

EVALUATION OF CONSUMER PREFERENCE FOR THE CONSUMPTION OF PROCESSED CHICKEN: A CASE STUDY OF PUBLIC SERVANTS IN ONDO STATE, NIGERIA

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ABSTRACT

The study was conducted to examine the consumer preference for consumption of processed chicken among public servants in Ondo State, Nigeria. Primary data were used for this study with the aid of a well-structured questionnaire. A multistage sampling procedure was used to randomly select 120 respondents. Descriptive statistics, Pearson correlation test and logistic regression were employed to analyze the data. The results showed that the mean age of the public servant was 39 years and about 52.5% of the workers were female. The average household size was 4, about 62.5% of the respondents were married and the public servant had an average working experience of 5 years. The results revealed that about 53.3% of the workers had preference for processed chicken and only 5.8% of the respondent consume processed chicken daily. Also, the result showed that 26.3% of monthly budget on food was spent on consumption of processed chicken, which amounted to N11,533.33. The result of acceptance of processed chicken showed that taste was the major factor to their preference and consumption of processed chicken. Also, there is a positive relationship between income and the quantity of processed chicken consumed. The logistic results showed that level of education, price of processed chicken, quantity consumed and income level were the major factors explaining the preference for processed chicken to other meat products in the area. The result of the study also showed that high price, income level and market difficulties were the main constraints to consumption of processed chicken by the public servant. It was then recommended that unemployed graduates should be encouraged to take advantage of the available demand for processed chicken meat among public servants and broiler meat marketers should be enlightened about the availability of demand for processed chicken meat among public servants.

Keywords: Chicken, consumers, logistic regression, public servants, preference, Nigeria.

1. INTRODUCTION

The Nigerian poultry sector dominated by chickens has grown rapidly over the years although its future remains uncertain. In spite of that, chicken meat consumption has continuously expanded and estimated at ₦80 billion (\$600 million) and is comprised approximately 165 million birds, which produced 290,000 MT of poultry meat in 2013. From a market size. Nigeria has the

second largest chicken population after South Africa's 200 million birds, 2013 (FAOSTAT, 2017). Chicken importation (with the exception of day-old-chicks) was banned by Nigeria in 2003, which spurred growth in domestic poultry production. Statistics from Eurostat, however, highlights that between 2009 and 2011 over 3 million MT worth of poultry products were imported into the Republic of Benin, with the preponderance of these products ending up in the Nigerian market. If this is reflected in overall assumptions, estimated poultry meat consumption in Nigeria is approximately 1.2 million MT. The Nigerian poultry sector is extremely fragmented with most of the chicken raised in 'backyards' or on poultry farms with less than 1,000 birds. However, there are a number of large commercial players in the sector most of whom are located in south-western Nigeria, in close proximity to Lagos and its large market of 17.5 million people. The preference and consumption of chicken meat can be considered as a universal phenomenon and chicken meat is greatly accepted by consumers worldwide as compared to the other meat consumption. According to Borchert (1998), chicken meat is one of the most consumed food worldwide amongst the urban and rural residents. The increase of chicken meat consumption is due to the versatility of the meat, relatively low cost in comparison to other meat, the acceptance of the chicken meat to all religions and increase in the household income. Nestle (1999) indicated that meat consumption is viewed as a reflection of favorable economic conditions.

The growth in consumption especially for processed chicken is to some extent, attributed to its perception as a healthy alternative to red meats besides the low retail prices and ease of preparation. The overall growth in demand for poultry meat would be much accelerated by the surge in human population, rise in incomes, and urbanization. This implies that the rural poor and landless in the developing countries are bound to benefit from the expanded livestock markets and improved household food security, thus alleviating the prevalent protein and micronutrient deficiencies (Nestle, 1999).

Preferential consumption exists in spite of chicken being an important source of animal protein. However, it worth being noted that consumption and preferences of processed chicken like other food products is not evenly distributed in Nigeria, according to Dauda et al. (2013). Factors such as consciousness of consumers on the nutritional and health value of chicken meat (Rankin, 2000); income level of households: the prices of meats substitute for chicken meat (Oliphant, 1997), population growth increases the absence of religious obstacles (Oliphant, 1997) and tastiness may be effective on the increase of chicken consumption.

Again, it has been observed by Adejobi et al. (2010) that increase in population growth accompanied by urbanization and increasing affluence is likely to increase the demand for high quality animal protein. Consumer preferences research, which is the scientific study of the processes consumers use to select, secure and consume products that satisfy their needs. Knowledge of consumer preferences directly affects marketing strategy. This is because of the marketing concept. The idea that processed chicken producers exist to satisfy customer needs (Winer, 2000). The producers can satisfy those needs only to the extent that they understand their customers. For this reason, marketing strategies must incorporate knowledge of consumer preferences into every facet of a strategic marketing plan (Solomon, 2002). There is a widespread recognition that consumer preferences are the key to contemporary marketing success. In order to understand the consumers' buying preference for processed chicken among Civil Servants in Ondo State, it is necessary to know the factors which influence the consumer preference and prioritize the factors. Hence, there is a genuine need to understand the factors

influencing the preferences of consumers when they shop for processed chicken. Therefore, it is against this background that the study assessed the consumer preference for consumption of processed chicken among public servants in Ondo State, Nigeria. The specific objectives are to examine the Socioeconomic Characteristics of consumers in the study area; describe the level of acceptability of processed chicken in the area; compute the proportion of household food budget taken by processed chicken in the area; determine the factor influencing the preference for processed chicken in the area; and identify the constraints faced by respondents in consuming processed chicken in the area.

Methodology

The Study was carried out in Ondo State, Nigeria. The State has 18 Local Government Areas with its headquarters in Akure as shown in Figure 1. It is located on longitude $4^{\circ} 30'$ and $6^{\circ} 00'$ E and latitude $4^{\circ} 45'$ and $8^{\circ} 15'$ North. The State has abundant land estimated to be 13.595km^2 .



Figure 1: Map of Ondo State

Source: Wikipedia.org

The data for the study were collected from a primary source with the aid of questionnaire and interview schedule. A two-stage sampling procedure was employed in selecting the respondents from the major state-owned institutions and government ministries in the State. Stage one involved the use of purposive sampling in selecting two (2) State owned institutions and two (2) government ministries in the area. Stage two involved a snow balling sampling procedure to select 60 workers from the State owned institutions and 60 workers from government ministries, therefore, formed a total number of 120 public servants which were used for the study. Descriptive statistics, logit regression model and correlation test were used for the objectives as the analytical techniques for this study.

Model Specification: The study employed the logit regression analysis to determine the significance of the number of factors which contribute to the consumer's preference for

processed chicken as also used in similar dichotomous studies (Igbalajobi et al., 2013; Ehinmowo et al., 2017; Olutumise et al., 2021). The explicit function of the model was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon_i$$

Where;

Y= preference for chicken (1- preferred, 0 - otherwise)

β_0 = Constant,

X_1 = income (#),

X_2 = Marital status (1- married, 0 - otherwise)

X_3 = Household's size, (numbers)

X_4 = Price of Chicken products (#)

X_5 = Quality of the products (rating scale),

X_6 = sex (1- male, 0- otherwise)

X_7 = Age of the respondent (years)

ε = The error term.

2. RESULTS AND DISCUSSION

Socio-economic Characteristics of the Respondents

The result in Table 1 showed that the sampled respondents for the study were largely female headed households with 52.5%. Gender of household head could influence food consumption pattern of households and this was reported by Agboola (2003) that gender was one of the socioeconomic characteristics that was significant in influencing household demand. The average age of 39.2years old was recorded. Household head could influence household consumption as indicated by Omonona *et al.* (2010), who revealed that age was a significant factor in influencing demand for chicken, palm oil, *ponmo*, yam flour and green leaves in their study on household food demand in semi-urban and rural households in south-west Nigeria. The Table also showed that about 56.7% had between 1 and 3 persons per house, with the average household size of 4 members. Ogwumike, (2002) and Amazaet al. (2009) reported that the number of persons living in a household is in close relation with consumption. Emphasizing that the total expenditure and household size are positively and directly related. The study clearly showed that majority (62.5%) of the respondents were married meaning that the decision on consumption pattern is highly influenced by couples. Result of the analysis corroborates with the findings of Akinola (2007), Ebitigha (2008) and Oludipe (2009) who stated that majority of work forces were married. Marriage can change people's diet significantly due to preferences, increase in purchasing power and relocation or urbanization. The results also revealed that all the respondents had attained and obtained at least one form of formal education or the other. This will allow them to make a rational choice and decision on expenditure on food items consumed. The result showed that majority (53.3%) of the respondent earned income of at most ₦100,000, with an average of ₦85,500.00. The findings prove that majority of the interviewed respondents are low-income earners. The high variability of household income implies a wider variation in purchasing power of households and subsequently, the households demand for food (Onyemauwaet al., 2008; Okidim, 2012) and the household income influences food consumption.

Table 1: Socioeconomic Characteristics of the Respondents

Variables	Frequency	Percentage	Mean
Sex			
Male	57	47.5	
Female	63	52.5	
Age(years)			
<30	27	22.5	
31-40	47	39.2	
41-50	28	23.3	39.2
>51	18	15.0	
Marital status			
Single	38	31.7	
Married	75	62.5	
Divorced	4	3.3	
Widow	3	2.5	
Educational Status			
Primary/Secondary Education	8	6.7	
Postsecondary Education	103	85.8	
Postgraduate	9	7.5	
Household size			
<3	68	56.7	
4-6	39	32.4	
7-10	8	6.7	3.6
>15	5	4.2	
Income			
<100000	64	53.3	
100,001-200,000	44	36.7	85,500
200,001-300000	9	7.5	
>300,000	3	2.5	
Total	120	100.0	

Source: Field Survey, 2021

Preference and Frequency of Consumption

The result revealed that 53.3% of the respondents preferred processed chicken to other meat type while 46.7% do not. 5.8% of them consume processed chicken every day, 26.7% consume it at least once a week. The findings also revealed that 33.3% consumes processed chicken once in every two weeks and 34.2% consumes it occasionally presented as reported in the Table 2.

Table 2: Distribution of Respondent by Preference and Consumption of Processed Chicken

Preference	Frequency	Percentage
Yes	64	53.3
No	56	46.7
Frequency of consumption		

Everyday	7	5.8
once a week	32	26.7
every two weeks	40	33.3
Occasionally	41	34.2
Total	120	100.0

Source: Field Survey, 2021

Processed Chicken Budget Share

The results in the Table 3 indicated that average monthly budgets for processed chicken was ₦11,533.33 while the monthly budget on Food was ₦43,883.333. The result revealed that the percentage of the monthly budget of food on processed chicken is 26.3% of the monthly household food budget share.

Table 3: Monthly Distribution Share of Processed Chicken on Food Budget Share

Average monthly budget on processed chicken (#)	Average Monthly budget on food (₦)	Percentage of the monthly budget on processed chicken and food.
11533.33	43883.333	26.3

Source: Field Survey, 2021

Acceptance of Processed Chicken among the Respondents

The result from the Table 4 showed that the taste of processed chicken was the major reason why public servants (respondents) consumes processed chicken ($\bar{x} = 4.34$) in the study area, followed by palatability of processed chicken which was accepted by 57.5% of the respondent. High nutrient /health benefit of processed chicken was ranked the third by ($\bar{x} = 3.9$) and price of processed chicken was the least accepted ($\bar{x} = 3.53$). Price determine the ability of individuals' buying power. Majority of respondent agree that they rejected processed chicken meat because it is expensive

Table 4: Distribution of Respondents by Acceptance of Processed Chicken

Level of Acceptance	Unacceptable		Slightly acceptable		Neutral		Slightly acceptable		Acceptable		Mean	Rank
	F	%	F	%	F	%	F	%	F	%		
Taste of processed chicken	4	3.3	11	9.2	12	10	6	5	87	72.5	4.34	1 st
Mouth texture and palatability of processed chicken	16	13.3	8	6.7	16	13.3	11	9.2	69	57.5	3.91	2 nd
High Nutrient/health benefit of processed chicken	8	6.7	7	5.8	28	23.3	23	19.2	54	45	3.9	3 rd

Appearance of processed chicken	14	11.7	5	4.2	37	30.8	21	17.5	43	35.8	3.62	4 th
Affordable Price of processed chicken	12	10	20	16.7	27	22.5	15	12.5	46	38.3	3.53	5 th

Source: Field Survey, 2021

Relationship Between Income and Quantity of Processed Chicken Consumed.

The result of the Pearson correlation in Table 5 revealed that there is a significant relationship between income and the quantity of processed chicken consumed among the public servant in the study area. The result showed that increase in respondent income will bring an increase in the quantity of processed chicken consume by the respondents. This implies that an increase in income will bring about 41.5% increase in the quantity of processed chicken consume by the respondents. The result is in line with the result of Ezemenar et al. (2010) who noted that as family income increases, there is a corresponding increase in consumption rate.

Table 5: Relationship Between Family Income and Quantity of Processed Chicken Consumed

		Income	Quantity consumed
Income	Pearson correlation	1	0.415**
	Sig. (2-tailed)		0.002
	N	120	120
Quantity consumed	Pearson correlation	0.415**	1
	Sig. (2-tailed)	0.002	
	N	120	120

Source: Field Survey, 2021

** . Correlation is significant at the 0.01 level (2-tailed).

Factors Influencing Preference for Processed Chicken in the Area

The results from the consumer’s preference for processed chicken in Table 6 showed that the coefficient of determination of 35.5%, which implies that the independent variables accounted for about 36% in predicting preference for processed chicken in the model. Education, price of processed chicken, quantity consumed and income were the factors that statistically and significantly affect the preference for processed chicken in the study area.

Education was statistically significant at 5% with a positive effect on choice to prefer processed chicken. This implied that an increase in respondent education level will increase the probability to prefer processed chicken by 1.04 coefficient. Price of processed chicken was also significant at 5% with a negative effect on choice to prefer processed chicken to other meat products, implying that a naira increase in the price of processed chicken, will increase the probability to consume other meat product to processed chicken by the coefficient of 4.96.

Quantity consumed had a positive effect on choice to prefer processed chicken and was significant at 1%, implying an increase in quantity consumed will increase the probability to

prefer consume processed chicken by 2.29 coefficient. Income was also significant at 1%, implying a naira increase in respondent income will increase the probability to prefer processed chicken to any other meat product by 6.23 coefficient. This result was confirmed by Laswai et al. (2005) and Silayo et al. (2004) who found out that increased in quantity consumed were mostly preferred by people.

Table 6: Binary Logistic Regression Showing the Factors Influencing Consumer’s Preference

Variables	Coefficients	S.E.	Sig.
Gender	-0.366	0.864	0.672
Age of respondents	0.026	0.033	0.430
Marital status	-0.436	0.715	0.542
Household size	-0.135	0.137	0.324
Level of Education	1.040	0.528	0.049**
Price of processed chicken	-0.496	0.500	0.047**
Quantity consumed	2.295	0.837	0.006***
Income level	6.352	0.001	0.001***
Household size	0.268	0.980	0.785
Constant	-0.254	1.205	0.445

Cox & Snell R Square 0.355

** Significant at 5 percent

*** Significant at 1 percent

Dependent variable: Preference for processed chicken (1- preferred, 0- otherwise)

Constraints to the Consumption of Processed Chicken in the Area

The result in Table 7 showed that high price of processed chicken was the major challenge faced by the respondents to consumption of processed chicken ($\bar{x} = 2.57$). in the study area, this was attributed to the cost incurred on production of broiler, followed by income level which was ranked the second constraint by ($\bar{x} = 2.57$). difficult access to processed chicken market was ranked the third constraint by the respondent in the study area, about 46.7% of them agreed it was a constraint for them in preferring and consuming processed chicken. Household size, taste and palatability, age constraint was ranked the 4th, 5th and 6th by ($\bar{x} = 2.11$), ($\bar{x} = 2.0$) and ($\bar{x} = 1.91$) respectively. A small household size will consume more of processed chicken compare to a larger household size, personal negative attitude was agreed to be a constraint by 1.9% of the respondent, norms and culture, and religion were the least constraint by ($\bar{x} = 1.72$) and ($\bar{x} = 1.29$) respectively.

Table 7: Distribution by The Constraint Faced to Consumption of Processed Chicken

Constraint	Not a constraint		Mild constraint		Constraint		Serious constraint		Mean	Rank
	F	%	F	%	F	%	F	%		
High price of processed chicken	30	25	35	29.2	12	10	43	35.8	2.57	1st
Amount of my income	26	21.7	43	35.8	16	13.3	35	29.2	2.5	2nd

Difficult accessibility to market where I can purchase processed chicken	30	25	34	28.3	48	40	8	6.7	2.28	3rd
Number of my household	48	40	35	29.2	13	10.8	24	20	2.11	4th
The taste and palatability of processed chicken	52	43.3	25	20.8	34	28.3	9	7.5	2	5th
Consuming processed chicken is not advice for my age group	66	55	18	15	17	14.2	19	15.8	1.91	6th
Personal negative attitude towards processed chicken	51	42.5	39	32.5	21	17.5	9	7.5	1.9	7th
Norms and culture of my society	64	53.3	32	26.7	18	15	6	5	1.72	8th
My religion is totally against consuming processed chicken	101	84.2	10	8.3	2	1.7	7	5.8	1.29	9th

Source: Field Survey, 2021

3. CONCLUSION AND RECOMMENDATIONS

The workers income had a significant positive effect on the quantity of processed chicken consumed, i.e., increase in respondent income will increase the quantity of processed chicken consumed. This study also revealed that 26.3% of the household monthly budget share was on processed chicken and taste of processed chicken was the major factor considered to preferring and consumption of processed chicken. Finally, this study has also revealed that the level of education, price of processed chicken, quantity consumed and income were significantly related to their choice of preferring and consuming processed chicken in the area. Based on the findings of this study, it is therefore recommended that unemployed graduates should be encouraged to take advantage of the available demand for processed chicken meat among public servants. The broiler meat marketers should be enlightened about the availability of demand for processed chicken meat among public servants. Processed chicken marketers should target higher income among educated consumers in neighborhoods/markets in order to boost the net income accrue from the enterprise. At the same time, in order to increase the consumption of processed chicken, farmer’s input resources should be subsidized to produce broiler birds at a cheaper rate so that the preference of the low-income earners could be catered for.

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