

Dimensions of Vended Food and Consumption Patterns among Auto-Technicians in Ibadan Metropolis

Alagbe Akintunde

Department of Business Administration
Caleb University Imota, Lagos

Abstract

One of the primary needs of any individual rich or poor is food which keeps him going and energizes him for daily activities and for sustainability especially in Nigeria where majority are technicians and labourers who do manual jobs to survive. This has led to high demand for vended foods of an increasing population leveraging marketers to develop marketing policy and strategies that can enhance healthy food distribution and understanding of food consumption patterns of the consumers. This study evaluated the influence of food dimensions on consumption patterns of vended foods among auto-technicians in Ibadan metropolis. The survey research design was employed with structured questionnaire. The population comprised of 5,468 registered members of National Auto and Technical Association (NATA) in 11 Local Government Areas in Ibadan metropolis adopting stratified random sampling technique, 2,014 members were selected using Paller-Calmorin and Calmorin (2007) scientific method. Data generated were analysed using frequency, mean, standard deviation and regression analysis at 0.05 alpha levels. Result indicated that consumption of street foods by auto-technicians in Ibadan is significantly influenced dimensions of street foods ($F_{.stat} = 286.673$; $R^2 = 0.141$; $p(0.000) < 0.05$). The study recommends that food vendors should pay adequate attention on hygiene during preparation and distribution of the foods to customers to avoid health issues emanating from food poisons. There is need for government assistant in construction of malls/kiosks where food vendors can hire at a minimal fee. This will generate steady income to the government and lead to creation of employment hence there shall be employees in charge of these kiosks and malls.

Keywords: Consumption patterns, Dimension of food attributes, Vended foods, Auto-technicians and Marketing strategy.

Corresponding Author: Alagbe Akintunde

Background to the study

All over the world food consumption has been a subject of research as reported by Obayelu, Okoruwa and Oni (2009). It is especially meaningful in Nigeria where food expenditures account for a relatively large share of household income. Studies on food consumption have largely focused on the question why do individuals eat the foods they eat and in what mix and frequency? (European Food Information Council, 1998; Conner & Armitage, 2002; Costa & Jongen, 2006). This may seem a rather simple question, but the answer is open and complex. An individual does not have to be hungry to eat and some influences also may not always be opened to introspection. Studies on food choice and consumption also bother on the aspect of human nutrition, which is an interdisciplinary science that tends to show the relationship between man, his environment and his food (Wasink, 2004; Witchell & Sheeshka, 2011).

Marketers have for long recognized that consumers seek product(s) they like, that is, what gives them satisfaction (Alagbe, 2015). In addition, take action to obtain such product(s). Identifying those factors that are most important to a person's decision about performing a specific behaviour can aid product development and promote desirable behaviours (Rajagopal, 2010). Health professionals were primarily concerned with how to understand the determinants of food choice and food consumption patterns as a foundation for better nutrition and health education, as well as counseling, which includes developing food plans that are acceptable and appealing to their clients and patients (Amair & Akhtar, 2012; Pieters, Guariso & Vandeplas, 2013).

Food then is a focus of symbolic activity about man's sociality and place in the society. Today, we are faced with many food products and diverse eating situations and habits that can make food choice decision more complex (Badler & Lawrence, 2009). Adequate food intake also plays a significant role in the maintenance of health and longevity. Therefore, appropriate food consumption is an essential factor in maintaining body functioning. It equally influences the rate of physiological well being (Westerterp, 2006).

Statement of the Problem

In a developing country like Nigeria, the consumption patterns are skewed towards food i.e. food accounts for a higher proportion of total expenditure, while in developed countries the opposite is the case (NBS, 2010). The more developed a society becomes the less it spends on food and the more it spends on non-food items also. Today, an unmistakable new pattern of food consumption is emerging in Nigeria. The country is witnessing an upsurge in the number of food outlets. At present, there are also sizeable number of street hawkers of all kinds of food and food products. They are so conspicuous that it would be difficult to miss them (Nigerian Business Info. Com. 2000).

the dimension which vended foods has assumed in Nigeria also affects consumer buying decisions thus posing a great marketing challenge (Sowunmi, Aroyeun, Okoruwa & Biobaku, 2009). The market expenditure of street food accounted for N15.7 trillion per year, representing 64.7 percent household expenditure at national level, while 22.7 percent of the highest overall household expenditure is recorded for South-West region and

vended foods accounts for approximately 25 percent in Ibadan (NBS, 2010) – revealing a large and relatively untapped market. There has been a great reliance by marketers on the use and application of the marketing mix variables that is 4Ps - Product, Place, Promotion and Price in determining the consumer buying decisions.

Objective of the Study

To determine the effect of dimensions of vended foods and consumption patterns among auto-technicians in Ibadan.

Research Question

What effect do dimensions of vended foods have on consumption patterns among auto-technicians in Ibadan?

Research Hypothesis

Dimensions of vended foods have no significant effect on consumption patterns among auto-technicians in Ibadan?

Literature Review

Food Consumption Patterns in Nigeria

Food consumption in Nigeria according to Akpan, Patrick, Udoka and Okon (2013) has been very dynamic over the years. Some of the factors contributing to this change include cultural and agricultural practices, education, improved standards of living and population movement/urbanization. In the traditional Nigerian society, farm families cultivated starchy roots, tubers, cereals, legumes, fruits and vegetables. These foods made up the family food basket and were occasionally supplemented by wild and domesticated animals. Legumes, cereals, wild herbs, fruits and vegetables made significant contributions to nutrient intakes of the population, especially during the dry season as they were normally preserved and stored ready for such seasons. Nnanyelugo, Ene-Obong and Ngoddy (1985) also found that cowpeas and other legumes contributed remarkably to the protein, iron, thiamin and niacin intake of rural population especially during the pre-harvest wet season. Wild herbs and vegetables were used not only as food but as medicine for various types of ailments. So, basically the traditional Nigerian diets were plant-based.

Foods were usually prepared in their fresh forms and eaten immediately without much preservation for a longer time. These practices are, however, no longer maintained. During the colonial days, the cultivation of cash crops affected agriculture and eating habits (Arulogun & Owolabi, 2011). Matters were made worse with the “oil boom” and consequent urbanization. With the foreign exchange accruing from oil and high value of the naira, importation of food and other products artificially became cheaper in relation to domestic production. The varied traditional foods are now old fashioned and have given way to imported foods. A typical example is the importation of rice, which has reduced local production and replaced the more nutritious local rice (Ofada, Adani, Abakaliki rice, etc) and other local staples (Enugu & Nwaegbure, 2001).

Dimensions of Vended Foods in Nigeria

Street hawking in urban metropolis of Nigeria is part of everyday life. Children, mostly boys and girls between age seven and above, are even involved in the practice, oftentimes chasing moving vehicles in traffic on highways, but adult men rarely carry trays on their heads and usually settle as newspaper vendors, deal on sports articles, and fashion wares (Legg, Kormawa, Maziya-Dixon, Okechuwkwu, Ofodile & Alabi, 2012). Most women are full time hawkers selling all sorts of foods and sometimes by the street corners, on bridges and along junctions. There is no argument that the reason for such business lifestyle is purely economic hardship; however, many are of the view that they constitute a nuisance to the society (Legg, Kormawa, Maziya-Dixon, Okechukwu, Ofodile & Alabi, 2012). Street hawking is an economic and environmental issue. In recent times, government has been intensifying efforts to curb or put an end to street hawking (Begum, et al. 2010). However, with rapid increase in population, surge to urban cities, continuous inflation, un-abating unemployment/unemployment rates and absence of good governance, street hawkers may not bulge under government policies to quit their source of livelihood.

The range of foods sold by street food vendors in specific contexts varies. Within the Ibadan metropolis, food street hawkers sell more than one kind of food product, although many specialize in certain food types, such as rice-or bean-based dishes (Adewale, 2005). Specialization in single type of food was practiced only by a minority of street food vendors (Winarno & Allain, 2009). Gender specialization was not so pronounced amongst street food vendors, although there was a trend for men to specialize in wheat-based noodle dishes and women in rice dishes (FAO & FBFI, 1991). In the FAO and FBFI study, it was found that the preparation and sale of traditional foods tend to be the preserve of women in Nigeria and India. The cost of street foods is usually competitive compared with that of foods purchased from larger food establishments, such as restaurants and fast food outlets. Also, due to sometimes high costs of fuel and ingredients in urban contexts, economies of scales can make street food cheaper than the same food prepared at home (FAO, 2011).

Theoretical Framework

Social Cognitive Theory

Social Cognitive Theory is developed by Bandura (1986). This theory emanated from the field of psychology. The main components of this theory are environmental factors, personal factors and behavioural factor (Bandura, 1986; Reynolds et al, 1999). On the other hand, social cognitive theory is of some interest. It has been lauded and reported by Reynolds et al, (1999) to be well-suited to the study of individual's eating behaviour. For that reason, Social Cognitive Theory is chosen to incorporate the various aspects of this study's goals by focusing on the psychological influences on informal workers' food consumption patterns. Hence, this theory provides a basis for studying how different psychological variables interact and explain both direct and indirect modeling of food behaviours and their roles in determining informal workers' food consumption patterns.

Empirical Framework

Dimensions of Vended Foods and Consumption Patterns

Several studies on determinants of food consumption patterns have been carried out on dimensions of vended foods (Ohiokpehai, 2003; Von & Mahoane, 2006 examined differential associations of fast food and restaurant food consumption and reported an association between takeaway and fast-food consumption and development of health conditions. Another multilevel analysis carried out by Thornton, Bentley and Kavanagh (2009) examined fast food purchasing and access to fast food restaurants from 49 census collector districts in metropolitan Melbourne, Australia. The study revealed that purchasing fast-food on a monthly basis was related to the variety of fast food restaurants. The study also deduced that density and proximity were not significant predictors of fast food purchasing. Also, a study of the fast food habits of African-Americans has confirmed the negative effects that eating fast food can have on the diet. After surveying roughly 650 college students, Satia, Galank and Seigga-Riz (2004) reported that higher frequency of fast food consumption was significantly associated with lower vegetable intake and higher fat intake. Similar findings have also been reported amongst Spanish population (Schroder, Fito, Covas & Investigators, 2007).

Methodology

Data required for this study was gathered from two sources, the first from a field study and the second from text books, journals and past studies. The study population was comprised of all registered auto-technicians of National Auto and Technical Association (NATA) in Ibadan metropolis. Ibadan metropolis was comprised of eleven (11) Local Government Areas (LGAs) (Adeyeye, 2006). According to NATA (2014), there were a total of five thousand four hundred and sixty-eight (5,468) registered members in these LGAs in Ibadan metropolis as shown below:

Table 1: List of Registered NATA's members in each LGAs in Ibadan Metropolis

S/No.	LGAs	No. of Registered NATA members
1	Ibadan North	655
2	Ibadan North-East	570
3	Ibadan North-West	340
4	Ibadan South-East	635
5	Ibadan South-West	778
1	Akinyele	360
2	Egbeda	300
3	Oluyole	820
4	Ona-Aara	490
5	Iddo	275
6	Lagelu	245
	11	5,468

Source: Adopted from Alagbe, (2016)

This study adopted the stratified sampling technique. This method was used to classify the LGAs into strata (that is, Inner and outer cities of Ibadan) and this gave five (5) LGAs in the inner city of Ibadan and six (6) LGAs in the outer city of Ibadan (See Table 2). In determining the sample size, the formula of Paler-Calmorin and Calmorin (2007) was adopted in this study. The sample size was computed as:

$$S_s = \frac{NV + [Se^2(1-p)]}{NSe + [V^2 p(1-p)]}$$

S_s = Sample size
 N = Total number of population = 5,468
 V = Standard value (2.58) at 1% level of probability with 0.99 reliability
 Se = Sampling error (0.01)
 p = Largest possible proportion (0.50)

Therefore, the total sample for this study was 2,014 respondents. And proportionate sampling method was adopted to finally select the sample size from the population.

Table 2: Computed Samples for Population at 0.01 Level of Probability to a Proportion of 0.50

Ibadan	S/No.	LGAs	No. of Registered NATA members	Scientific determination of sample size
Inner City	1	Ibadan North	655	206
	2	Ibadan North-East	570	200
	3	Ibadan North-West	340	173
	4	Ibadan South-East	635	204
	5	Ibadan South-West	778	213
Outer City	1	Akinyele	360	176
	2	Egbeda	300	166
	3	Oluyole	820	215
	4	Ona-Aara	490	193
	5	Iddo	275	161
	6	Lagelu	245	107
Total		11	5,468	2014

Applying the modified Likert scale where 6= strongly agree, 5= agree, 4=fairly agree, 3= fairly disagree, 2= Disagree and 1= strongly disagree and this will contain questions relating to the study variables: Dimension of vended foods and Consumption patterns of food vendors.

In this study, data collected were analysed using both descriptive statistics and inferential statistics. Descriptive statistics of frequency distribution, percentage, mean and standard deviation were used to analyse the demographic information and research questions. Afterward, inferential statistics of multiple regression analysis was used to test the determinants of food consumption patterns among auto-technicians in Ibadan-Oyo State.

Table 3. Influence of Dimensions of Vended Foods on Consumption Pattern among Auto-technicians in Ibadan

S/No.	Dimension of Vended Foods	SD	D	FD	FA	A	SA	\bar{X}	Std.D
1	Most vended foods are cheaper than food prepared at home	-	163 (9.3%)	-	5 (0.3%)	394 (22.5%)	1186 (67.8%)	5.40	1.17
2	Most hawkers of street foods have a regular customer.	-	168 (9.6%)	-	-	427 (24.4%)	1153 (66.0%)	5.38	1.17
3	Most street food vendors charge lower prices to customers.	163 (9.3%)	-	-	5 (0.3%)	427 (24.4%)	1153 (66.0%)	5.29	1.44
4	Most street foods are hawked in bus, train stations, markets and hospitals.	-	165 (9.4%)	5 (0.3%)	-	608 (34.8%)	970 (55.5%)	5.18	1.43
5	Street food vendors have group or association.	5 (0.3%)	377 (21.6%)	-	-	213 (12.2%)	1153 (66.0%)	5.01	1.62
6	Hawking of street foods differ according to location or areas	163 (9.3%)	211 (12.1%)	5 (0.3%)	-	216 (12.4%)	1153 (66.0%)	4.92	1.80
7	Children, mostly boys and girls between age seven and above involve in the selling of vended foods	3 (0.2%)	162 (9.3%)	-	-	1116 (63.8%)	467 (26.7%)	4.90	1.32
8	Most street foods are hawked on the street corners, bridges and along junctions	4 (0.3%)	164 (9.4%)	-	-	1115 (63.8%)	465 (26.6%)	4.90	1.33
9	Vended foods constitute nuisance to the society the way they are sold	182 (10.4%)	165 (9.5%)	-	-	429 (24.5%)	972 (55.6%)	4.86	1.75
10	The extent to which street foods are processed varies	164 (9.4%)	-	421 (24.1%)	-	12 (0.7%)	1151 (65.8%)	4.80	1.76
11	Most food street hawkers sell more than one kind of food product	-	163 (9.3%)	5 (0.3%)	-	394 (22.5%)	1186 (67.8%)	4.79	1.27
12	Nearly all the vended foods are carried on trays	343 (19.6%)	2 (0.1%)	-	3 (0.2%)	428 (24.5%)	972 (55.6%)	4.77	1.91
13	The sale of vended foods is the most visible part of the trade	344 (19.7%)	-	4 (0.3%)	-	432 (24.7%)	968 (55.4%)	4.77	1.91

S/No.	Dimension of Vended Foods	SD	D	FD	FA	A	SA	\bar{X}	Std.D
14	Hawking of street foods is an economic and environmental issue	343 (19.6%)	-	3 (0.2%)	-	710 (40.6%)	692 (39.6%)	4.61	1.84
15	Most street food vendors employ one or two paid assistants	183 (10.6%)	377 (21.6%)	-	-	213 (12.2%)	974 (55.7%)	4.50	1.98
16	Most street food ingredients are hawker specific	444 (25.4%)	-	5 (0.3%)	-	427 (24.4%)	872 (49.9%)	4.48	2.08
17	Most women are full time hawkers selling all sorts of street foods	442 (25.3%)	-	2 (0.1%)	3 (0.2%)	432 (24.7%)	869 (49.7%)	4.48	2.07
18	Most street food vendors sell their food from mobile carts, baskets, trays, and umbrella	442 (25.3%)	-	-	5 (0.3%)	613 (35.1%)	688 (39.4%)	4.38	2.02
19	Most street foods are household-based food	181 (10.4%)	589 (33.7%)	2 (0.1%)	-	3 (0.2%)	973 (55.7%)	4.13	2.12
20	Vended foods are easily available	281 (16.1%)	163 (9.3%)	-	-	1299 (74.3%)	5 (0.3%)	4.10	1.60
21	Street food vendors frequently chase moving vehicles to sell in traffic on highways	623 (35.6%)	-	3 (0.2%)	-	432 (24.7%)	690 (39.5%)	3.97	2.25
22	Street foods from small stalls, kiosks and push charts were the predominant type	281 (16.1%)	377 (21.6%)	5 (0.3%)	-	904 (51.7%)	181 (10.4%)	3.81	1.79
23	Large numbers of street food vendors are single persons	465 (26.6%)	377 (21.6%)	-	-	213 (12.2%)	693 (39.6%)	3.69	2.21
24	Most street food vendors provide an outlet for foods processed by others	444 (25.4%)	211 (12.1%)	214 (12.2%)	-	871 (49.8%)	8 (0.4%)	3.38	1.74

Note: \bar{X} =mean, Std.D=Standard deviation, SA=Strongly Agree, A=Agree, FA=Fairly Agree, FD=Fairly Disagree, D=Disagree, SD=Strongly Disagree

Source: Researcher's Field Survey Result (2015)

Table 3 above reveals the influence of dimensions of vended foods on consumption pattern of auto-technicians in Ibadan. Most auto-technicians sampled for this study strongly have the same opinion that most vended foods are cheaper than food prepared

at home and this has highest mean rating score ($X=5.40$, Std.D=1.17). The result reveals that most street food are easily available ($X=4.10$, Std.D=1.60), household-based food ($X=4.13$, Std.D=2.12), regularly hawked by children between age seven years and above ($X=4.90$, Std.D=1.32) in bus stations, train stations, markets, hospitals ($X=5.18$, Std.D=1.43) and in street corners, bridges and along junctions ($X=4.90$, Std.D=1.33). The result reveals that most street food ingredients are hawker specific ($X=4.48$, Std.D=2.08), most of the street food vendors have regular customer ($X=5.38$, Std.D=1.17) and charge lower prices from their customers ($X=5.29$, Std.D=1.44). Most auto-technicians consent that street food vendors have groups or associations ($X=5.01$, Std.D=1.62) therefore, hawking of street foods differs according to location or areas ($X=4.92$, Std.D=1.80). Other dimensions of vended foods as agreed by the auto-technicians are that street foods are processed in different ways ($X=4.80$, Std.D=1.76) and sometimes vendors chase moving vehicles to sell in traffic on highways ($X=3.97$, Std.D=2.25) an act which therefore constitutes nuisance to the society the way the foods are sold ($X=4.86$, Std.D=1.75). The result reveals that nearly all street foods are carried on trays ($X=4.77$, Std.D=1.91), mobile carts, baskets and umbrella ($X=4.38$, Std.D=2.02) and sell in small stalls, kiosks and push charts ($X=3.81$, Std.D=1.79). In addition, the result disclosed that the sale of vended foods is the most visible part of the trade in Ibadan ($X=4.77$, Std.D=1.91), therefore, making hawking an economic and environmental issue in Ibadan metropolis ($X=4.61$, Std.D=1.84). The result also confirmed that most street food vendors employed one or two paid assistant ($X=4.50$, Std.D=1.98) and majority were women which are full time hawkers ($X=4.48$, Std.D=2.07).

It is obvious from the above result that consumption of street foods by auto-technicians in Ibadan is generally influenced by the following dimensions: because they are cheaper than home food and easily available in different places such as in bus station, train stations, markets, hospitals, street corners, bridges, along junctions and in highways traffic. Though, the result revealed that the way street foods are sold by the hawkers (that is children between age seven and above) constitute nuisance to the society, which therefore, contribute to economic and environmental issues in Ibadan metropolis.

Regression Model of Dimensions of Vended foods and Food Consumption Patterns of Auto-technicians in Ibadan

Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Intercept a₀	20.371	.364		55.893	.000
Dimension of Street Food	.052	.003	.376	16.931	.000

R² = 0.141
Adj. R² = 0.141
F = 286.673
Sig.: 0.000

Source: Researcher's Field Survey Result (2015)

Estimate Model

$$Y = f(x)$$

Y = Food Consumption Patterns (FCP)

X = Dimension of Street Food (DiSF)

The parameter estimates comply with a priori expectations which explain that the food consumption pattern is dependent on dimension of street food. Considering the 1% increase level of street food consumption pattern among auto-technicians in Ibadan is brought about by 38% change in dimensions of street food. The estimated value of R² value of 0.141 signifies that 14% of the variation in street food consumption patterns in Ibadan is accounted for by dimensions of street of foods. This indicates that dimensions of street food such as cheaper price, ease of availability, mode of hawking and traditional food as consumed in their respective home are determinants of food consumption patterns of auto-technicians in Ibadan. Furthermore, the overall significance of the entire model as measured by the F-statistic demonstrates that the calculated F-stat. is 286.673 is statistically significant at 0.05. Therefore, this result accepts the alternative hypothesis that there is positive significant relationship between dimensions of street foods and food consumption patterns among auto-technicians in Ibadan.

Conclusion and Recommendations

Food consumption pattern is dependent on dimension of street food among auto technicians in Ibadan metropolis. Consumption of street foods by auto-technicians in Ibadan is generally influenced by the following dimensions: because they are cheaper than home food and easily available in different places such as in bus station, train stations, markets, hospitals, street corners, bridges, along junctions and in highways traffic. Though, the result revealed that the way street foods are sold by the hawkers (that is children between age seven and above) constitute nuisance to the society, which therefore, contribute to economic and environmental issues in Ibadan metropolis.

Recommendations are made on the premise of the findings from the study:

1. Food vendors should pay adequate attention on hygiene during preparation and distribution of the foods to customers to avoid health issues emanating from food poisons.
2. Under aged children should be avoided in food hawking as they constitute nuisance in the streets and seen as child abuse which is against government policy.
3. There is need for regulatory bodies to monitor the activities of vended food vendors to ensure compliance and sanction any offender/s.
4. The study suggests government assistant in construction of malls/kiosks where food vendors can hire at a minimal fee. This will generate steady income to the government and lead to creation of employment hence there shall be employees in charge of these kiosks and malls.

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