

DETERMINANTS OF HOUSEHOLD EGG CONSUMPTION PATTERN IN WASE LOCAL GOVERNMENT AREA OF PLATEAU STATE, NIGERIA

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ABSTRACT

The study analyses the egg consumption pattern of households in Wase Local Government Area of plateau States, Nigeria. The data were obtained through administration of questionnaire on 108 respondents. The data were analysed through the combination of descriptive statistics and multiple regression. The study result showed that 77% were male. The average Age of the respondents in the study area was 36 years, while average household size was 9 with 74% married. The mean value of the years of schooling was 11 years. Average income earned by the respondents in the study area was 26.20, with weekly consumption of 61.1%. The result further reveals that household income, Age, occupation and marital status were significant determinants of household expenditure on egg consumption.

Keyword: Determinants, Egg, household, Consumption,

1.0

INTRODUCTION

The major concern of many Nigerians nowadays, invariably, any human being is the assurance of food supplies at reasonable cost then its quality as people's purchasing powers continue to fall. The concern for food stems from critical role it can play in sustenance of human life and the release of energy measured in calories, for body metabolism and creative growth. The task of solving the food problem of the world's malnourished population is increasingly a major focal point of co-operation between governments, agriculturalists, manufacturers and international agencies. One of the immediate goals is the introduction and eventual acceptance of the consumption of nutritious foods amongst low income workers, school children and impoverished urban dwellers accounting for over 60% of the Nigerian population. Mammo *et al.* (2008) in Nigeria reported that fluctuation in the prices of the village chickens and chicken-products were mainly due to purchasing power of the consumers, festive seasons and availability of products. However, this important goal can be achieved through establishing extensive poultry enterprise and providing good marketing system. Many poultry birds are found essential, but those that are of commercial or economic importance given the trade in poultry, however, are chicken, guinea fowls and turkeys, amongst which the chickens predominate (Adene and Oguntade, 2006). The importance of the poultry sub-sector is chiefly in the provision of meat and egg as well as the provision of employment either directly or indirectly and the contribution to the revenue (Gross Domestic Product) of the country (Adebayo and Adeola, 2005). However, the economic recession in Nigeria has changed the average consumption pattern among various households to the extent that an individual is no longer

interested in the quality of food he consumes but the quantity. It is even common among various household in Nigeria nowadays for the household head only to ask the children or the members of the household whether they have eaten rather than asking if they are satisfied with the volume of the food taken. Such question is rather expected since most household cannot longer afford even minimum requirement for family food and shelter. The aftermath of the inadequacy optimized by the recent record of the increasing cases of nutritional deficiency symptom and the relatively reduced resistance to the disease in the body which portentous food could check, Thiriva (2007) affirmed that inadequate food supply and nutrition combined with rudimentary health facilities, usually lead to low life expectancy and incident of infant and child mortality. Among the components of food mentioned.

Eggs contain only a trace of carbohydrate. Poultry eggs contribute to the palatability of many dishes (Alabi and Isah, 2002). Apart from its contribution to the gross domestic product (GDP), also poultry production contributes to the provision of gainful employment and income to a sizeable proportion of the population (Ajibefun and Daramola, 1999). The high demand for poultry products, the success of exotic breeds and the ease of mastering the technique of poultry production, among other factors make poultry business a very attractive venture (Sani et al, 2002). Poultry egg has also attained industrial importance as a major ingredient in the baking of confectioneries and the use of the egg albumen in the making of shampoo and in book binding (May hew and Penny, 1988). A table egg as is also called is of various economic uses. It serves as a source of income to both small and large-scale producers. It is also major ingredient in the food industry such as garnishing and preparation for some processed food. In the beverage industry, egg is required in the processing of cocoa powder into food drinks this importance of egg justify commercial production in Nigeria (Adetimirin,2000).

One of the greatest problems facing households in Nigerian is how to improve the quality and quantity of their diet as well as addressing the problem of nutritional imbalances (Abubakar, (2008). Literature have shown that Nigeria are inadequately fed and this is due mainly to lack of balance diet especially protein needed for growth and development. (Kushwahaet *al*, 2007). It is not surprising that Nigeria is highly deficient in animal protein security with the per capital consumption put at 9.3g/day as against the 35g/day recommended by the FAO to be the minimum requirement for the growth and development of the body (Esobhawan, Ojo and Ikheloa, 2008). However, many other factors have been considered to affect local consumption of eggs; these factors include: the income earning power, level of education, household size, unit price, as well as the price and availability of other animal protein sources. According to Koutsoyianis (2001), consumption pattern of a family is determined by family income, sexes in the family, household income, Age, price sales, taste, education status, religion etc,. Some of these factors have been isolated to examine their relevance in egg consumption.

The objectives of this study are:

- I- To examine the socio-economic characteristics of the household expenditure in the study area.
- II - To determine factors influencing egg consumption in the study area.

2.0 MATERIALS AND METHODS

2.1 Study Area

The study was conducted in four districts area of Wase local government area of plateau State. Wase Local Government Area is situated some 216 km south east of Jos, the Plateau State capital. The population of the LGA was projected at 150,000 as of 2010, with total land area of 1750 km². The local government is made up of four districts (Wase district, Bashar district, Lamba district and Kadarko district) and has 12 wards which include: Bashar, Danbiram, Gudu, Kadarko, Kumbong, Kumbur, Kuyambana, Mavo, Nyalum/Kampani, Saluwe, Wasetofa, Yolawakat. Wase is a land of agriculture. The vegetation is divided into the Northern Guinea Savanna in the North and Southern Guinea Savanna in the South. The local government experiences a tropical continental climate with two distinct seasonal climates, dry and rainy seasons. The wet season (May to October) is heavier in the southern part of the State than in the northern part. Wase local government topography is favourable for small, medium and large-scale farming and for tourism. Cash and food crops cultivated include yam, cotton, groundnut, tobacco, maize, beans, guinea corn, millet, ginger, rice, and cassava. They are also involved in animal rearing and poultry farming in small quantity. The major animals reared include cattle, sheep, and goats. Although livestock resource in the area are still on a small scale which result in the importation of livestock product from other places (PADP, 2010).

2.2 Analytical tools

Descriptive and inferential statistics were employed in analyzing the surveyed data. Simple statistics such as frequency and percentages were used in discussing the types and quantity of eggs consumed, frequency of consumption, consumption preference and constraints to egg consumption by sampled households. Regression analysis on the other hand was used to investigate the effects of some household factors such as income, age, household size, education level, occupation, unit price and marital status.

2.3 Regression analysis

The multiple regression analysis was estimated using the ordinary least square methods in its implicit form. The aggregate protein expenditure function was estimated using a set of dependent variables; the full regression equation was expressed for 6 independent variables viz: Different functional forms were tried in the cause of analysis and the best functional form was later Selected. Some of the functional forms considered evaluating the relationship between the quantity of egg consumed and some selected related parameters before the selection of the one with the best line of fit include:

1. Linear: $Y = b_0 + b_1x_1 + U_1$
2. Semi-log: $Y = b_0 + b_1 \log x_1 + U_1$
3. Double log: $\log Y = b_0 + b_1 \log x_1 + U_1$

Where b_i = coefficients of included variables, x_i = vectors of variables

MODEL SPECIFICATION

$$Y = b_0 + b_1x_1$$

$$Y = a + b(X_1, X_2, X_3, X_4, X_5, X_6, U) \text{-----} (1)$$

Where

Y = Household expenditure on egg

X_1 = Household income

X_2 = Household size

X_3 = Education level

X_4 = Occupation

X_5 = Unit price

X_6 = Marital status

a= intercept

b= coefficient of independent variable estimated

U= the error term which is assumed to be normally distributed with zero constant variance.

3.0

RESULTS AND DISCUSSION

3.1 Socio-Economic Characteristics of Respondent

The socio-economic characteristics of the respondent are presented in Tables below.

The result of the analysis is presented in the Table 1 below. It shows that 71.3% are male while 28.7% are female. The wide gap between the values of male and female indicate that gender plays greater role in egg consumption. The mean average years of the respondents are 36, an indication that the respondents were relatively in their active and productive years. At this active age, more energy is needed to carry out certain assignments which can only be obtained by increase dietary intake rich in protein. The result also revealed 74% of the respondents are married while 12% are single.

Table 2 shows household earns an average income of N13, 312.47 per month. The result further reveals 61.7% of egg consumption was on weekly bases.

Table 1: Socio-economic variables

Variables	Frequency	Percentage	Mean
Sex			
Male	77	71.3	
Female	31	28.7	
Total	108	100	
Age			
<20	30	27.77	
20-30	18	16.69	36
31-40	16	14.81	
41-50	23	21.29	
>50	21	19.44	
Total	108	100	
Marital status			
Married	80	74	
Single	13	12.0	
Divorce	9	8.4	
Widow	6	5.6	
Total	108	100	
Household size			
<4	15	13.9	
4-6	39	36.1	
7-9	27	25.0	9
10-12	19	17.6	
>12	8	7.4	
Total	108	100	
Educational level			
Primary	11	10.2	
Secondary	36	33.3	
Tertiary	51	47.2	11
Others	10	9.3	
Total	108	100	
Occupation			
Civil servant	44	40.7	
Business	33	30.6	
Farming	22	20.4	
Others	9	8.3	
Total	108	100	

Table 2. Distribution of respondents based on their egg consumption variables

	Frequency	Percentage	Mean
<10000	27	25	
10000-20000	32	29.6	
21000-30000	26	24.1	
31000-40000	9	8.3	13, 312.47
41000-50000	3	2.8	
51000-60000	7	6.5	
>60000	4	3.7	
Egg consumption			
Daily	35	32.4	
Weekly	66	61.1	
Fortnightly	2	1.9	
Monthly	5	4.6	
Total	108	100	
Reasons for egg consumption			
Protein	22	20.4	
Cheapness	64	59.3	
Readily available	4	3.7	
Taste	17	15.7	
Others	1	0.9	
Total	108	100	
Substitute for egg			
Fish	36	33.33	
Meat	25	23.15	
Chicken	16	14.81	
No substitute	31	28.70	
Total	108	100	

An examination of the reasons for egg consumption revealed that majority (59.3%) consume egg because it is cheaper compare to other sources of protein like meat, fish and chicken. While 20.4%, 15.7%, 3.7% and 0.9% of the sample household consume egg because of other reasons.

The result further indicates that expenditure on meat is high. This agrees with the findings of **Inyang H. B et al**, (2014) and Yusuf (2012) who reported that large proportion of household monthly expenditure are spent on meat followed by fish.

3.2 Factors influencing egg consumption in the study area.

Table 3 shows the result of the regression analysis on factors influencing the total amounts of money spent on egg consumption. The result reveals that four variables were found to be significant at ($p < 0.001$), ($p < 0.05$) and ($p < 0.01$), which are household income, age, occupation and marital status respectively. The R^2 shows that about 63% of the

variation on egg expenditure in the study area was caused by the variables included in the model while the remaining 37% of the variations were caused by other variables that were not included in the model. The significance F value statistic indicates that the equation model is in good fit. This result implies that the coefficient of household income was found to be positive and significant at 1% indicating that income significantly influence egg consumption hence the higher the household income the higher the amount spent on meat consumption i.e. household with higher income were likely to spend more on egg. The coefficient of age was found to be negative but significant at 10% which indicates that younger household size were likely to consume more egg than older household. Furthermore, the coefficient of marital status was positive and significant at 10% which indicates that married household consume eggs than single, widow and divorce. This may not be unconnected with increased number of married household than the single, widow and the divorce.

Table 3. Regression Analysis of Egg Consumption

Variable	coefficient	S.E	T-Value	Sig level
Constant	2.2948*	1.2299	1.790	0.077
Household income	1.8783***	0.5929	3.170	0.002
Age	-1.9312*	0.5373	-1.740	0.085
Household size	0.1080	0.1481	0.120	0.907
Education level	-0.2660	0.1720	-0.565	0.720
Occupation	-0.7411*	0.2210	-0.61	0.096
Unit price	-0.151	0.221	0.683	1.211
Marital status	1.623*	0.6106	1.900	0.060
R ²	0.6276			
F-Value	2.33***			

Source: field survey, 2017

***means significantly at 1%, **significantly at 5% and * significantly at 10% respectively

4.0 CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

Emanating from the findings of this study, it can be concluded that socio-economic characteristics shows male dominate the respondents interviewed and are relatively in their productive age. The average income of the respondent per month was considered small going by the current economic reality. Household egg consumption was influenced positively by the monthly income and the household size.

4.2 Recommendations

Based on the findings of the study, the following recommendations are made:

- 1 Public enlightenment campaigns should be embarked upon to enlighten people on the importance of protein-energy deficiencies so as to enhance consumption of animal protein products.
2. Individuals, government, and non-governmental organization should invest in livestock production in order to make animal protein products available for consumption.

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