



Analysis of Urban Household Demand for Poultry Production in Ado Local Government Area of Ekiti State, Nigeria

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ABSTRACT

The study investigates the urban household demand for poultry products in Ado Local Government areas of Ekiti State, Nigeria. A two-stage sampling technique was used to select respondents for the study. Ten wards were randomly selected in Ado local government area and this was followed by a random selection of twelve households from each selected ward, making a total number of 120 respondents used for the survey with the aid of structured questionnaires. The analytical techniques used include descriptive statistics like mean, minimum value, maximum value; standard deviation and linear regression analysis were used to analyze the relationship between the household's socio-economic characteristics and the amount spent on poultry products. The results obtained revealed that majority of the household (45.4) percent believed that taste of the poultry product determine the demand for poultry products, the mean amount spent on poultry product monthly is ₦4,918.61(24.59USD) which is very low, it may be due to the high price of poultry products or easy accessibility to a close substitute which made respondents demand for more substitutes than poultry products and the regression analysis for the determinant of households demand for poultry products reveals that variables such as "years spent in formal education, household size and average monthly income" had positive effect on amount spent on poultry products. There should be a policy measure that will ensure increase in purchasing power of the people's income which will invariably contribute positively to the improvement of nutritional status of the people and government price intervention program should be introduced in order to stabilize the fluctuation of poultry products prices.

Key words: Analysis, Urban, Household, Demand, Poultry Products

INTRODUCTION

Since the 1970s in Nigeria, global production and consumption trade of poultry meat has grown faster than any other meat. During the 1990s when demand growth showed for other meats, including fish, demand growth for poultry meat accelerated and poultry continue to lead the expansion of meat trade. Poultry is crucially important in the context of agricultural growth and important in the diets of people in Nigeria. The sub-sector is particularly important in that it is a significant source for the supply of protein and nutrition, in a household's nutritional intake. It is an attractive economic activity as well, especially for women. Livestock farming has remained an essential component in the agricultural sector of the Nigerian economy. This is true because livestock is a good source of animal protein, which is needed for a proper and balanced diet. The Food and Agricultural Organization (FAO, 2010) recommended that an average of 200 gram of animal protein is required per day for healthy living in the developing countries. This therefore, means that the general wellbeing of the people is directly dependant on the amount of animal protein consumption available to them. Although, FAO, 2010 recommended the average protein requirement for

healthy living and maintained that the meat protein consumption in most African countries is very low, at a level of 25 gram. Yet in Nigeria, the consumption is even lower especially in the southern and eastern part of Nigeria, where recently human nutritionists have observed that the production of animal protein has not been enough to meet the demand of the rapid population growth (Obi, 2003). He asserted that much of the animal protein intake available to the southern and eastern part of Nigeria comes from the north in the form of cattle, rams and goats.

Comparative statistics by Ademosun (2000) puts Nigeria's total Poultry meat production at 810,000 tons for a population of about 110 million resulting in a poultry meat production index of 22 gram per capital consumption, per day. Sonaiya (1982) had rightly envisaged that as consumers become more articulate and organized their demand for wholesome animal protein will exert a powerful influence upon quality production methods and strategies. He added that recent increases in income expenditure of urban dwellers have tendencies to stimulate greater demand, not only for quality but also quantity of meat products. Today, the increasing human population in the face of inelastic

production, strategies appears to have widened the demand and supply gap and accentuates society needs for meat products. Regmi et al. (2002) supported this view and noted that, the unprecedented growth that has occurred in the last half-century has created an additional demand for meat and general food in developing countries. Beside the failure of meat production capacity to match with the human population growth, the distribution of livestock in Nigeria is apparently lopsided. Composite transportation cost incurred, coupled with remote distance between major meat producing areas and consuming urban centers together make the value of wholesome beef, mutton, pork, and chicken and dog meat often unaffordable (Mdafri and Brorsen, 1993). As the poultry industry is expanding with the increasing number of households involved in the raising of domestic fowls, turkeys, goose, ducks and all the likes, the problems of malnutrition persists. It is very difficult for an average Nigerian, to consume any of the poultry products either chicken meat or egg, on the scales of international nutrition requirement. This can be traced to the high price of the products, which makes poultry products appear infrequently on many of our tables, except during the festive periods.

The low level of consumption makes the issue of malnutrition to be persistent. Another observation is the fact that the demand for this product is still far higher than its supply, this arises from higher pricing and importation of both chicken and eggs from other countries. Nigeria has the largest population in Sub-Saharan Africa. About 47% of the population resides in urban areas where the population growth rate is estimated at three times more than that in rural areas (World Bank, 2004). The suggested shift in increased food demand from the rural to the urban areas, government policies tend to support the urban dwellers at the detriment of the rural areas. Over the past three decades, rural households have been significantly poorer than urban households. However, while urban poverty has increased, rural poverty has decreased, especially after the post-adjustment period 1995 to date (Canagarajah and Thomas, 2001). Urbanization is therefore a key non-income factor explaining the changes in demand for animal protein (Ahmed and Gruhn, 1995).

The concept of demand helps to explain everyday's economic problems in the demand and consumption of poultry products in the economy. The volume of production is greatly influenced by the demand structure. The demand by an individual for a commodity or service may be defined as the schedule of the amount of poultry products that would be purchased by the person at various given times and places (Akinleye, 2007).

When consumers increase the quantity of demand at given price, it is referred to as an increase in demand, increase in demand could also come from a change in taste, income, price of the products, price of close substitute, information, fashion and so forth. But if there is a decrease in demand the price will decrease and quantity will also decrease. There are several main factors, which determine the level of the demand and schedule for a particular commodity by an individual consumer or household. For a given demand schedule, these factors are assumed to be constant or given, any changes in those given factor will cause a shift in the demand schedule. The main determinants of an individual's demand of a household are; their preferences or personal taste, level of the income at the disposal of a consumer, the population (number of people in household), the government policies, the level of prices of a close substitute, the prices of complementary goods etc.

First and foremost, the level of income at the disposal of a consumer will determine the level of consumption and demand. A positive income effect is expected from a product that is considered superior, meaning that more of the product will be purchased while a negative income effect is associated with a product considered inferior; Furthermore, the level of prices of other commodities is also a major determinant of the level of a particular demand schedule. The prices of close substitutes are another factor. The strength of demand is theoretically determined by the price of the commodity. Also expectation regarding future prices of commodities affects the height of the demand schedule of a consumer for a particular commodity. Moreover, the scale of consumer preferences or personal taste determines the level of the demand schedule for a commodity. Thus any shift in the scale of preference will lead to a change in the demand. Any change in government policies may affect the demand. When government imposes tax on goods, thereby increasing the effective price of the commodity. Any rise in price will determine the demand or purchasing power of an individual or household. Also an increase in income tax will see a fall in the demand, as people will have less money left in their pocket to spend. Whereas a decrease in income tax will result in the increase of demand for product and service because people now have more disposable income (Akinleye, 2007). The Age of the members of household most especially the head of the household affects or determines the quality and quantity of what will be consumed and demanded among household (Ajewole and Omonona, 2005). The size of a family or household significantly affects or determines the relative level of consumption and demand among Nigerian household (Aboyade, 2005). An increase in

household size will result in the rise in demand of poultry products.

In addition, social cultural factors affect what will be demanded, different people have taste for different goods and considering the adage that says, "One man's food is another Man's poison". Different cultural groups and people have norms and laws guiding the consumption of various foods. This invariably affects the type of food that will be demanded for, and also the level of demand of these foods (Olayemi, 1998). Difference in geographical location is very crucial in the demand for poultry products. There is marked between urban and rural dwellers while a rural based household may be restricted to the type of poultry produced in the locality, urban counterparts may have access to variety of poultry products produced outside its areas thus affecting the demand for poultry products. In most cases livelihood determines the pattern of poultry product demand. Livelihood comprises of the capabilities assets (Including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and asset both now and in the future while not undermining the natural bases (Carter and Barrett, 2006). This study therefore seeks to analyze the urban household demand for poultry products in Ado local Government Areas of Ekiti State, Nigeria.

MATERIAL AND METHODS

Study area

Ado local government of Ekiti State, Nigeria is located on latitude $7^{\circ} 35'$ and $74^{\circ} 47'$ North of the equator and longitude $5^{\circ}11'$ and $5^{\circ}16'$ East of the Greenwich meridian. Ifelodun/Irepodun Local government and East and South by Gbonyin, Ikere and Ekiti South West local government areas bound it on the North and West. The local government has a population density of 43,986 person square kilometer; it is the state capital of Ekiti state with 13 wards and is the commercial center of the state that is why it was selected as the study area.

Study period

The study was carried out during 2012. This period is the festive period when the request for poultry products is expected to be high. This period would therefore give a good understanding for consumers' demand.

Sampling technique

A two-stage sampling techniques was used to select respondents for the study. Ten wards were randomly selected in Ado local government area,

Nigeria and this was followed by a random selection of 12 households from each selected ward, making a total number of 120 respondents used for the survey.

Data collection

Data were collected with aid of well-structured questionnaire in Ado local government area, Nigeria, which included socio-economic characteristics of the household as well as demand pattern for poultry products by the household.

The analytical techniques used in the study include:

Descriptive statistics like mean, minimum value, maximum value, standard deviation were used to analyze the urban household's socio-economic characteristics and the factors that affect the demand for poultry products in Ado Ekiti metropolis. Linear regression model was used to analyze the relationship between the household's socio-economic characteristics and the amount spent on poultry products. Significant levels for each independent variable were considered using the P-values by multiplying each value by 100. The results obtained would determine the significance level that is, if it falls below 1, it implies that it is significant at 1% level while if significant at 5% means the value ranges between 1.1-4.9, and between 5-9.9 implies significance at 10% level.

RESULT AND DISCUSSION

The socio-economic characteristics of respondents

The socio-economic characteristic of the households in Ado local government has been carefully identified and studied because they can influence the households demand for poultry products either directly or indirectly (Table 1).

Effective factors on demand of poultry products

The determinants of demand for poultry products are the possible factors that can affect the demand for poultry products in a household, which vary from one household to the other. In this section, the determinants are analyzed by using frequency and percentage distribution (Table 2). Table 2 shows that majority of the household 45.4 percent believed that taste of the poultry product determine the demand for poultry products while 29.4 percent believed that income at their disposal determined their demand for poultry products, 21.0 percent believed that price of the poultry products determines their demand and 5.0 percent believed that price of other substitutes determines their demand for poultry products.

Table 1. Socio-economic characteristics of urban household demand for poultry products in Ado- Ekiti, Nigeria in 2012.

Socio-economic characteristics	Frequency	Percentage
Gender		
Male	63	52.5
Female	57	47.5
Total	120	100
Age (Years)		
≤ 30	52	43.6
31 – 40	24	20.1
41 – 50	23	19.2
51 – 60	14	11.7
61 and above	7	5.6
Total	120	100
Marital status		
Single	44	37.0
Married	76	63.0
Total	120	100
Educational Level		
No Formal Education	4	3.2
Primary Education	5	4.2
Secondary Education	13	10.9
College of Education	20	16.8
Polytechnic/University	76	63.1
Others	2	1.7
Total	120	100
Occupation		
Farmer	9	7.5
Artisan	13	10.9
Trader	30	25.2
Unemployed	2	17.2
Civil servant	57	47.1
Public Servant	9	7.6
Total	120	100
Household size		
1 – 2	14	11.8
3 – 4	35	29.4
5 – 6	42	35.2
7 and above	29	24.4
Total	120	100

Table 2. Determining effective factors on demand of poultry products in Ado Ekiti, Nigeria in 2012.

Factors	Frequency	Percentage
Income	35	29.4
Price of poultry products	25	21.0
Price of Other substitutes	6	5.0
Taste	54	45.4
Total	120	100.0
Number of Times		
Everyday	42	35.6
One day Interval	26	21.8
Once in a Week	36	30.3
Once in a Month	13	10.9
Occasionally	3	2.4
Total	120	100.0
Household		
Substitute	95	79.1
No Substitute	25	21.0
Total	120	100.0
Reason		
Easy accessibility	31	25.8
Price	38	31.7
Relative distribution	51	42.5
Total	120	100.0

It can be deduced that, taste and income respectively are the major determinant of household demand for poultry products. However, how often a household demand for poultry product will affect the quantity demanded for a period of time since this will either increase or decrease the market demand.

It was shown in Table 2, that 35.6 percent of the households demands for poultry products every day, 21.8 percent of the household demands for poultry products at one day interval, 30.3 percent of the household demand for poultry products once in a week, 10.9 percent demand poultry products once in a month and 2.4 percent demand for poultry products at their leisure period. Since most of the respondents demand for poultry products seems to be frequent, i.e. more people demand for poultry products within the week, there is tendency that the households will demand for higher poultry products, which will affect the demand pattern. It was also revealed that 79.7 percent of the households' demands for close substitute while 21.0 percent did not demand for any close substitute except poultry products.

It can be deduced that higher percent of the household demand for close substitute, which will have influence on the demand for poultry products. The demand for close substitute to poultry product for any reason will influence the demand for poultry products because the two products that are the poultry product and close substitute like beef, will compete for available resources. Also, 42.5% of the respondents demand for close substitute based on the price of the substitute and 25.8 percent demand for close substitute based on the easy accessibility of the close substitute. It can be deduced that the highest percent of the respondent demand for close substitute based on the relative distribution.

Effect of income and price on demand for poultry products in Ado-Ekiti, Nigeria in Year 2012

For a normal good, an increase in income of consumers will increase the demand for poultry products. Thus, the quantity demand of poultry products is also directly related to income. Also an increase in price will result in the decrease in quantity demanded of poultry product.

Table 3 presents the effect of income and price on demand for poultry product. From the table 21.1 percent of the respondents earned below 30,000 Naira (150 Dollars) monthly, 24.1 percent earned between 30,000 - 50,000 Naira in a month, 17.5 percent of the household earned between 71,000 - 90,000 Naira monthly, 4.1 percent of the household earned between 91,000 - 110,000 Naira as monthly income, 5.0 percent earned between 111,000 - 130,000 Naira monthly, 5.9 percent earned between 131,000 - 150,000 Naira

monthly and 15.8 percent of the household earned 151,000 Naira and above monthly. The mean income of the households is 101,013.75 Naira (505.07 USD) from all sources. However, Income determines the demand for poultry products and putting into consideration the average household size and the cost of living, majority of the household were middle-income earners, which will influence their demand for the products.

Table 3. Effect of income and price on demand for poultry products in Ado Ekiti, Nigeria in 2012

Monthly Income ₦ (USD)	Frequency	Percentage
>30,000 (150)	24	21.1
30,000(150)–50,000(250)	29	24.1
51,000(255)–70,000(350)	21	17.5
71,000(355)–90,000(450)	8	6.6
91,000(455)–110,000(550)	5	4.1
111,000(555) – 130,000(650)	6	5.0
131,000(655) – 150, 000(750)	7	5.9
151,000(755) and above	20	15.8
Total	120	100.0
Amount Spent On Poultry Naira ₦ (USD)		
Less than 1,000(5)	21	17.6
1,000(5) – 4,000(20)	44	36.6
5,000(25) – 9,000(45)	35	29.3
10,000(50) – 14,000(70)	12	10.0
15,000(75) – 19,000(95)	3	2.5
20,000(100) and above	5	4.1
Total	120	100.0

Also from the Table 3, 17.6 percent of the respondents spent less than 1,000 Naira (5USD) on poultry products in a month, 36.6 percent spent between 1,000 - 4,000 Naira on poultry products, 29.3 percent spent 5,000 - 9,000 Naira on poultry products in a month while 10 percent spent between 10,000 - 14,000 Naira on poultry products, 2.5 percent spent between 15,000 - 19,000 Naira on poultry products and 4.1 percent spent 20,000 Naira and above on poultry products in a month. Since the mean amount spent on poultry product monthly is 4,918.61 Naira (24.59USD) which is very low, it may be due to the high price of poultry products or easy accessibility of close substitute which made respondents' demand for more substitute than poultry products. The amount a household is willing to spend on poultry product will determine their demand pattern.

The relationship between the household socio-economic characteristics and the amount spent on poultry products

Table 4 reveals the regression analysis for the determinant of households demand for poultry products. Variables; “years spent in formal education, Household size and average monthly income” had positive effect on the amount spent on poultry products (Dependent Variable). It however implies that the higher the years spent in formal education, household size and average monthly income, the higher the

amount spent on poultry products. Out of these positive correlated variables, only “Average monthly income” was significant at 1%, household size and years spent in formal education were significant at 10%.

Table 4. Determinants of households demand for poultry products in Ado Ekiti, Nigeria in 2012.

Variables	P-value
X ₁	0.589
X ₂	0.292
X ₃	0.057*
X ₄	0.066*
X ₅	0.000***
X ₆	0.890

X1 = Age, X2 = Marital Status, X3 = Years spent in formal education, X4 = Household size, X5 = Average monthly income, X6=Frequency of demand for poultry products; *Significant at 10%; ***Significant at 1%.

CONCLUSION

Comprehensively, there is now a wider understanding about the household demand of poultry products in Ado Local Government Area of Ekiti State, Nigeria. The findings showed that taste and income level of the respondents determine the demand for poultry products. However, the average amount spent on poultry products was very low compared to average amount of income this is because of the relative distribution of close substitute like fish. Finally, as the household level of education increases, there is an increase in the demand for poultry products, the numbers of people living in a household (household size) also play an important role in the demand for poultry product.

Recommendation

The importance of demand for poultry products cannot be overemphasized since it is the major source of animal protein. It is therefore recommended that, the poverty status of the area should be addressed by the government, this will go a long way in increasing the living standard of the people and change the mentality that poultry meat belong to the few affluent people except on festival days. There is the need for systematic introduction of the technology for collection, processing, storage, and distribution of poultry products to the market by the government to ensure regular supply of products at stabilized market price. There should be policy measure that will ensure an increase in purchasing power of the people's income, which will invariably contribute positively to the improvement of nutritional status of the people. Government price intervention program should be introduced in order to stabilize the fluctuation of poultry products prices. Finally, there should be setting up of standards for grading and policy for appropriate pricing of product that will give remunerative price to farmer, encourage

him to continue and improve production. On the other hand the consumer will get quality processed products at a reasonable and affordable price.

Competing interests

The authors have no competing interests to declare.

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