all these policies, programs and projects rice consumption and its demand in the country have out grown its domestic production leading to persistent increase in the importation of the commodity. The persistent rise in demand for rice in Nigeria has been attributed to factors such as growth in income, urbanisation and the associated expansion of fast food restaurants (Kassali et al, 2010).

Concept of Choice

The decision to choose among alternatives or the preference of one or more items over others is choice. It can be explained by the rational theory. The theory was developed as part of the behavioural revolution that took place in America's political science in the 1950s and 1960s. According to Ogu (2013), one of the assumptions of this theory is rationality. He has viewed rationality as the most predominant among the assumptions of the theory which describe the behaviour of individual as rational. This means that every individual will take a decision that is the best form him. All human are self-centered and will put themselves first in undertaking any course of action.

Michiru and Poder (2019) viewed choice from the perspective of the economists and the psychologists. They have explained choice not to be associated with the decision to choose between commodities but also the decision to choose between available administrative options. To them choosing between two or more commodities is subject to the cost of these items. They said if the price of one good continues to rise, the consumer may cut down his consumption of that commodity. Truly choice does not only come from the dilemma of choosing between physical alternatives but also for delivering administrative services.

Ogu (2013) asserted that the rational model of economic idea showed that consumers want to maximize innate, stable preference that depends on the quantity and quality of the goods they consume. To him consumer's sovereignty is an important property and that preference is predetermined in any choice situation and does not depend on what alternative is available, meaning that desirability precedes availability. The standard model incorporated the vague of biological flavour which says that preference is determined through a genetically coded template. This in turn is dependent on how experience of the consumer is connected to his preference for a commodity. The consumer is used to tastes of commodities he/consumes and would select one that appeals to him/her to buy. Although, even if his choice of goods are not available he/she must ask first before taking an alternative and choosing another option is as a result of the desire for preference.

According to Fernando and Yvonn 2007, a consumer and his sovereignty are sacrosanct in societal decision taking with regard to what to produce and what not to produce. This is true and could be observed in the consumer's behaviour as he exercises his sovereignty through choice making by choosing to buy one commodity and not buying others. Due to scarcity of resources, the producers are also faced with problem of choice. They are come into dilemma of choosing among several output which to produce. They are constrained to forgo some and to choose the one in their production possibility boundary that can efficiently be produced with maximum utilization of the available resources. Thus consumer's sovereignty and choiceis crucial in production.

Ogu (2013) explains the rational choice theory as regarding consumer as being individualistic because of his rational decisions. The consumer does nothing that does not favour him, optimal in nature because one he takes any decision and he considers best, any other decision becomes an alternative. The consumer takes action based on his preference and opportunities or constraints which he faces. According to him, the consumer is self-regarding with interest and rational. He makes choices putting his welfare first and make sure he is first in considering any accruing benefit.

Review of Relevant Studies

Uchendu et al (2022) studied the determinants of consumer preference for rice in Umuahia, Abia state, Nigeria. They used multi-stage sampling technique to select a sample of seventy (70) respondents from the study area using questionnaires. They analysed their data using descriptive statistics such as mean, frequencies and percentages. They adopted the logit model in estimating their parameters. Their findings show that income, quality of rice, household size, years of educational attainment and availability of rice are the factors that determine the consumer preference for rice in the study area. They recommended thatefforts should be geared towards its availability and value addition to increase rice production.

Ajayi & Ajiboye (2020) carried out a survey on analysis of consumers' preference for local rice among households in Ekiti state, Nigeria. A total of two hundred and forty respondents were sampled through multi-stage random sampling technique. The used frequency counts, percentages and mean to anlyse the collected data. Logistic regression was used to estimate the parameters of the model. Their findings show thatmajority of respondent preferred local rice to imported rice. They conclude that nutritional value, quality of rice and good taste are the factors influencing preference for local rice. They recommended improved processing technology to eliminate presence of particles from local rice to meet with the quality of imported rice.

Adeyonu et al (2019) did a research on assessment of consumers' preference for local rice in South West, Nigeria. They selected a total of one hundred and fifty (150) respondents for the study and applied Tobit regression and likert type of measurement in parameter estimation. They found out that consumers were very positive about their perception of local rice as a result of its good taste, superiority in quality and healthiness over polished rice. Their study also revealed that household size, quality, ease of cooking and market price have significant influence on consumer's decision. They concluded that consumer's preference for local rice is influenced by the household size, grain quality, ease of preparation and grain price.

Hamid et al, (2021) in their research, consumer preference analysis for local and imported rice consumption in Adamawa state employed a multistage sampling technique to sample 128 households from the study area. They used frequency counts, percentage and means to present the data while chi-square was used to analyse it. Their results show that majority of respondents preferred local rice to imported rice because it price, taste, and swelling capacity while others in majority also preferred imported rice for its cleanliness, pleasant odour and grain shape. They concluded that imported rice was preferred by most respondents and recommended that local rice should be improved in terms of its cleanliness, odour and grain shape.

Selorm Ayeduvor (2018) conducted a survey titled assessing quality attributes that drive preference and consumption of local rice in Ghana. The study covered Accra, Kumasi and Tamale with a total sample of 165 sellers of local rice. He presented his work in tables using frequency counts and percentages but, did not use any known analytical tool for analysis. His findings revealed that local rice price has being on the decline compared to that of imported rice due to its low quality which results to low demand for it. He recommended market campaigns and public sensitization to encourage consumption of local rice and policy options to build demand for quality local rice in Ghana.

Uchenna and Lloyd, (2017) carried out a research on the willingness to pay and preference for imported rice brands in Nigeria: do price-quality difference explains consumers inertia? They sampled 460 households from major satellite towns in the Federal Capital Territory (FCT) Abuja. They presented their data in tables using frequencies and percentages. Binary logit model was used in analyzing data. The research findings show that household head age, income, and general perception are the variables that explain household preference for rice type and imported rice brand. They said consumers' position against preference and willingness to pay for imported rice lingers due to price and quality differentials between local and imported rice brands. They recommended that since rice consumers consider price and quality differentials between local and imported rice, there is need for import restriction and marketing strategy and policy that willabsorb wide price difference between local and imported rice while also putting in place measures toimprove on the quality of local rice.

Theoretical Framework and Demand Preference

The idea of this research is hinged on David Richardo's theory of value. In his theory of value unlike Smith that concentrated on the exchange value, Richardo also gave attention to the use value. He said before a consumer can make a choice, apart from his income if he does not have utility for that commodity he will not buy it. Although, he however said that utility is not a major determinant of demand but the price, income and others.

Most authors who have written on the determinants of demand included taste which is synonymous to utility. It is when a consumer has utility for a commodity that he will develop interest and interest in turn leads to preference.

Based on this theory, the quantity and brand of a commodity that a consumer will buy depends on his taste, the price of the commodity and the income of the consumer. The choice of commodities by consumers is never constant. It changes with time due to a number of factors. It either increases or decreases based on the

nature of changes in the factors affecting it. The choice for a commodity can change as a result of change in taste, cost, means, and availability of suitable alternatives. A change in choice for a product signifies a change in one or more of the factors (other than the price of the product) which determine its demand. These other factors include; disposable real income, pattern of distribution of income, price of other goods, taste and fashion, advertising, availability of credit and population (Stanlake and Grant in Sule et al, 2022).

RESEARCH METHODOLOGY

Area of Study

The study area was Sokoto North Local Government area of Sokoto state. It its position on the globe is between latitude 13^0 to 3^0 N and longitude 5^0 to 14^0 E occupying a land mass of 51 square kilometres witha population of 233,012 (2006 census figures). It is located in the Sudan savannah zone having dry land and harmattan dominated climate with wind usually blowing Sahara dust over the land. It has an annual mean temperature of 28.3^0 C and has highest temperature record of 47.2^0 C as the peak recorded in Nigeria. It has rainfall between 500mm and 1300mm with sandy soil at the top, clayey below and alluvial at the flood plain (Sokoto North Local Government 2011).

The major agricultural produce of the area are rice, beans, maize, millet, and groundnut. Onion, garlic, carrot and vegetables such as spinach, lettuce and pepper are also cultivated. Because of low rainfall, majority of the farm produce are grown in the flood plane during the dry season.

The history of sokoto started from 1908 when it was established by Sultan Muhammadu Bello as the ancient city of Sakwato and wasmade the administrative capital of the Sokoto caliphate. Sokoto became the capital of the defunct North Western state in In 1973 and served as the headquarters of the then Sokoto native authority the same time.Sokoto state was among the states created by Murtala administration in 1975with Sokoto town as the capital. The state was depleted by the creation of Kebbi and Zamfara states out of it (Sokoto North Local Government, 2011).

Sokoto local government was carved by the Murtala's administration in 1976, as one of the foremost local governments in the federation. Kware and Wamako were the two major towns in sokoto which were later created out of the Sokoto local government. Sokoto local government split by the creation of sokoto south from it by General Sani abaacha in 1996 out of what remained as Sokoto local government by the Abacha's government, leaving the remaining part as Sokoto North Local Government. The local government is situated at the middle of Sokoto state mapping and have borders with Kware local government (North east), Sokoto south (South) and Wamako in the west (Sokoto North Local Government, 2011).

The major tribes of the area are Hausa and Fulani. There are other tribes that reside in the local government including foreign nationals resident in the eleven wards of the area. Islam is the major religion, with Hausa language as widely spoken. Sokoto people are mostly traders, Farmers, Labour services providers and craftsmen. The people are peaceful, hospitable, respectableand have regards for elders, they are observers of some of the predominant religions and social-cultural ceremonies e.g. marriage/naming ceremonies and annual Sallah festivities (Sokoto North Local Government, 2011).

Prominent features found in the local government include among others, the Sultan palace, Hubbaren Shehu(Shehu's thumb), Usmanu Danfodiyo and Sultan Bello Mosques. The people of Sokoto north local government take pride in their contribution to the peaceful coexistence, historical and political development of Nigeria (Sokoto North Local Government, 2011).

Sampling

A total of 120 respondents were selected from the survey conducted between October and December 2012

with the use of questionnaires. The respondents were grouped into three categories; the low income, middle income and the high income group. The study area was divided into twelve sub areas. These areas are Kofa Taramniya, Kofa Rini, Kanwuri area, Kofa Marke, Gida Dawa area, Kofa Kware, Gida Haki area, Makera Asada area, Kofa Dundaye, Kofa Kade, Runji Sambo area and Gidan Dare area. 10 respondents were allocated to each area using quota sampling method.

Model Specification andAnalytical Techniques

The use of simple descriptive statistics such as tables, percentages and frequency counts were used to analyse the data. The OLS regression model and Chi-square were used to analyse the data.

The Models

1. $Y = f(X_1, X_2, X_3, X_4, X_5, U_t)$——————————————— (1)

Where Y= the demand for rice or the quantity of rice bought per month.

X1 = the average monthly price of rice (Naira per kg).

X2 = the monthly income of respondents (Naira)

X3 = the size of household (no. of people)

X4 = Monthly price of Beans (Naira per kg)

X5 = Monthly price of Spaghetti (Naira per kg)

Ut = the error term.

The log-linear form of the model is given as;

$$lnY = bo + b1lnX1 + b2lnX_2 + b3lnX_3 + b4lnX_4 + b5lnX_5$$ ——————————— (2)

The model above was adopted from Sule et al (2022) and it make possible to run Analysis Of Variance (ANOVA) for the data. The other technique is the Pearson Chi-square or Cross-tabulation also known as goodness of fit test. SPSS was used to analyse the data.

2. $\chi^2 = \sum_i^n \left[\frac{O_i - E_i}{E_i} \right]^2$

Equation 2 is the Pearson Chi-Square

χ^2 = Chi-Squre

O_i = the observed frequency

E_i = the expected frequency

Priori Expectation

It is a common belief that local rice is viewed as inferior good because of its impurity. For this reason it is generally regarded as product for the low class members of the society. The people that are expected to fall under this group are the less or uneducated people, people with low incomes and large families. So, those highly educated, the rich and the small families are expected to demand for foreign rice. Although some of the highly educated may prefer local rice due to its nutritional contents.

DATA PRESENTATION AND ANALYSIS OF RESULTS

Table 1: Effect of Household size and Income level on average monthly Food Expenditure

Categorization of Respondents	Frequency		Percentage	Monthly Average Food Expenditure
Household Size Ranges	1 – 5	52	43.33	₦7,188.56
	6 – 10	47	39.17	₦14,183.94
	11 and above	21	17.50	₦24,125.23
Income Groups	Low Income	51	42.50	₦11,627.94
	Middle Income	38	31.67	₦14,468.38
	High Income	31	25.83	₦14,975.74

Source: Survey Data, December, 2012.

From Table 1, one could see that the monthly average food expenditure of household size between 1 and 5 (52 or over 43%) is ₦7, 188.56. This is compared with household's size of 6-10 (47 or over 39%) whospend ₦14, 183.94 monthly. For the category of households between 11 and above (21 or about 18%), the monthly average food expenditure was ₦24, 125.23. The income effect on the monthly average food expenditure indicates that as income of the respondents increases, they spend more on food.

The ANOVA Approach

This part is concerned with the Analysis of Variance approach to show the significance of the effect of the income groups on their spending on rice. The different income groups and their respective mean expenditures on rice are discussed in this subsection. The detail is presented in Table 2.

Table 2: Summary of ANOVA Results – Average Rice Expenditure According to Respondents' Income Groups

Variables	Frequencies	Mean Values of Rice Expenditures
Low Income	51	₦5281.438486
Middle Income	38	₦7260.791942
High Income	31	₦7443.896084

F-statistic = 6.607***

*:Significant at 10%, **:Significant at 5%, ***:Significant at 1%

Source: Data Analysis, December, 2012.

Table 2 shows the summary of Analysis of Variance (ANOVA) results. The first column bears the income groups, the second column carries the frequencies of the income groups and the last column contain the average or mean rice expenditure of each income group. The mean values of the expenditure on rice by the income groups as presented by the ANOVA conform to that presented by descriptive statistics. The aim of using this approach is to investigate if the income groups do not differ significantly in their expenditures on rice.

In table 1, the F-statistic is 6.607 and significant at 1%. The F-statistic been statistically significant is an indication that the ANOVA results are accepted. It also indicates that there is significant difference in the amounts the income groups spend on rice per month. Looking at the table, one could see clearly that as we move down the income groups from the top, the expenditure increases with income of the groups. Looking at table 1 we can see that as the mean income of the group increases, their expenditure on rice also increases. In other words, as one respondent moves from one income group to the other, his expenditure on rice increases. Thus, we conclude that there is a positive relationship between the income groups and rice expenditure. This means that positive relationship also exists between income groups and the demand for rice.

From Table 2 also, one could see that the gap between the mean expenditure of the low income group and the middle income group is higher than that between the middle income group and the high income group and considering the mean income of the groups in table 1, we can deduct that the low and the middle income groups spend more on rice than the high income group.

The Chi-Square Approach to Choice of Rice According to Education Level

This section discusses the results of the Chi-square test. It explains the influence of the respondent's level of education on their demand for rice. The distribution of the respondents according to their preference for local and foreign rice and the significance of such distribution are detailed in Table 3.

Table 3: Summary of Chi-Square Results – Choice of Rice According to Respondent's Level of Education

Level of Education	Rice type 1	2	Total
1	9	0	9
2	17	20	37
3	19	55	74
Grand Total	45	75	120

Pearson Chi-Square = 20.541***

Likelihood Ratio = 23.419***

Linear-by-Linear Association = 18.294***

Source: Data Analysis, December, 2012.

Table 3 is an extract of the Chi-square results from SPSS output. The level of education of the respondents is presented on the first column with the numbers 1, 2 and 3 representing Primary, Secondary and Tertiary education level respectively. The second column represents the rice type preferred by the respondents. 1 is for local rice and 2 for foreign rice. The contents of the table are the results of the cross tabulation between the rice type and the level of education of the respondents. This serves as a backup to the descriptive reports in Table 3. In summary, 55 respondents who attended tertiary institution, 20 of them having secondary education and 0 of the primary education category respectively preferred foreign rice. Only 19 respondents belonging to the tertiary education level, 17 respondents in the secondary education level and 9 of them who attended primary education respectively preferred local rice.

 In other words, the 4th row representing tertiary education level has the highest demand for both foreign and local rice and the 3rd row marked as the secondary education level has fewer demand for both rice types. The second row is the primary education level having the lowest demand for local and foreign rice. Chi-square measures the discrepancies or the difference in the preferences of the respondent's choices of rice type. From the table we could see the value of Pearson Chi-square is 20.541 and significant at 1% level. The values of the Likelihood Ratio and Linear-by-Linear Association are 23.419 and 18.294 respectively and are both significant at 1% level. The explanation is that the difference in the respondent's preference for the rice types is not by chance since the asymptotic significance values are less than 0.10.

Table 4: Distribution of the Respondents' Education and Choice of Rice Type

S/No.	Educational level	Local rice	Sub %	Foreign rice	Sub %	Grand %
1	Primary	9	7.5	0	0	7.5
2	Secondary	17	14.17	20	16.67	30.84
3	Tertiary	19	15.83	55	45.83	61.66

Source: Survey Data, December, 2012.

We can see clearly in Table 4 that 55 (about 46%) who attended tertiary education preferred foreign rice to local rice even though 19 (about 16%) of them preferred local rice. 20 (about 17%) and 17 (slightly over 14%) secondary school leavers respectively, preferred foreign and local rice. All the primary school leavers among the respondents 9 or about 8% of them preferred local rice and none of them has preference for foreign rice. This implies that among the other things that choice for foreign rice is higher among highly educated people than the less educated ones.

Table 5: Distribution of the Respondents' Occupation and Choice of Rice Type

S/No.	Occupation	Local rice	Sub %	Foreign rice	Sub %	Grand %
1	1	20	16.67	34	28.33	45.00
2	2	26	21.67	29	24.17	45.84
3	3	6	5	5	4.17	9.17

Source: Survey Data, December, 2012.

In the column named occupation in table 5, 1, 2 and 3 represent civil servant, trader and others respectively. It can be observed that majority of the civil servants, 34 (bout 29%) preferred foreign rice despite 20 (closely 7%) of them indicated interest for local rice. 29 (slightly above 24%) and 26 (about 22%) preferred foreign and local rice respectively while 6 (exactly 5%) and 5 (approximately 4%) respectively preferred local and foreign rice.

Table 6: Distribution of the Respondents' Income Size and Choice of Rice Type

S/No.	Income size	Local rice	Sub %	Foreign rice	Sub %	Grand %
1	1	39	32.5	12	10.00	42.50
2	2	12	10.00	26	21.67	31.67
3	3	4	3..33	27	22.50	25.83

Source: Survey Data, December, 2012.

Column 2 of Table 6 is income levels of respondents. The income levels are classified as Low, Middle and High and are represented by 1, 2 and 3 respectively. The table reveals the different choice of rice type by

different income groups. 39 (about 33%) and 12 (exactly 10%) of the low income group preferred local and foreign rice respectively, 12 (exactly 10%) and 26 (about 22%) of the middle income class indicated interest for local and foreign rice accordingly. 4 (about 4%) of the high income preferred local brand to foreign type while 27 (about 23%) chose foreign rice.

Table 7: Distribution of the Respondents' According to Household Size and Choice of Rice Type

S/No.	Household size	Local rice	Sub %	Foreign rice	Sub %	Grand %
1	1	28	23.33	24	20.00	43.33
2	2	32	26.67	15	12.50	39.17
3	3	15	12.50	6	5.00	17.50

Source: Survey Data, December, 2012.

Household size is in column 2 of Table 7 and is classified into 1-5, 6-10 and 11 and above but represented by 1, 2 and 3 respectively. The information in Table 7 shows that majority (about 24%) of families of size 1-5 prefer local rice to foreign rice with only 24 (exactly 20%) preferring foreign rice. 32 (about 27%) of family size 6-10 preferred local rice while 15 (approximately 13%) indicated choice for foreign rice. The last row is for family size of 11 and above where 15 (about 13%) indicated preference for local rice and 6 (exactly 5%) preferred foreign rice.

CONCLUSION

The research was restricted to socioeconomic variables as factors that influence the choice of rice rather than product attributes as seen in the work of others. It also combined the impact of income on rice expenditure by the income groups. The study showed household income to have a positive relationship with household expenditure on rice. It revealed that as the income of household increases so do the spending on rice. The level of education attained by the respondents has greater influence on their choice between local and foreign rice.

This was evident from the results of Chi-Square and the data presentation in the table.

Other factors that influence choice of rice type as shown by the study are household size, income and occupation of respondents. The influence of household income and household size on the choice of local and foreign rice is in agreement with the work of Uchendu et al, (2022) and Adeyonu et al, (2019).

The research indicated a general preference for foreign rice over local rice except for large families that choose local rice instead of foreign rice. This we may attribute to the lower price of local rice. The other socio-economic faction influenced choice in favour of foreign or imported rice.

RECOMMENDATION

The study recommends the government to put in place policies that will enhance human capital development. Sincere and wilful work in human capital development will empower the labour force and will induce private sector investment. The local rice should be improved in quality through value addition. This could be done by local milling arrangement so as to meet up with the quality of foreign rice. The product should not be too polished like the imported rice to differentiate it from other rice products in the market and also to retain and maintain some substantial part of its nutritional contents.

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