

See discussions, stats, and author profiles for this publication at: <http://www.researchgate.net/publication/274713624>

EMPIRICAL STUDY ON CONSUMER PREFERENCE FOR BEVERAGE IN ILORIN, KWARA STATE, NIGERIA

ARTICLE · JUNE 2014

DOWNLOADS

31

VIEWS

38

4 AUTHORS, INCLUDING:



[Matthew Olaniyi Adewumi](#)

University of Ilorin

33 PUBLICATIONS 26 CITATIONS

[SEE PROFILE](#)



[Opeyemi Eyitayo Ayinde](#)

University of Ilorin

33 PUBLICATIONS 13 CITATIONS

[SEE PROFILE](#)

EMPIRICAL STUDY ON CONSUMER PREFERENCE FOR BEVERAGE IN ILORIN, KWARA STATE, NIGERIA.

^aADEWUMI, M. O; ^{a1}AYINDE, O. E; ^aAJEWOLE, O. O; AND ^aOLADEJO, O. M.

^a*Department of Agricultural Economics and Farm Management University of Ilorin, Ilorin, Nigeria.*opecyemi@unilorin.edu.ng; opeayinde@yahoo.com <http://dx.doi.org/10.4314/jard.v13i1.5>

ABSTRACT

The present study on consumer preference of beverage was carried out in Ilorin Metropolis. Kwara State, with the use of a well-structured questionnaire. The analytical techniques employed in this study include; descriptive statistics, the Likert scale, the least significant difference (LSD), and the AIDS Model. The result of the Likert scale established that reasonable price, aroma, taste and flavor are the qualities that the consumers prefer the most. The result of the AIDS model showed that the family size had positive and significant effect on the share of cocoa but it had no effect on tea and coffee. The educational status of the respondents also had a positive and significant effect on coffee but no effect on tea and cocoa products. The Marshallian own price and cross elasticities showed that the beverage under study were elastic and sensitive to changes in their own prices.

Keyword: Consumer Preference, Beverage, AIDS model.

INTRODUCTION

Agriculture is the most-important sector of the national economy accounting for about 23.1% of the gross domestic production in 2006 (World bank, 2007). Agricultural sector remains the largest contributor to the Nigeria economy, accounting for over 30% of the non-oil foreign exchange earnings and employing about 75% of the active labour force of the population (FAO, 2002).

The Wikipedia free encyclopaedia defined beverage as a liquid which is specifically made for human consumption, in addition to fulfilling a basic need, drinks form part of the culture of human society (Wikipedia, 2012). The Food and Beverage industry is one of the most globally competitive industries – dominated worldwide and in Nigeria by a handful of multinational companies. In food and Fast Moving Consumer Goods (FMCGs), the growth dynamics for Africa's largest nation by population remain very encouraging. With incomes rising and more people able to afford goods, there is a lot of room for growth. In reality, only the surface of the potential of the Food and Beverage industry has been scratched. Nigeria ranked second in Business Monitor International's recently launched Food and Drink risk/reward ratings for Sub-Saharan Africa behind only South Africa and comfortably ahead of the other growth economies (BGL 2012). In the beginning, there was water-abundant, refreshing, providing everything the body needs to replenish the fluid it losses. Humans relied on it as their only beverage for millions of years. Milk came next with the advent of agriculture and domestication of animals. Then came beer and wine, coffee and tea all drunk for taste and pleasures much as the fluid they provide. The new comers soft drinks, sport and energy drinks, offer dehydration but with a hefty dose of unnecessary calories that the body may have a hard time regulating (Branske, 2011). Taking a critical look at the work of Willet *et*

al. (2002), beverages can be categorized into six levels based on calories delivered, contribution to intake of energy and essential nutrients. The levels of the classes include water which is not really a beverage but is necessary in the classification because it essentially provides everything the body needs to restore fluids lost through metabolism, breathing, sweating and the removal of waste. The other classes include: Coffee and tea which are the calorie free beverage, low fat, skim milk and soy beverages, non-calorically sweetened beverage, caloric beverages and calorically sweetened beverage which includes carbonated and non-carbonated soft drinks, fruit drinks, lemonades and other “ades”.

Willet (2001) reported that in the past, coffee was regarded as an “old fashioned” beverage for older people, with just two flavours: regular and decaf. The recent trend of Coffee consumption shows its relevance as a major beverage in the corporate and contemporary world. Tea is also considered as the cheapest beverage among the beverages available. Organisations have also started introducing low- and free-sugar drinks in an effort to satisfy customers’ demand. This is due to the rise in people’s consciousness about the negative effects of excess sugar in the body and the fact that diabetes case is on the increase, which has brought caution to consumers on their sugar intake (Nigeria Punch Newspapers 2012)

Food selection is a complex phenomenon, depending on a lot of factors which affects human behaviour in different ways resulting in the selection of some and rejection of the other products (Wadalowska *et al.*, 2008). Philip (1997) defines consumer behaviour as “all psychological, social and physical behaviour of potential customers as they become aware of the product, evaluate, purchase, consume and tell others of the products and services”. Factors that affect food choice may be divided into three main groups: product-related factors, Consumer-related factors and Environmental-related factors (Shepherd 1989).

In order to develop a model, some assumptions about the consumer’s preferences must be made. There are four assumptions, the first is decisiveness. This assumption states that; given any two commodity bundle in commodity space, the consumer must be able to rank them. The second assumption is consistent. The consumer must be consistence in preference and rankings. The third assumption is non-satiation. In other words more is always better than less. More formally, any commodity bundle with at least as much as much of one good and more of the other must be preferred. The last of the assumption is convexity, which is the most difficult to explain. It is based on the notion that as a consumer consumes more and more of a particular good, the additional utility obtained decreases (Engel *et al.*, 1990). According to (Senauer 2001) the overall preference for a product is the result of the relevant perceptual dimensions (a process affected by needs, motives, socio cultural or situational elements), the beliefs of the consumer with respects to the effectiveness of the dimensions against each other (preference function) and also changes in the demographic and socio-cultural variables, consumer attitudes and the developments of new lifestyles define the consumer –preference or food

Satisfying the consumer has been a challenge to producer due to change in technology, innovations and life style (Ayinde et al., 2013). Since the introduction of beverage,

Consumer Preference for Beverage

research methods have been concerned majorly on the health aspects (Popkin 2007) with little attention given to its market potential (Willet *et al.*, 2002, 2006). Market potential is influenced by factors such as consumers' eating habits, access to the product, knowledge and consumers preferences. As a result, little is known about beverage consumption and preferences (Ayinde *et al.*, 2010). Furthermore, there is need to understand why consumers make the purchases they make and the factors influencing their purchase. Therefore this study answers the following questions; what brand of beverage do consumers prefer; What quality does consumers prefer in beverage; What are the factors affecting the expenditure on beverage; Is the demand for beverage price elastic?

METHODOLOGY

The study area was Ilorin in Kwara State. The state is between latitude 7°41' N and 9°3' N of the equator and longitude 2°3' E and 6°25' E of the equator (Kwara State Diary 2008) with a population of 2.37 million people (NPC 2008). Ilorin metropolis was purposively sampled being the capital of the state and also because of the availability of important information for the sampling frame. Ilorin metropolis was sub-divided into three sectors to carefully examine the consumer preference for beverage. The sectors are: the educational sector comprising of teaching and non-teaching staffs in higher institutions, the formal civil service sector comprising of those that work for the government in the Federal secretariat, ADP (Agricultural Development Programme), and the informal sector comprising of those that might not necessarily be working under the Federal Government or State Government but are self-employed or unskilled workers. Out of the four academic institutions in Ilorin, University of Ilorin was chosen as one of the study area being the largest and only Federal institution in the state, the Federal secretariat was randomly chosen since it comprises workers from different field like Medical practitioners and immigration officers among others, for the informal sector market women, road side mechanic, photographers and so on were used as respondents. Data of beverage examined include: Coffee, Tea and Cocoa products and was collected with the use of a well-structured questionnaire administered to 120 respondents. The statistical data analysis methods were descriptive analysis, ranking method taking into considerations qualities of beverages such as aroma, taste, flavor, brand image. Least significance difference (LSD) was used to test the ranking for statistical significance using the method represented in pair-wise comparism at 5% level of significant using the model;

$$\begin{aligned} \text{LSD} &= t_{\alpha/2} \sqrt{\text{MSE} (1/n_1 + 1/n_2)} \\ \text{Where LSD} &= \text{least significant difference} \\ \text{MSE} &= \text{Mean Square Error} \\ n &= \text{type of beverage being compared (1,2)} \end{aligned}$$

Almost Ideal Demand System (AIDS) model was used to analyze the factors affecting the expenditure on beverage and the effect of price of beverage and income on consumer demand. The relationship of consumer's income and prices of different items on the portion of total expenditure can be expressed as:-

w_i	=	$a_0 \sum d_{ijk} \eta_k + \sum y_{ij} \ln(p_j) + \beta \ln(x/p) + \mu_i$
w_i	=	the budget share of goods i
a_0	=	average value of budget share of item in the absence of price and income effects.
B_i	=	effect of real income on the budget share of item i
x	=	the total expenditure of the goods in question
p_j	=	price of goods j
p	=	trans log price index
d_{ijk}	=	associated parameters and demographic variables respectively
μ_i	=	random disturbance assumed with zero mean and constant variance.

for all $i=1,2,3$ which are coffee, tea and cocoa respectively.

k = Age and family size respectively

η = Educational status

p_j = price of goods $j(1,2,3)$

And the elasticity can be computed as

Income elasticity: $\eta_{ij} = 1 + \beta_i/w_i$

Own price elasticity: $\eta_{ij} = -d_{ij} + Y_{ij}/w_i$

Where $d_{ij} = 1$ for $i = j$ and $d_{ij} = 0$ for $i \neq j$

RESULTS AND DISCUSSION

The research found that 59.2% of respondents were brand loyal who will continue to consume a particular beverage type because of its brand. About 40.8% will consume or prefer a beverage type to another not only because of its brand (Table 1). This also agree with the findings of Mei-Mei et al (2006)

Nescafe is a popular coffee brand in Nigeria, table (2) shows that all respondents who consumed coffee choose Nescafe as the brand they mostly preferred. This proportion represented about 50.8% of the total respondents. This is possibly due to its mild caffeine content. Caffeine is noted for its ability to increase alertness, speeds up heartbeat and breathing rate. (Sowunmi et. al 2009).

Tea has been reported as a good source of dietary antioxidant flavonoids has positive effect on endothelial function. (Poulter et.al 2003), table (3) reveals that 66.7% of the respondent's most preferred tea is Lipton, while 23.3% would always go for Top tea brand. Also 9.2% and 0.8% of the respondents showed their preference for Green tea and Queen tea brand respectively. This preference might be as a result of advertisement of Lipton as compared to other brands. Considering the respondents preference for cocoa products as shown in table (4) about 36.7% preferred Bournvita most while 31.7% revealed their preference for Milo brand. Ovaltine got the preference vote of about 16.6% of the respondents. Richoco and Pronto brands were preferred by about 11.7% and 3.3% respectively of the respondents. This is probably because Bournvita is the only cocoa product still endorsed by the Nutritional Society of Nigeria. Table (5) shows that about 60% of the respondents mostly consume cocoa products while about 28.3% and 7.5% of the respondents chose tea and coffee respectively as the type of beverages they mostly consumed while table (6) shows equal proportion of 24.2% each

Consumer Preference for Beverage

consumed beverages on daily and weekend basis respectively. 25% of the respondents consumed beverages three times a week while 19.1% and 7.5% consumed beverages twice and once a week, respectively.

Preference for a product is dependent on a number of factors; the response of the respondents on preference as shown in table (7) shows that reasonable price, taste, aroma, flavor and attractive packaging were most preferred by consumers of coffee, while influence by others, retailers influence, brand image, effective advertisement, timely availability and celebrity endorsement were least preferred; For Tea as shown in Table (8), reasonable price, taste, flavor, timely availability and brand image were most preferred by consumers of tea, while attractive packaging, aroma, effective advertisement, celebrity endorsement, influence by others and retailers influence were least preferred. In Cocoa products; flavor, reasonable price, aroma, taste and attractive packaging were most preferred, while timely availability, brand image, retailers influence, influence by others, effective advertisement and celebrity endorsement were least preferred as shown in Table (9). These preference results agrees with the findings of Mohammed (2008); Bennett and Thiele (2004); Romaniuk and Sharp (2003).

The rank results as presented by table (10) revealed that respondent prefer cocoa products to tea while further investigation using the LSD shows that Cocoa products and Tea are the most preferred. Table (11)

The values of the R^2 coffee, tea and cocoa are 0.375, 0.842 and 0.169 respectively. From the result; Table (12), it was shown that for each of the budget share equations about 37.53%, 84.14% and 16.85% changes in the budget shares of coffee, tea and cocoa products respectively are as a result of changes in the independent variables. The Durbin Watson was used to test for the adequacy of the model and it showed that the model was adequate. It was discovered that household characteristics such as educational level of the household head, household size and beverage characteristics such as prices of coffee, tea and cocoa product are very impact and in determining budget allocation to beverage.

Table (13) shows the estimates of the Marshallian cross price elasticities of Tea and Cocoa products, in response to changes in the price of Coffee show prevalence of substitution between Coffee and Tea, Coffee and Cocoa products, a 10% rise in price of Coffee, for example, will increase demand for Tea and Cocoa products by 22.05% and 0.7% respectively. The estimates of cross price elasticities of Coffe and Cocoa product to change in the price of tea indicated that 10% rise in the price of tea will increase household demand for Coffee and Cocoa products by 10.3% and 13.2% respectively. For Cocoa products, the estimates of cross price elasticity indicated that a 10% rise in price of Cocoa products will cause household to increase demand for Tea and Coffee by 10.3% and 0.7% respectively.

CONCLUSION

It can be concluded from the finding of this research that the consumption of beverage is influenced by a host of socio economic factors. However not all factors significantly influence the consumption. The study revealed that 60% of the respondents preferred cocoa products, 28% preferred tea, 8% preferred coffee and 4% preferred other types of

beverages. Using the ranking methods, the qualities consumers preferred was described as well as the least preferred qualities. The AIDS model showed the prevalence of substitution between coffee and cocoa products and coffee and tea as a result of changes in price.

RECOMMENDATION

It is hereby recommended that if consumer preference is to be satisfied, the manufacturer of beverages must give more attention to reasonable price, taste, aroma and flavor of beverage since these quality attributes were the most preferred among all other quality under study

REFERENCES

Ayinde, O. E. Adewumi, M.O. and Folorunsho, W. O (2010) Consumer preference of Banana (Musa Spp.) in Kwara State, Nigeria in *Banana and Plantain in Africa: Harnessing International Partnership to increase research impact Acta Horticulturae*: 89-93

Ayinde, O.E.; Abduolaye, T. Olaoye, G. and Akangbe, J. A (2013) Gender and Innovation in Agriculture: A Case Study of Farmers' Varietal Preference of Drought Tolerant Maize in Southern Guinea Savannah Region of Nigeria. *Albanian Journal Agricultural. Science* 12(4) : 617 – 625.

Benett, R. and Rundle – Thiele, S. (2004). Customer satisfaction should not be the only goal. *Journal of Services Marketing* 18(7): 514-523

BGL (2012)“Economic note on Nigeria’s Consumer space” **Investigative Research Report** published by BGL group : 3
<http://research.bglgroupng.com/Documents/EconomicNote/ECONOMIC%20NOTE%20-Nigeria%27s%20Consumer%20Space.pdf> Accessed on 12th October 2013

Branske, E. (2011), The origin of soft drinks, from
<http://www.helium.com/items/2136960-> accessed 24/11/2012

Engel JF, Blackwell RD, Miniard PW (1990). “Consumer Behavior”, New York; Dryden Press

Food and Agriculture Organisation (FAO) (2002). Food and Agriculture Organisation year book Volume 56.

Kwara State Ministry of Information (2002) Kwara State Diary 2002. 1-10.

Mei-Mei, L., Monstsun, C., Ka-leung, M. and Wing-sun, L. (2006) Brand loyalty of sportswear in Hong Kong, *Journal of Textile and Apparel Technology and Management*, 5 (1), 15.

Mohammed, I. (2008) Customer Satisfaction in Mobile Phone service in Bangladesh, *World Journal of Management*, (2): 8

Consumer Preference for Beverage

Nigerian National Population commission (2008) Nigerian 2007 Population Census Report. 1-10

Nigerian Punch Newspaper 2012. <http://www.punchng.com/feature/men-who-consume-sugary-drink-risk-heart-disease-study/> and <http://www.punchng.com/spice/lifestyle-diets/sugary-food-endangers-health/>. Retrieved 14/08/2012 by 12:54pm

Popkin BM (2007). Understanding global nutrition dynamics as a step towards controlling cancer incidence. *Nature Reviews Cancer* 7:61–67

Poulter, J., Bolton-Smith C., and Rietveld A., (2003). Is there any evidence that tea drinking impacts on cardiovascular health in the UK? *Brit. J. Cardiol.*, 10 (4): 281-286

Romaniuk, J. and Sharp, B. (2003) Brand salience and customer defection in subscription markets *Journal of Marketing Management* 19(2): 25-44

Seneur, B. (2001). The food consumer in the 21st century. New research perspectives. Working paper 01-03.25. The Retail Industry Center. University of Minnesota, Saint Paul, Minnesota, USA

Shepherd, R. (1989): Factors influencing food preferences and choice. In Shepherd, R. (Ed.) *Handbook of the Psychophysiology of Human Eating*, Wiley, Chichester, pp 3-24.

Sowumi F.A., Aroyehun S.O., Okoruwa V.O., Biobaku M.O. (2012) . “Tea Consumption in Ogun State Nigeria: Prevalence and Characteristics of Consumers” *Current Research Journal of Social Sciences* 1(1): 24-30

Wadolowska, L., Babicz-Zielinska, E., Czarnocinska, J.(2008): Food choice models and their relation with food preferences and eating frequency in the Polish population: POFPRES study. *Food Policy* (33) 122-134

Wikipedia free encyclopaedia (2012) available at <http://en.wikipedia.org/wiki/Drink> retrieved 12th Aug 2012 10am

Willett WC (2001). *Eat, Drink, and Be Healthy*. New York: Simon and Schuster,

Willett WC (2002), McCullough ML, Feskanich D, Stampfer MJ, Giovannucci E, Rimm EB, Hu FB, Spiegelman D Hunter DJ, Colditz GA. Diet quality and major chronic disease risk in men and women: moving toward improved dietary guidance. *Am J Clin Nutr* 2002;76:1261-1271

Willett WC 2006, Shai I, Jiang R, Manson JE, Stampfer MJ, Colditz GA, et al. Ethnicity, obesity, and risk of type 2 diabetes in women: a 20-year follow-up study 17. *Diabetes Care.*; 29(7):1585-90.

World Bank (2007). “World Development Report 2008: Agriculture for Development.” Washington, D.C.: World Bank.

Table 1 Brand Loyalty

Are you brand loyal ?	FREQUENCY	PERCENTAGE (%)
Yes	71	59.2
No	41	40.8
TOTAL	120	100.0

Source: Filed survey, 2012

Table 2: Coffee Preference

Most preferred coffee product	Frequency	Percentage (%)
Nescafe	61	50.8
No coffee	59	49.2
TOTAL	120	100.0

Source: Filed survey, 2012

Table 3: Tea Preference

Most preferred tea product	Frequency	Percentage (%)
Nescafe	61	50.8
Lipton	80	66.7
Top tea	28	23.3
Green tea	11	9.2
Queen tea	1	0.8
TOTAL	120	100.0

Source: Filed survey, 2012

Table 4: Cocoa Product Preference

Most preferred cocoa product	Frequency	Percentage (%)
Bournvita	44	36.7
Milo	38	31.7
Ovaltine	20	16.6
Pronto	4	3.3
Richoco	14	11.7
TOTAL	120	100.0

Source: Filed survey, 2012

Table 5: Beverage Consumption

Beverage type most consumed	Frequency	Percentage (%)
Coffee	9	7.5
Tea	34	28.3
Cocoa products	72	60.0
Others	5	4.2
TOTAL	120	100.0

Source: Filed survey, 2012

Consumer Preference for Beverage

Table 6: Frequency of consumption

Frequency of beverage consumption	Frequency	Percentage (%)
Once a week	9	7.5
Twice a week	23	19.1
Thrice a week	30	25.0
Weekend	29	24.2
Everyday	29	24.2
TOTAL	120	100.0

Source: Filed survey, 2012

Table 7: Quality preference of coffee

Quality preference	Likert Score	Rank
Aroma	341	3 rd
Flavour	326	4 th
Taste	350	2 nd
Brand image	282	8 th
Retailers influence	285	7 th
Influence by others	298	6 th
Reasonable price	373	1 st
Timely availability	266	10 th
Attractive packaging	302	5 th
Effective advertisement	271	9 th
Celebrity endorsement	233	11 th

Source: Filed survey, 2012

Table 8: Quality preference of Tea

Quality preference	Likert Score	Rank
Aroma	308	7 th
Flavor	334	3 rd
Taste	346	2 nd
Brand image	316	5 th
Retailers influence	218	11 th
Influence by others	236	10 th
Reasonable price	358	1 st
Timely availability	318	4 th
Attractive packaging	313	6 th
Effective advertisement	283	8 th
Celebrity endorsement	246	8 th

Source: Filed survey, 2012

Table 9: Quality preference of Cocoa products

Quality preference	Likert Score	Rank
Aroma	391	3 rd
Flavour	411	1 st
Taste	372	4 th
Brand image	331	7 th
Retailers influence	329	8 th
Influence by others	311	9 th
Reasonable price	397	2 nd
Timely availability	332	6 th
Attractive packaging	338	5 th
Effective advertisement	284	11 th
Celebrity endorsement	285	10 th

Source: Filed survey, 2012

Table 10 Rank Result

Beverage	Likert Score	Rank
Cocoa products	436	1 st
Coffee	338	3 rd
Tea	381	2 nd

Source: Filed survey, 2012

Table 11 LEAST SIGNIFICANT DIFFERENCE (LSD) RESULT

BEVERAGE	$\mu_a - \mu_b$	LSD (5%)
Coffee and Cocoa	0.1374	34.56%
Coffee and Tea	0.6885	37.02%
Cocoa and Tea	0.5511	40.46%

Source: Filed survey, 2012

Table 12 Factors affecting the expenditure on beverage

	w-Coffee	w-Tea	w-Cocoa
Constant	0.015 (0.066)	0.431 (0.361)	0.740 (0.533)
Family size	0.005 (0.007)	0.032 (0.513)	0.917 (0.392)*
Age	0.001 (0.042)	0.051 (0.044)	0.471 (0.381)
Educational status	0.015 (0.003)*	0.032 (0.066)	0.148 (0.137)
lnTBE	0.421 (0.410)	0.702 (0.331)*	0.821 (0.329)*
Cocoa-product price	0.019 (0.017)	0.521 (0.215)*	-0.131(0.015)*
Coffee price	-0.017 (0.003)*	0.321 (0.042)*	0.048 (0.078)
Tea Price	0.311 (0.127)*	-0.412 (0.198)*	13 (0.143)*
R ²	0.375	0.842	0.169
Dw	1.931	1.812	1.798
F	20.12	68.21	50.17
β coffee	0.016		
β Tea		0.258	
β cocoa			0.004

Source: Filed survey, 2012

Consumer Preference for Beverage

Table 13: Marshallian Own Price and Cross Elasticities

QUANTITY CHANGES	PRICE CHANGES		
	Coffee	Tea	Cocoa
Coffee	-1.138	1.015	0.073
Tea	2.205	-2.724	1.037
Cocoa	0.070	1.321	-1.230

Source: *Filed survey, 2012*