SOCIO-ECONOMIC FACTORS INFLUENCING FOREIGN RICE CONSUMPTION IN IKWUANO AND UMUAHIA NORTH LOCAL GOVERNMENT AREAS OF ABIA STATE.

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ABSTRACT

The study examined the socio-economic factors influencing foreign rice consumption in Ikwuano and Umuahia North local government Areas of Abia state. A total of 93 rice consumers were selected across the two local government areas using the simple random technique. Data, which comprised information on the socio-economic characteristic and other quantitative variables of interest, were collected using a well-structured questionnaire administered to the consumers. The socio-economic characteristics were analyzed using descriptive statistic such as percentages and frequencies. The ordinary least square (OLS) model of multiple regression technique was used to analyze the consumption functions of rice consumers. From the results obtained, it was revealed that the price of commodity (X_1), price of substitute (X_2), Household size (X_4) frequency of consumption (X_5), and educational status(X_6) were significant and positively related to foreign rice consumption in the study area. The economic implication is that foreign rice has become an essential commodity whose demand is not easily decreased by the decrease or rise in its price or price of its substitute, household size and its frequency of consumption in study area. The government should therefore regulate importation of the foreign rice commodity and on the other hand increase investment on agriculture so as to boost and accelerate indigenous production of local rice which can match the imported ones in quality and standard. Government should create enabling environment to attract foreign rice producing companies in Thailand, China, e.t.c. to enter into partnership with Federal, State, Local governments as well as organized private sector for production of same high quality rice in Nigeria.

KEYWORDS: Socio-Economics, Foreign Rice, Consumption.

INTRODUCTION:

The food sub-sector of Nigerian agriculture parades a large array of staple crops. These commodities are of considerable importance for food security, expenditures and incomes of households. Among all the staples, rice has risen to a position of pre-eminence in Nigeria (World Bank, 1991). Also rice is the most important of the World cereals and forms the basis of the diets of millions of people in South Asia, America and Africa. (Anyanwu et al 1998). Again, rice has historically been the single, most important commodity in Asia, for at least three important reasons. First, rice supplies a large share of caloric intake in many countries especially for the poor. Secondly, rice still accounts for an important share of total economic activity in the very poor countries. Third, rice is a political commodity (Dawe, 1998). Rice, once reserved for consumption on special occasions, has grown in importance as a component of Nigerian diets. The average Nigerian now consumes 21kg of rice per year, representing 9% of total caloric intake and 23% of total cereal consumption. The remainder represents a shift in diet towards rice at the expense of the coarse grains (Millet, Sorghum and Wheat). An estimated 2.1 million tons of rice are consumed annually (WARDA 2004).

According to Imolehin (1991), Nigeria was almost 99% self-sufficient in the rice consumed by its citizens in the 1960s. From 1970-1980, self-sufficiency declined to 38% leading to demand outstripping supply. To supplement the 62% deficit, the Federal Government of Nigeria resorted to massive importation of rice. More

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than 540,000 tonnes of rice were imported in 1983 alone. Per capita income rice consumption rose from 3.5kg in 1970 to more than 14kg in the 1990s. This phenomenon was largely the result of increased per capita income, rapid population growth and changes in the tastes and diet of Nigerians.

Nigeria's rice production in May 2004 was forecasted at 2.3millions metric tonnes (MMT), up from 2.2 (MMT) in May 2003/2004. The projected increase was based on a combination of improved input supply and favourable weather outlook. Government promoted the adoption of the new hybrid rice varieties to help boost rice production. Despite the initiative, however, post forecast Nigeria's rice imports in May 2004 rose up to 1.7 (MMT), from the revised May 2003 estimate of 1.6 (MMT). The projected increase was due to limited supply of locally produced rice and other alternatives such as yams and beans (USDA, 2004). According to WARDA (2003), Nigeria is the World's second largest rice importer spending annually over US $300million on imports alone to satisfy the voracious consumption of this commodity among urban and rural poor households, observing that same rapidly growing trend has been noticed in many other African cities.

Poor quality and insufficient supply of local rice have been credited as two major problems faced by rice consumers (WARDA, 2003). Nevertheless, to boost domestic supply of high quality rice, USDA (2004) reported that the Nigerian Government has given subsidy on basic farm inputs especially improved rice varieties. Now considering Nigeria's agricultural potentials, the increasing trend of foreign rice importation as well as her declining self-sufficiency in rice production, it has become expedient to examine issues that influence consumption of foreign rice in Nigeria. This paper therefore seeks to investigate the socio-economic factors influencing foreign rice consumption in Ikwuano and Umuahia North Local Governments Areas of Abia State.

METHODOLOGY
A field survey was conducted in Ikwuano and Umuahia North Local Governments Areas (LGAs) of Abia State in 2005 to investigate socio-economic factors influencing the consumption pattern of foreign rice in the study area. The two local Government Areas were purposively selected based on cosmopolitan structure, proximity and low level of rice production in the area. In each LGA, ten communities were selected by simple random sampling technique from the list of all communities in the area. Then in each community, six households were similarly selected by same random sampling technique. Thus 60 respondents were obtained from each LGA and a sample size of 120 respondents for the entire study area. Using structured questionnaires, relevant data on household rice consumption were collected from the respondents. Data were analyzed with both descriptive and the consumption function model of multiple regression statistics.

Consumption Function Model
The multiple regression model used in this work was specified implicitly as;
$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9) + E_i$…………………..(1)
Where;
Y = Quantity consumed of foreign Rice (kg).
X_1 = Price of the commodity.
X_2 = Price of the substitute (i.e. local rice).
X_3 = Monthly Income.
X_4 = Household size.
X_5 = Frequency of consumption.
X_6 = Level of education of household heads.
X_7 = Sex of consumer household heads.
X_8 = Marital status of the household heads.

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Factors influencing foreign rice Consumption

X_9 = Total expenditure on other food items.
E_i = Stochastic distribution or error term.

Four functional forms of multiple regression were employed in order select the one that has provided the best fit. The functional forms tried were; linear, double-log (Cobb-Douglass), semi-log and exponential. The choice of the best functional form was based on the magnitude of the R^2 value, the significance, size and the sign of the regression coefficients as they conform to a-priori expectation. The functional forms were specified implicitly as follows;

1. Linear Function:
$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + ei \ldots\ldots\ldots (2)$$

2. Double-Log Function:
$$Ln(Y) = b_0 + b_1LnX_1 + b_2LnX_2 + b_3LnX_3 + b_4LnX_4 + b_5LnX_5 + b_6LnX_6 +$$
$$b_7LnX_7 + b_8LnX_8 + b_9LnX_9 + ei \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

3. Semi Log Function:
$$Y = b_0 + b_1LnX_1 + b_2LnX_2 + b_3LnX_3 + b_4LnX_4 + b_5LnX_5 + b_6LnX_6 + b_7LnX_7 +$$
$$b_8LnX_8 + b_9LnX_9 + ei \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

4. Exponential Function
$$Ln(Y) = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + ei \ldots (5)$$

RESULTS AND DISCUSSION
Socio-Economic Characteristics of the Respondents

Majority of the respondents were household decision makers especially in the area of food purchase and consumption, this is without respect to age and sex. More so, there were more female respondents than male generally, and this implies that women are mostly the household decision-makers with regards to household food consumption in the study area. However, men are also involved in the kitchen affair either because, the man is a bachelor, divorced, a widower or the wife is incapacitated by illness.

The respondents cut across all socio-economic boundaries. This includes urban and rural dwellers of different occupational educational and socio-economic background

From results in Table 1, the largest proportion of respondents (37.6%) is between the ages of 20-39 years, followed by those between 40-59 years (32.3%). This implies that greater percentage of the respondents comprises young and middle aged people. Thus the marginal propensity to consume (MPC) rice is higher with the youths and the middle aged than the ageing household members.

The result also revealed that majority (47.3%) of the respondents have 0-5 members in their households, 27% have percent have 6-10 members, while 25% of the respondents have a large household ranging from 11 to 15 members. The implication is that the household size of the respondents in the area is high as such, the demand for rice in the household will however, go high except for low income earners. Also, due to synergies from larger household size, the demand for rice will be high, since they can pull resources together (Quartey, 2005). In the study area, it was also found that the average household size was 7 which suggest a growing trend in the size of households. This also has direct implication for rice and its quantity consumed per day (QCD) considering the fact that there are more months to feed.

Table 1: Distribution of Respondents according to Age, Household size, Marital and Educational Statuses, Sex, and Frequency of Rice Consumption.

Variables	Frequency	Percentages
Age(years)		
<40	35	37.6
40-59	30	32.3
60 and above	28	30.1
Total	**93**	**100**
Household size		
?5	44	47.3
6-10	25	26.9
11-15	23	24.7
Above 15	1	1.1
Total	**93**	**100**
Marital Status		
Single	15	16
Married	40	43
Divorced/Widowed	38	41
Total	**93**	**100**
Sex		
Male	43	46.3
Female	50	53.7
Total	**93**	**100**
Educational Status		
No Formal Education	0	0
Primary School Education	18	19.4
Secondary School Education	19	20.4
Post Secondary Education	56	60.2
Total	**93**	**100**
Frequency of Consumption		
1-5	75	80.7
60-10	8	8.6
11-15	6	6.5
16-20	4	4.3
Total	**93**	**100**

Source: Household survey data 2005.

It was also shown from results in Table 1, that the largest proportion (43%) of the respondents was married. This was closely followed by widows/divorced who constituted 41% of the respondents while 15 percent of the household heads were singles. Cumulatively 84% of the household heads had ever married. Thus high propensity for rice consumption could be expected in the study area. The survey result further revealed that about 54% of the respondents were females whereas the remaining 46% were males. This indicates that there

are more female household heads than male-headed households in the study area.

More so, it was observed that all the respondents were educated. About 60% of the respondents attained post secondary education while 20.4% and 19.4% represented those that had secondary and primary education respectively. In this study, educational status which informs the type of job and standard of living one has, was taken as a proxy to occupation of the household heads. The survey reveals that majority (80.7%) of the respondents consumed rice at least 1-5 times each week while 8.6% consumed the commodity below 6-10 times each week. Cumulatively, 89% of the respondents consume rice between 1-15 times per week. This implies that, rice is consumed appreciably in the study area.

Table 2: Ordinary Least Square (OLS) Multiple Regression Analysis of Foreign Rice Consumption

Variables	Linear	Double-Log	Exponential	Semi-Log
Constant	-8.013[xxx]	-0.321	1.865[xxx]	-87.450[xxx]
	(-4.671)	(-0.926)	(31.386)	(-3.134)
Price of Foreign rice	0.004062[xxx]	0.310[xxx]	0.00005322[xxx]	7.329[xx]
	(8.168)	(6.785)	(3.062)	(1.988)
Price of sub-stitute (local Rice)	0.00005699[xxx]	0.03908[xx]	-0.000003652	3.698[xx]
	(3.168)	(2.013)	(-0.586)	(2.363)
Monthly Income	-0.207	-0.06706[x]	-0.01345	-3.452
	(-0.345)	(-1.791)	(-0.646)	(-1.144)
Household Size	0.533[xxx]	0.07099[x]	0.001502	4.964[x]
	(2.601)	(1.983)	(0.211)	(1.721)
Freq. of Consum-ption	0.518[xxx]	0.106[xxx]	0.008056	6.864[xxx]
	(3.244)	(3.856)	(-1.456)	(3.109)
Level of Education of HHH	8.274[xxx]	0.733[xxx]	0.564[xxx]	17.443[xxx]
	(5.070)	(10.743)	(9.980)	(3.171)
Sex of Con-Sumer HHH	0.05114	0.002778	0.008046	1.292
	(0.063)	(0.130)	(0.284)	(0.752)
Marital Status Of Consumer HHH	-0.660	0.03929	0.009387	1.610
	(-1.151)	(1.289)	(0.473)	(0.515)
Total Expend-iture of HHH On Other Food	-0.515	0.02416	0.02971	-0.700
	(-0.931)	(0.700)	(1.550)	(-252)
R^2	0.977	0.983	0.970	0.898
R Adjusted	0.973	0.976	0.964	0.878
F-statistics	213.822[xxx]	285.348[xxx]	161.061	44.107[xxx]

The Ordinary Least Square (OLS) multiple regression analysis results for foreign rice consumption are summarized on Table 2. The Linear functional form of multiple regression was also chosen as the lead equation because it possess the highest number of variables which are significantly related to foreign rice consumption in the area. It also has R^2 value of 0.977 indicating that 97.7% of observed variations in foreign rice consumption in the study area are explained by the included variables. Specifically, five of the explanatory variables were all significant at 1%.

The price of the commodity (0.004062^{xxx}), had a strong positive relationship with the quantity of foreign rice consumed which means as the price of foreign rice increased, the quantity consumed by the household increased. Here, rice is seen to behave like an indispensible commodity, though contrary to the a-priori expectation (Onyebinama, 2000). Ordinarily, it would be expected that as price of foreign rice increases, its demand and consumption should decrease. Also, price of the substitute commodity (0.00005699^{xxx}) i.e. local rice showed a positive relationship with the quantity consumed of foreign rice. The implication is that as price of the substitute commodity (local rice) increased, the quantity consumed of foreign rice increased. This trend agrees with a priori expectation.

More so, household size (0.533^{xxx}) is positively related to the quantity consumed of foreign rice which shows that an increase in the household size will automatically bring about an increase in quantity consumed of foreign rice. The reason is simply because where there are more mouths to feed, quantity of commodity consumed increases.

Similarly, a positive relationship exists between the frequency of consumption (0.518^{xxx}) and the quantity of foreign rice consumed. This suggests that frequency of consumption is also a major factor explaining the variation in the quantity of foreign rice consumed. It is also in agreement with a- priori expectation which indicates that quantity of foreign rice consumed will increase as frequency of consumption in the household increases. Finally, result also shows a significant positive relationship between the levels of education of household heads (8.274^{xxx}) and the quantity of foreign rice consumed. The level of education of heads of household, positively affects the quantity of foreign rice consumed. This positive relationship according to Keynes and Freidman was confirmed by empirical studies (Koskela and Viren, 1982). The level of education of household heads in the study area was high.

CONCLUSION AND RECOMMENDATION

The results indicated that the major socio-economic determinants of the consumption of foreign rice are price of the commodity (X_1), price of substitute commodity (X_2), Household size (X_4), Frequency of consumption (X_5) and level of education of the household heads (X_6).The value of R^2 (97.70%) indicates that there are still other variables which affect foreign and local rice consumption in the study areas, which were not included in the model. This could include qualitative factors like taste and preferences, customs and traditions, urban exposures of the household heads as well as other exogenous factors like government policies. The F-ratios for all the functional forms were statistically significant showing that the people in these study areas consume foreign rice substantially, hence justifying the research work in these areas.

The result obtained from this study has important implications for policy. It brought to light the need for an improvement in the agricultural sector. The results showed that people consume foreign rice more than indigenous (local) rice. This indicates that rice import is greater than indigenous production probably because Nigeria runs a free market economy and so traders are free to import rice in view of the surplus demand of the commodity in the market. This situation suggests that the profitability of imported rice for the traders is higher than the locally produced rice. This has a detrimental impact on the nation's economy.

Factors influencing foreign rice Consumption

Considering the above findings, it is therefore recommended that Government should regulate importation of the foreign rice commodity while on the other hand increase investment in agriculture so as to boost and accelerate indigenous production of local rice which can match the imported ones in quality and standard. Also government should create enabling environment to attract foreign rice producing companies in Thailand, China, etc. for production of same high quality rice here in Nigeria in partnership with Federal, State, Local governments as well as organized private sector.

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