ANALYSIS OF HOUSEHOLD CONSUMPTION OF CHICKEN IN IDO LOCAL GOVERNMENT AREA, OYO STATE

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ABSTRACT

This study examined household consumption of chicken in Ido Local Government Area, Oyo State. Simple random sampling technique was used to select 110 households. Data on household expenditure, socio-economic factors and other household characteristics were collected with a pre-tested questionnaire and were analyzed using descriptive statistics and tobit model. Results showed that 33.6% of the respondents preferred imported chicken because of its availability (70.9%) and ease of processing (49.1%); while 29.1% preferred domestic chicken because of its availability (20.9%) and ease of processing (49.1%). Also, 25.5% and 10.9% of the respondents spent between ₦1,000.00 – 1,999.90 on imported and domestic chicken, respectively per week. Only 10.0% of the respondents spent above ₦4,000.00 on imported chicken while none spent above ₦3,999.90 on domestic chicken. The tobit result revealed that education level of household-head ($p<0.05$), price of beef ($p<0.01$), non-food expenditure ($p<0.05$), food expenditure ($p<0.05$) and chicken type ($P<0.01$) were factors influencing consumption of chicken in the study area. In conclusion, the study found out that most households prefer imported chicken to domestic chicken due to availability in the market and ease of processing. Thus, it is recommended that stakeholders and government should encourage poultry farmers through provision of incentive and formulation of policies that will help to boost production of domestic chicken and make it more available at all times. Also, education on poultry production should be intensified so that people will be fully aware of its nutritional importance, particularly proteinous ones like chicken.

Keywords: Domestic, Imported, Chicken, Consumption, Expenditure

INTRODUCTION

Food plays important roles in the development of nation and livestock production as that which could be referred to as food on the long run, constitutes an important component of the agricultural economy in developing countries. It is an instrument of socioeconomic change, improved income and quality of rural life in Nigeria (Okumadewa, 1999). In livestock production, poultry occupies a prominent position in providing animal protein as it accounts for 25% of local meat production in Nigeria (Okunlola and Olofinsawe, 2007). Poultry production as an aspect of livestock production is important to the biological needs, economic and social development of the people in any nation (Oladeebo and Ambe-Lamidi, 2007). Over the years, the contributions of the livestock sub sector to Gross Domestic Product (GDP) have decreased from 5.61% in 1960 to about 2.64% in 2010 (CBN, 2010). The contributions of livestock to Agriculture in 1999 and 2010 remained at 2.64% (CBN,

2010). However, the contribution of poultry production (meat and eggs) to total livestock output increased from 26% in 1995 to 27% in 1999 with an increase in egg production alone accounting for about 13% during the period (Ojo, 2003).

Elementarily, food can be classified into six based on their constituents and these are: carbohydrate, protein, fat and oil, mineral salt, vitamins and water. The last class of food which is protein when broken down becomes amino acid; the useful form of protein in the body. Protein is further splits into two sub-classes based on its source, which are plant and animal protein. Plant protein is the protein obtained from plants such as those obtained from cowpea, soya beans and other legumes while animal protein is obtained from animals and they could be from chicken, cow, pig, sheep and goat. It might be from the flesh which could be chicken, beef, pork, turkey and mutton or from its other products such as eggs and milk.

Poultry and Nutrition in Nigeria

Poultry farming is one of the leading enterprises in Nigerian Agricultural sector. It has gained acceptance among the citizens of almost all the regions in Nigeria due to the prolific instincts and short-term rate of returns in forms of cash and kind benefits (Igene, 1997). The development of the poultry industry in Nigeria has been described as the fastest means of bridging the protein deficiency gap prevailing in the country. It has been reported that most Nigerian diets are deficient in animal protein, which results in poor and stunted growth as well as increase in spread of diseases and consequently death (Federal Government Nigeria/UNICEF, 1994; Apantaku *et al.,* 1998; Maziya-Dixon *et al.,* 2004). The Poultry industry plays important role in the development of Nigerian economy. It is a major source of egg and meat which have high nutritional value particularly in the supply of protein (Olagunju and Babatunde, 2011). Poultry farming serves as an auxiliary occupation to complement the income of small and marginal farm families. It occupies an essential position in the rural space because of its vast potential to bring about rapid economic growth, particularly benefitting the weaker section of the populace (Ekunwe *et al*., 2006).

The fact that the level of protein consumption in Nigeria particularly animal protein is very low is no more a news. Nigeria as a developing country is faced with a worsening situation of inadequate protein consumption (Ayinde and Aromolaran, 1998). This problem has been on the increase as the large proportion of the populace eats mainly starchy foods. Moreover, in a nutritional profile of Nigeria, Food and Agricultural Organization (FAO, 1990) reported that the protein supply *per capita* was 44g out of which animal protein consumed constituted less than 2%. As a result of this, under nutrition and malnutrition affect all age groups and this is widespread in Nigeria today. Nutritionally related diseases are some of the common features of a poorly fed populace such as increase level of kwashiorkor, delimitating fatigue, other diseases and consequent early death.

Available statistics in Nigeria further showed that even protein intake of the populace is heavily dominated by plant protein with very low intake of animal protein (Lion, 1990). Chicken has important advantage over other meat types; unlike pork, it does not have any religious or traditional taboo associated with its consumption.

The population of the poor in Nigeria has increased over the years geometrically while *per capita* expenditure of the poor has risen from ₦593 (US$3.95) in 1985 to ₦795 (US$5.3) in 1992 and dropped to ₦720 (US$4.8) in 1995 (World Bank 1996). This shows the deplorable state of poverty in Nigeria thus leading to an increase in food nutritional inadequacy when Nigerians could not afford the required nutrition including protein. This becomes a problem despite that two sources of chicken are known to be available to Nigerian market, that is the imported and domestic chicken, though they command different levels of demand among households. Thus, this study sought to answer the following questions: is chicken consumption affected by households' socio-economic factors; is there any difference in households' consumption of domestic and imported chickens; and what are the factors responsible for households' consumption of chicken?

Therefore, the study assessed households' consumption of chicken in Ido Local Government Area, Oyo State. The objectives were to describe the socio-economic characteristic of households in the study area; describe the consumption pattern of chicken among households in the study area; and determine the factors influencing consumption of chicken in the study area.

RESEARCH METHODOLOGY

Description of the Study Area

The study area is Ido Local Government (LGA) in Oyo State. This area was selected because of production and consumption of poultry (chicken) and its products. Ido LGA is one of the 33 Local Government Areas in Oyo State of Nigeria. It was created in 1989 from the former Akinyele Local Government Area with a land area of 986km^2 and a total population of 103,261 based on 2006 national population census. It covers the area spanning Apata, Ijokodo, Omiadio, Akufo and Apete. It shares boundaries with Oluyole, Ibarapa-east, Akinyele, Ibadan South-West and Ibadan North-West Local Government Area in Oyo State and Odeda Local Government Area in Ogun State. The council presently has ten (10) wards for ease of administration. The population is dominated by civil servants, artisans and farmers who are involved in production and consumption of livestock (for example poultry farming); and crop farming due to a large hectarage of grassland.

Sources and Methods of Data Collection

Primary data were used for the study. These were obtained through administration of a pre-tested questionnaire that contained pertinent questions which border on some socio-economic characteristics of households in the study area, the consumption pattern of chicken among households, and the factors influencing consumption of chicken in the study area.

Sample Size and Sampling Technique

One hundred and ten (110) respondents were sampled using simple random technique. Ten respondents were randomly selected using the resident list of the Community Development Association (CDA) in each of the existing eleven wards in the Local Government Area as at April, 2014.

Analytical Techniques

The following analytical tools were employed in the analysis.

(i) **Descriptive statistics:** frequencies and percentages were used to describe the socio-economic characteristics of respondents such as age, sex, marital status, educational level, household size, income and expenditure; and to describe the consumption pattern of chicken by the respondents in the study area.

(ii) **Tobit regression model:** was used to determine the factors influencing consumption of chicken in the study area and this was accomplished with the use of maximum likelihood estimate technique. Generally, the tobit model was expressed implicitly as:

$Y_i = f(\beta X_i, \mu_i)$

Where:

Y_i = quantity of chicken demanded

β = parameter estimate

μ_i = stochastic error term

Here:

$X_i = X_1, X_2, \ldots\ldots\ldots\ldots\ldots, X_n$

The X_i variables are defined as:

X_1 = Age of household head (years)

X_2 = Household size (number)

X_3 = Educational level of household head (years)

X_4 = Household income (₦)

X_5 = price of chicken (₦)

X_6 = Beef price (₦)

X_7 = Non-food expenditure (₦)

X_8 = Food expenditure (₦)

X_9 = Chicken dummy (0 = consumed domestic chicken, 1= Consumed imported chicken)

RESULTS AND DISCUSSION

Description of Respondents' Socio-economic Characteristics in the Study Area

The study (Table 1) revealed that 50% of the respondents were male while 50% were female implying that decisions pertaining to the nutritional status and/or welfare of the households may be jointly and equally determined by both gender. The study also revealed that 28.2% each of the respondents belonged to the age groups of 21-30 years and 31-40 years (Table 1). These age groups fall within the economically active age group and implies that the highest proportion of the respondents were middle aged and this is in line with Yinusa (1999) who observed that this age bracket contains the innovative, motivated and adaptable, individuals. Also, most of the respondents (75.5%) were married with a good proportion (47.2%) of the household having between 5-8 persons. Furthermore, a number (47.3%) of respondents were HND/BSc. graduates, 43.6% possess OND/NCE while only 9.1% had school certificate. This implies that majority of the respondents' households were educated and would have been well informed on nutritional values of chicken; it also reflects a high interest of the respondents in education which is an important component of household features to improving the quality of life. Table 1 revealed that majority (58.2%) were civil servants, 20.0% were business tycoon, 13.2% were farmers while only 8.2% were into other forms of businesses. This implies that majority of the respondents were into one paid job or the other which may enable them purchase chicken, a form of animal protein needed for their nutritional upkeep.

Table 1: Distribution of Respondents by Socioeconomic Characteristics

Characteristics	*Frequency*	*Percentage*
Sex		
Male	55	50.0
Female	55	50.0
Total	110	100.0
Age (years)		
≤ 20	10	9.1
21-30	31	28.2
31-40	31	28.2
41-50	29	26.3
≥ 51	9	8.2
Total	110	100.0
Marital status		
Married	83	75.5
Single	27	24.5
Total	110	100.0
Household size		
≤ 4 members	50	45.5
5-8 members	52	47.2
≥ 9 members	8	7.3
Total	110	100.0
Education		
SSCE	10	9.1
OND/NCE	48	43.6
HND/B.Sc	52	47.3
Total	110	100.0
Occupation		
Civil servant	64	58.2
Business tycoon	22	20.0
Farmer	15	13.6
Others	9	8.2
Total	110	100.0

Source: Field survey 2014

Description of Respondents by Consumption Pattern of Chicken

Table 2 revealed that a larger percentage (33.6%) of the respondents preferred imported chicken only, 29.1% preferred domestic chicken only, 31.8% preferred both while 5.5% neither preferred imported nor domestic chicken. This may be because they found it more nutritious than other animal protein sources. Also 49.1% like to process chicken themselves while 21.8% did not like to process at all. However, 29.1% were indifferent. Furthermore, majority (70.9%) opined that imported chicken is more available in the market with only 20.9% of the respondents opined that domestic chicken is more available. This may be due to the proximity to production centers and the number of producers who were either involved in the production of domestic and/or imported chicken. In addition, majority

(67.3%) of the respondents consumed other types of meat while only 8.2% did not consume other types of meat than chicken.

Table 2: Distribution of Respondents by Chicken Consumption Pattern

Variables	*Frequency*	*Percentage*
Consumption preference		
Domestic chicken	32	29.1
Imported chicken	37	33.6
Both	35	31.8
Indifferent	6	5.5
Total	110	100.0
Processing		
Yes	54	49.1
No	24	21.8
Indifferent	32	29.1
Total	110	100.0
Chicken types availability		
Domestic	23	20.9
Imported	78	70.9
Indecisive	9	8.2
Total	110	100.0
Chicken substitutes		
Yes	74	67.3
No	9	8.2
Indifferent	27	24.5
Total	110	100.0

Source: Field survey 2014

Yes, No, Indifferent responses applies to both groups.

Description of Respondents by Monthly Income and Weekly Food Expenditure on Chicken

Table 3 showed that largest proportion (29.1%) of the respondents earned between ₦40,001.00 - ₦60,000.00 while 12.7% earned between ₦20,000.00 or less. This implies that respondents would be able to purchase chicken types based on the level of their income. Also, Table 3 revealed that 30.9% of the respondents spent between ₦ 6,000.00 and ₦7,999.00 per week on food while only 4.6% spent between ₦ 8,000.00 and ₦ 9,999.90 per week on food. This implies that respondents were able to spend this much on food because of their income level.

Table 3: Distribution of Respondents by Monthly Income and Weekly Food Expenditure

Variables	*Frequency*	*Percentage*
Income (₦)		
≤ 20,000.00	14	12.7
20,001.00 – 40,000.00	29	26.4
40,001.00 – 60,000.00	32	29.1
60,001.00 – 80,000.00	20	18.2
≥ 80,001.00	15	13.6
Expenditure		
≤ 1,999.90	12	10.9
2,000.00 – 3,999.90	21	19.1
4,000.00 – 5,999.90	20	18.2
6,000.00 – 7,999.90	34	30.9
8,000.00 – 9,999.90	5	4.5
≥ 10,000.00	18	16.4

Source: Field Survey 2014

Description of Respondents by Taste and Weekly Expenditure on Chicken Types

Table 4 revealed that most (61.8%) of the respondents rated the taste of domestic chicken good while 20% rated it is fair. On the other hand, about half of the respondents (51.8%) rated the taste of imported chicken as good, 26.4% it as fair while 4.5% rated the taste as poor. Table 4 also revealed that 25.5% of the respondents spent between ₦1,000.00 – ₦1,999.90 on imported chicken per week while only 10.9% spent the same amount as that of imported chicken on domestic chicken per week. None of the respondents would spend above ₦3,999.90 on domestic chicken while only 10.0% would spend above ₦4,000.00 on imported chicken.

Table 4: Distribution of Respondents by Taste and Weekly Expenditure on Chicken Types

	Domestic chicken		*Imported chicken*	
	Frequency	*Percentage*	*Frequency*	*Percentage*
Taste				
Good	68	61.8	57	51.8
Fair	22	20.0	29	26.4
Poor	-	-	5	4.5
No response	20	18.2	19	17.3
Expenditure (₦)				
None	76	69.1	28	25.5
≤ 999.90	9	8.2	14	12.7
1,000.00 – 1,999.90	12	10.9	28	25.5
2,000.00 – 2,999.90	9	8.2	18	16.4
3,000.00 – 3,999.90	4	3.6	11	10.0
≥ 4,000.00	-	-	11	10.0

Source: Field Survey 2014

Factors Influencing Chicken Consumption by Respondents

Table 5 showed that educational qualification of household-head (P<0.05), beef price (P<0.01), non-food expenses (P<0.05), food expenses (P<0.05) and chicken type (P<0.01) had significant effect on quality and quantity of chicken consumed by households in the study area. Positive coefficients of educational qualification of household-head, beef price, food expenses, and chicken type indicated that as level of each of the variable is increased, the quality and quantity of chicken demanded and consumed by households in the study area increases. A negative non-food expenses coefficient means that as more non-food expenses were increased, quality and quantity of chicken consumed by households in the study area decreased. That is there is a direct relationship between the educational status of household-head, beef price, food expenses and chicken type; and chicken consumption. There is an indirect relationship between non-food expenses and chicken consumption. A decrease in non-food expenses will lead to a proportionate increase in the quantity of chicken demanded and consumed by the households.

Table 5: Determinants of Respondents' Chicken Consumption

Variable	Coefficient	odd-ratio
Age	-0.010677	-0.58935
Household size	-0.010639	-0.18116
Educational qualification	0.264560**	2.11750
Household income	0.000006	0.96349
Price of chicken	0.000644	0.93671
Price of beef	0.001675*	3.36100
NFD expenses	-0.000103**	-2.12970
FD expenses	0.000075**	2.05860
CHKDUM	2.487200*	6.60730
Log-likelihood function	-148.20283	

** Significant at 5%, * Significant at 1%

Source: Field Survey 2014

CONCLUSION AND RECOMMENDATION

The study revealed that majority of the households preferred imported chicken to domestic chicken due to availability in the market and ease of processing. This study also found out that 25.5% spent between ₦1,000.00 - ₦1,999.90 on imported chicken per week while only 10.9% of the respondents spent the same amount on domestic chicken per week and only 10.0% of the respondents would spend above ₦4,000.00 on imported chicken while none would spend above ₦3,999.90 on domestic chicken. Furthermore, educational level of household-head, price of beef (a substitute to chicken), non-food expenditure, food expenditure and chicken type are factors affecting chicken consumption in the study area.

Based on these findings, the following recommendations were made:

Stakeholders and government should encourage domestic poultry farmers through provision of incentives and formulation of policies that will make domestic chicken more available in the market. This indeed would provide better employment, investment opportunities and also raise the income of rural communities in the country. This would also go a long way to improve the standard of living of the people most especially those in the rural areas restricting the migration trend towards big cities in search of better life for the households

In addition to educational level of household-head, formal and informal education on food and its quality should be intensified so that people will be fully aware of its nutritional importance particularly the proteinous ones like chicken.

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