

## FACTORS INFLUENCING CHEESE CONSUMPTION AMONG SELECTED HOUSEHOLDS IN EJIGBO LOCAL GOVERNMENT AREA, OSUN STATE, NIGERIA

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### ABSTRACT

*Cheese, a white soft un-ripened product of coagulated milk protein is a popular food in some parts of Northern and Southern Nigeria which contributes immensely, to animal protein and mineral intake especially in the rural communities. This study analyzed factors influencing cheese consumption in the study area. Accidental sampling technique was utilized to select a total of sixty (60) respondents to constitute the study sample. Relevant data were collected from respondents using interview schedule and same were analyzed using descriptive statistics and logit regression model. Findings revealed the mean age of respondents as 34 years, 80.0% of the respondents were females, 85.0% were married, 76.7% had varying degrees of formal education while 96.7% had occupational engagements with mean monthly income of ₦30,086. Results further showed that 60.0% of the sampled respondents consume fresh cheese, 3.3% fried cheese, 28.3% both fresh and fried cheese while 75.0% source cheese from the open markets. Also, 23.3% consume cheese daily, 26.7% twice in a week while 35.0% consume cheese weekly. Results of logit regression established gender, monthly income, level of formal education and nearness to cheese purchase point as the significant determinants of cheese consumption among respondents. The study concludes that despite the nutritional benefits locked in cheese, its level of consumption in the study area is not appreciable. Hence, sensitization campaigns on the food and nutritional value of cheese across the study area is highly recommended.*

**Keywords:** *Fresh cheese, Fried cheese, Consumption, Accidental sampling.*

### INTRODUCTION

Milk and its various products form the major portion of food for infant and adult all over the universe. Yunusa, (2011) affirmed that milk is the main source of protein in Northern Nigeria where it is mostly consumed in form of 'Nunu' and 'Wara' (Cheese). Difficulties in conservation of fresh milk in developing countries necessitated the development of technological approaches to transform milk into added value products (Dossou, Hounzangbe-Adote & Soulé, 2006). Wara, a white soft un-ripened cheese produced by the coagulation of milk protein is a popular food in some parts of Northern and Southern Nigeria. The cheese which is also produced in other West

African countries notably Republic of Benin contributes to animal protein and mineral intake especially in rural communities (Alalade & Adeneye, 2006).

Dairy industry provides means of livelihood for a significant proportion of rural pastoral families in the sub-humid and semi-arid ecological zones of Nigeria. Ninety six percent (96%) of all cattle in Nigeria are in the hands of the pastoral Fulani. This pastoral herd is the most important source of domestic milk. Only a few imported cattle breeds such as Friesians and Brown Swiss, and their crosses are kept in experimental dairy farms owned by government agencies. A few private commercial dairy farms, owned by companies and individuals, are known to exist in Nigeria. These farms, which constitute the organized dairy farms, produce an insignificant proportion of the domestic milk supply. In addition to the supply of milk from the national herd, an insignificant quantity of milk is supplied by the commercial dairy farms. Several processed dairy products are imported into Nigeria. These include evaporated milk, powdered milk, butter, cheese and cream. Yahuza (2001) affirmed that condensed milk and milk powder have dominated the Nigerian milk import trade for a long time

The activities of the Nigerian dairy industry are centered on milk production, importation, processing, marketing and consumption and these have been going on for long. These activities are, however, unorganized except for the relatively few processing firms that produce and market reconstituted milk products from imported powdered milk. Despite the unorganized nature of the industry, the dairy industry represents an important component of the agricultural sector of the economy with great economic, nutritional and social implications (Olaloku, 1976; Yahuza, 2001). Milk and milk products constitute important nutritional components for all age groups. Good quality milk product could meet the nutritional needs of the body better than any single food as it contains essential food constituents. However, the nutritional value of milk is not fully harnessed due to its high cost and inability of the masses to afford it. Hence, cheese has been found to be a cheaper and readily available alternative source of protein for the commoners.

Consumers around the world are different in various factors such as age, income, education level and preferences which may affect the way they avail of goods and services. This behavior then impacts how products and services are presented to the different consumer markets. Consumer behavior is the study of when, why, how and where people do or do not buy products and refers to the mental and emotional process and the observable behaviour of consumers during searching, purchasing and post consumption of a product or services (Sethi, 2018).

Kundi, Ismail, and Panni (2008) stated that consumer behavior refers to the mental and emotional process and the observable behavior of consumers during searching, purchasing and post consumption of a product or services. Consumer behavior blends the elements from psychology, sociology, socio-psychology, anthropology and economics. Buying a product is a complex situation with a great variety of different stimuli to be taken into account before a decision is made. Quite often, price is operationalized as a given component in order to get something (Monroe, 2003). Moreover, price perception has been regarded in earlier studies as a one-dimensional construct (Padula & Busacca, 2005) according to which low price is favorably and high price unfavorably interpreted. This is in accordance with the principle of the economic

rationality of the consumer. However, several studies have shown that consumers can make irrational choices in buying higher priced products instead of lower priced ones and price can be a multi-dimensional construct including, for example, fairness assumptions (Padula & Busacca, 2005). Consumers' responses to price information can be related to quality of information and information uncertainty (Urbany, William & Ajit, 1997). Summarily, there are many components which influence consumer behavior namely; cultural, social, personal, and psychological (Kotler, Armstrong, Saunders & Wong, 2001). It is against this back drop that this study attempted to isolate the factors that influence cheese consumption among selected households in the study area. The specific objectives of this study were to:

- i. describe the socio-economic characteristics of respondents;
- ii. examine the level of cheese consumption among respondents and
- iii. determine the factors influencing cheese consumption in the study area.

## **MATERIALS AND METHOD**

This study was carried out in Ejigbo Local Government Area, Osun state, Nigeria. Data used in this study were obtained from primary sources. Cluster sampling technique was used to select four (4) locations with the highest concentration of cheese sellers within the study area. Accidental sampling technique was then used to select fifteen (15) cheese buyers from cheese purchase points in each of the four selected locations within the study area, giving a total of sixty (60) respondents which constituted the study sample. Data were collected with the aid of well-structured interview schedule and analyzed with the aid of descriptive and inferential statistics. The descriptive statistics employed include frequencies, percentages, mean and standard deviation while logit regression analysis was used to determine factors affecting cheese consumption.

## **RESULTS AND DISCUSSION**

Table I shows that majority 43.3% of the respondents were found within the age group of 30-39 years, 31.67% were within the range of 20-29 years, 21.67% fall between the range of 40-49 years, 1.67% falls in the age group of 10-19 years while the mean age was found as 34 years. This implies that most of the respondents are middle aged. Most (80.0%) of the respondents are females, 85.0% were married, 81.7% were Muslims, 10% were Christians and the remaining 1.7% was a traditionalist. Some (25.0%) of the respondents had tertiary education, 31.7% had secondary education, 20.0% had primary education while 20.0% had no formal education. This result suggests that majority of the cheese consumers are well educated and are presumably well informed about the nutrition and health values of cheese. Table I further reveals that 35.0% of the respondents were traders, 33.3% were civil servants while 31.7% were artisans. Over forty percent (41.67%) of the respondents earn less than ₦20,000 per month, 30.0% earn between ₦20,000 and ₦39,000, 13.3% earn between ₦40,000 and ₦59,000, 8.33% earn between ₦60,000 and ₦79,000, 6.7% earn between ₦80,000 and ₦99,000 while mean monthly income was found as ₦30,086 which is far above the ₦18,000 minimum wage obtainable in Nigeria.

**Table I: Socioeconomic characteristics of respondents (n=60)**

| <b>Variables</b>              | <b>Frequency</b> | <b>Percentage</b> | <b>Mean</b>       |
|-------------------------------|------------------|-------------------|-------------------|
| <b>Age</b>                    |                  |                   |                   |
| 10-19                         | 01               | 1.67              |                   |
| 20-29                         | 19               | 31.67             |                   |
| 30-39                         | 26               | 43.33             | <b>34.0 years</b> |
| 40-49                         | 13               | 21.67             |                   |
| 50-59                         | 01               | 1.67              |                   |
| <b>Gender</b>                 |                  |                   |                   |
| Male                          | 12               | 20.00             |                   |
| Female                        | 48               | 80.00             |                   |
| <b>Marital status</b>         |                  |                   |                   |
| Single                        | 08               | 13.33             |                   |
| Married                       | 51               | 85.00             |                   |
| Separated                     | 01               | 1.67              |                   |
| <b>Religion</b>               |                  |                   |                   |
| Islam                         | 49               | 81.67             |                   |
| Christianity                  | 10               | 16.67             |                   |
| Traditional Religion          | 01               | 1.67              |                   |
| <b>Level of education</b>     |                  |                   |                   |
| No formal education           | 14               | 23.33             |                   |
| Primary education             | 12               | 20.00             |                   |
| Secondary education           | 19               | 31.67             |                   |
| Tertiary education            | 15               | 25.00             |                   |
| <b>Occupation</b>             |                  |                   |                   |
| Artisanal engagements         | 19               | 31.67             |                   |
| Trading                       | 21               | 35.00             |                   |
| Civil service                 | 20               | 33.33             |                   |
| <b>Monthly income (Naira)</b> |                  |                   |                   |
| 10,000-19,000                 | 25               | 41.67             |                   |
| 20,000-39,000                 | 18               | 30.00             |                   |
| 40,000-59,000                 | 08               | 13.33             | <b>₦30,086</b>    |
| 60,000-79,000                 | 05               | 8.33              |                   |
| 80,000-99,000                 | 04               | 6.67              |                   |
| <b>Total</b>                  | <b>60</b>        | <b>100.00</b>     |                   |

**Source:** Field Survey, 2016

### **Source, type and frequency of cheese consumption**

Table II reveals that almost all (91.67%) of the respondents consume cheese, 85.00% of the respondents sourced their cheese from the open market, 6.67% sourced cheese from the

supermarkets while the remaining 8.33% of the respondents do not consume cheese at all. Table II further shows that 60.0% of the respondents consume fresh cheese, 28.33% consume both fresh and fried cheese, 3.33% of the respondents consume fried cheese only while 8.33% of the respondents do not consume cheese. This means that fresh cheese is preferred to fried cheese consumption by respondents in the study area. This may be due to the fact that most respondents believe that fresh cheese is more palatable and nutritious than fried ones. Also, Table II indicates the frequency of cheese consumption among respondents. Some (26.7%) of the respondents consumed cheese twice in a week, 23.33% consume cheese daily, 35.0% consume cheese once in a week, 1.67% of the respondents consume cheese monthly, 5.0% consume cheese once in three months while 8.3% of the respondents do not consume cheese at all. This reflects that cheese is mostly consumed on weekly basis, in the study area. This is probably because cheese is not perceived as a regular food item even though it is readily available and can readily substitute for meat and fish.

**Table II: Distribution of respondents based on source, type and frequency of cheese consumption (n=60)**

| <b>Variables</b>                   | <b>Frequency</b> | <b>Percentage</b> |
|------------------------------------|------------------|-------------------|
| <b>Cheese consumption</b>          |                  |                   |
| Non-cheese consumers               | 05               | 8.33              |
| Cheese consumers                   | 55               | 91.67             |
| <b>Source of cheese</b>            |                  |                   |
| Non-cheese consumers               | 05               | 8.33              |
| Open market                        | 51               | 85.00             |
| Supermarket                        | 04               | 6.67              |
| <b>Types of cheese consumed</b>    |                  |                   |
| No consumption                     | 05               | 8.33              |
| Fresh cheese                       | 36               | 60.00             |
| Fried cheese                       | 02               | 3.33              |
| Both                               | 17               | 28.33             |
| <b>Freq. of cheese consumption</b> |                  |                   |
| No consumption                     | 05               | 8.33              |
| Daily                              | 14               | 23.33             |
| Weekly                             | 21               | 35.00             |
| Twice in a week                    | 16               | 26.67             |
| Monthly                            | 01               | 1.67              |
| Once in three months               | 03               | 5.00              |
| <b>Total</b>                       | <b>60</b>        | <b>100.00</b>     |

**Source:** Field survey; 2016.

### **Factors affecting cheese consumption**

Table III presents the result of logit regression used to determine the factors influencing cheese consumption in the study area. The result reveals a positive relationship between gender and cheese consumption in the study area at 10% level of significance. Monthly income is negatively related to consumption and it's significant at 10% level. This suggests that as monthly

income of the respondents increases, the frequency at which they consume cheese decreases as they tend to replace cheese with close substitutes like fish and meat which have now become affordable to the respondents as a result of increased purchasing power. The coefficient of nearness to cheese purchase point is positive and significant at 5% level. This implies that the closer the cheese purchase points to the respondents, the more likely they consume cheese. The coefficient of level of formal education is positive and it's significant at 5%. This implies that cheese consumption is positively influenced by the respondent's level of formal education. That is, the more educated the respondents are, the higher their tendencies to consume cheese. This may be due to the fact that educated people are better informed about the nutrition and health benefits of cheese. Shilpa Shree and Padian (2017) found the factors having positive influence on the consumption of cheese in India as including family size, education level of the household head and monthly family income. In the same vein, the determinants of dairy consumption expenditure in urban communities of southern Ghana were documented as income level of household head, distance from home to purchase point and level of urbanization of consumer's home location (Aidoo, Nurah, Fialor & Ohene-Yankyera, 2009).

**Table III: Result of Logit Regression**

| Variables                          | Coefficient | Std. error | T     | P> t    |
|------------------------------------|-------------|------------|-------|---------|
| Gender                             | 0.6026      | 0.3149     | 1.91  | 0.061*  |
| Monthly income                     | -0.2736     | 0.1465     | -1.87 | 0.067*  |
| Nearness of cheese purchase points | 0.1227      | 0.0516     | -2.38 | 0.021** |
| Monthly expenditure on fish        | -0.1940     | 0.1353     | -1.43 | 0.158   |
| Monthly expenditure on meat        | 0.0040      | 0.0667     | 0.06  | 0.953   |
| Level of formal Education          | 0.1870      | 0.0849     | 2.20  | 0.032** |
| Constant                           | 2.9698      | 0.8464     | 3.51  | 0.001   |

**Source:** Data Analysis, 2016      \*\*P ≤ 0.05    \*P ≤ 0.10    **Observation:** 60

**R-Squared** = 0.5003    **Adj. R-Squared** = 0.4437

## CONCLUSION AND RECOMMENDATIONS

The study concluded that the level of cheese consumption in the study area is not appreciable in spite of the food and nutritional values locked in it. Results of logit regression revealed that gender, monthly income, level of formal education and nearness to cheese purchase point were all significant factors influencing cheese consumption among respondents. Hence, the study recommended:

- i. Gender inclusive sensitization campaigns on the food and nutritional value of cheese across the study area.
- ii. Increased government investment in the dairy industry to strengthen local production of cheese and other dairy products and boost the distribution chain.

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