

**ECONOMIC ANALYSIS OF THE FACTORS INFLUENCING MEAT
CONSUMPTION AMONG FEDERAL CIVIL SERVANTS IN EKITI
STATE, NIGERIA**

BY

ALAKE AYODEJI JOSEPH

AE/12/0431

**DEPARTMENT OF AGRICULTURAL
ECONOMICS AND EXTENSION
FACULTY OF AGRICULTURE
FEDERAL UNIVERSITY OYE EKITI,
EKITI STATE, NIGERIA**

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**A PROJECT WORK SUBMITTED TO THE DEPARTMENT OF
AGRICULTURAL ECONOMICS AND EXTENSION IN PARTIAL
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**FEDERAL UNIVERSITY OYE EKITI
EKITI STATE, NIGERIA**

DECLARATION

I, **ALAKE AYODEJI JOSEPH** hereby declare that this project was written by me and it is a record of my own research work. It has not been presented before in any reputable presentation elsewhere. All borrowed ideas have been duly acknowledge.


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ALAKE, AYODEJI JOSEPH

(Student)

22/03/2019
.....

DATE


.....

PROF. R. A. OMOLEHIN

(Project supervisor)

22-03-19
.....

DATE

CERTIFICATION

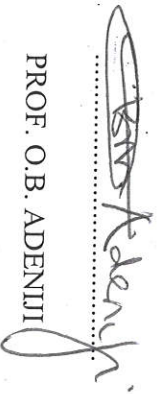
This is to certify that the project work was carried out by **AYODEJI JOSEPH ALAKE** within the department of Agricultural Economics and Extension of Federal University, Oye-Ekiti, Ekiti state, Nigeria.


.....

PROF. R. A. OMOLEHIN
(Supervisor)

22-03-19
.....

DATE


.....

PROF. O. B. ADENIJI
(Head of department)

26/3/19
.....

DATE

DEDICATION

This Project is dedicated to the Almighty God who has been my helper and comforter during this journey so far. It is also dedicated to my dear parents Mr. And Mrs. Alake and my wonderful siblings. There is no doubt that without their continued financial support and prayer I could not have completed this programme.

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With deep sense of appreciation, I express my sincere gratitude to my mummy and daddy. Mr and Mrs. Alake. Thank you for your love, financial support, kindness and prayers. I also

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ABSTRACT

This study examined the Economic analysis of the factors influencing meat consumption among federal civil servants in Ekiti state, Nigeria. A Two stage sampling technique was used to select the respondents for the study. The data were collected from 80 respondents using a well structured questionnaire. The data were analyzed using descriptive statistics and Ordinary least square regression model was used to analyze the factors influencing meat consumption in the stud area. The findings revealed a large percentage of the respondents (45%) were aged between 30-39 years. Majority (56.3%) were male. Most of the respondents (81.3%) were married and most of them had a family size of 3 members and below. Most of the respondents (91.4%) had tertiary education. Majority (93.8%) were Christians and majority (51.2%) had other secondary occupation. The average amount the respondents spend on meat in a week is 1737.1875 naira and the average quantity of meat the respondents consume in a week is 1.95 kilogram. The average amount the respondents spend on other food items in a week is 5,477.3438. The study further revealed that age, family size, educational level attained and income were the significant factors that influence meat consumption among the respondents in the study area. This study therefore recommends that Respondents are advised to diversify their means of generating income in order to increase their income. There should be intensification nutritional campaigns and there should be various means of educating people on the clinical and sub-clinical repercussion of not taking enough of animal protein in their diet. This will go a long way in helping to increase expenditure on animal protein from the respondents.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the study

Today's world is becoming more global, consumers habits are constantly changing and global companies are selling their products in all parts of the world. Agriculture is under the constant influence of changes and challenges primarily caused by economic factors, but also by changes in consumer habits, climate change, and the rise in prices, market liberalization and other factors (Kovljenić and Savić 2017).

Countries around the world have been categorized into developed, developing and under developing countries. Furthermore, many economies around the world have been classified based on their income groups. According to (World Bank classification 2016) the income groups are categorized as Lower income economies, Lower middle income economies group, Upper middle income economies group and high income economies group. Nigeria has been placed by World Bank classification into the lower middle income economy group because lower middle-income economies are those with a Gross National income (GNI) per capita between \$1,006 and \$3,955 and Nigeria falls into this category. There is a saying which say all fingers are not equal which I can say is true in Nigeria because there are different socio economic class in Nigeria. According to (Iyangbe and Orewa 2009) socioeconomic class/income earner can be grouped into three classes; Lower class, middle class and the upper class. This socio economic class is based on income, purchasing power and standard of living. Millions of Nigerian citizens dream of getting a high paying job after graduation either by working

professional activity where people hold specific posts that aid in practical implementation of tasks and functions of the country. These individuals are public servants or civil servants and have an appropriate authority.

Many Nigerians are confident that in order to get the best job, it should have some form of connection to the Nigerian government. but not everyone will get that opportunity. Nigeria civil service jobs are meant for those who want to become well-to-do professionals and enjoy stable employment in Nigeria (Stephanie Obasanho 2017).

According to (Andrella Tersoo 2017) how much each civil servant earns mainly depends on job position, education, experience, and salary grade level. The minimum wage for a civil servant is 18000 naira per month and they could receive up to 460,000 naira monthly.

But before oil was discovered in 1970's, agricultural exports was the mainstay of the Nigerian economy with livestock products contributing a significant share of exports. During this period, the country had a well-developed domestic agricultural market. In spite of this sound potential for growth in the domestic market, Nigeria has been witnessing a drastic decline in agricultural production, especially in livestock and meat sectors of the industry (Adesehinwa et al., 2004). For instance, livestock and fishing contributed about 3% to Nigerian Gross Domestic Product in 2011 This contribution to GDP mainly depends on the production and consequent utilization of the meat and fish products by the consumers (Central bank of Nigeria (CBN) 2012)

Food is necessary and important for human existence but the production and distribution of food in Nigeria as revealed by (Onyeneke and Nwaiwu 2012), ascertained that food is not distributed equally among the households in Nigeria; this may be attributed to high level of poverty in some

Therefore protein is an essential nutrient for growth and development and also plays important role in assisting overweight and obese people in losing weight fast. It is a good source of phosphorus, which is a very essential mineral for the body phosphorus, maintains the health of teeth bones and also healthy functioning of the kidneys, liver, and the central nervous system (Luz, 2009).

One of the significant needs of protein on a world population basis is its importance in food and infants and for young children development. In instances where adequate protein and a proper diet are withheld for long, recovery may be incomplete due to irreversible damage and possible mental retardation (Adeniyi *et al* 2012). Examples of food rich in protein are: beans, cheese, eggs, Meat etc. Protein for human consumption usually comes from plants and animals.

Plant proteins are deficient in certain amino acids notably methionine, tryptophan and lysine which are necessary for proper healthy growth. They are also relatively inferior to animal protein because protein quantity and quality differ widely at different parts as those obtained from root plants are not the same as ones from leafy plants. Some plant proteins have undesirable substances such as aflatoxin (as in groundnut seeds or peanuts, corn and tree nuts) which is said to cause liver cancer in poultry and man (Adeniyi *et al* 2012).

Animal protein is, however, rich in amino acids and is, therefore, described as first class or good quality protein. This has formed a part of the reasons for the acceptability of animal protein (Adeniyi *et al* 2012).

However animal protein is mostly obtained from the livestock industry and this livestock industry are the major sources of protein supply for the large population, contributing 3% of the

Organization (FAO 1992) recommended an average of 200g animal protein as a requirement on daily basis for healthy living and maintained that meat protein consumption in most African countries is very low at a level of 25g.

In Nigeria, meat, fish and animal products are the fourth most commonly consumed food group (88.9%) by households. Its consumption lags behind grains and flours (97.2%), oils and fats (96.8%) and vegetables (96.7%). Compared to other food groups, average weekly household expenditure is highest for meat, fish and animal products (N1, 359 per week) (National Bureau of Statistics, 2016).

Meat products are rich in nutrients and they help in the development and growth of the human body and they are enriched with high value biological protein and vitamins, meat which facilitates the development of the gastrointestinal tract, cranio-dental features (teeth, jaw, etc.) and posture (Pereira and Vicente, 2013). Its consumption in adequate quantities ensures normal functioning of the immune system, mucous membranes and metabolic processes (Biesalski, 2005). The alarming sources of the health, nutrients etc. can find answers in meat eating. Out of a large number of health benefits of eating meat, its contribution as a fabulous source of high quality proteins is remarkable and it is to be noted. This cannot be given or substituted by even a single vegetarian food. Meat holds all the required amino acids that the body needs to maintain a balance.

Although meat production in Nigeria has been ever increasing, it has been observed that there are factors that control or influence the purchase and consumption of meat products such as Red meat (beef, mutton, pork, and chevon, Wild Game, bush meat,) white meat (chicken, turkey,

The low level of animal protein consumption in Nigeria as reported by the Food and Agriculture Organization (FAO 1992) revealed that the diet of an average Nigerian contains about 20% less than the recommended requirement.

This is no doubt responsible for most problems of malnutrition among all age groups particularly infants and children. This is because there is a great disparity between the required animal protein intake and the actual consumption (Adeniyi et al 2012).

In addition to this, from my experience and observation, I have observed that so many household in Nigeria have this tradition that fish or meat should be given to the adult members of the house and meat is usually eaten only whenever there are special ceremonies. Furthermore it has been observed that the Nigerian case of meat consumption is much lower especially in the Southern parts of Nigeria, where nutritionists in recent times observed that the production of animal protein is not high enough to meet the demand of the rapid growing population.

Optimum consumption of meat is necessary however there are factors that determines or influences the consumption of meat among different income groups specifically considering civil servants in Nigeria

1.2 Statement of Problem

There has been a clear evidence from literatures that Nigerians are inadequately fed. (FAO 1992) revealed that the protein diet of an average Nigerian contains about 20% less than the recommended requirement. FAO also reported that meat protein consumption in most African countries is very low at a level of 25g which is drastically low when compared to the recommended requirement of an average of 200g animal protein on daily basis for healthy living.

This problem has leads to unbalance diet because meat contributes essentially to human's diet (Aromolaran 2004) and the consequence of this poor nutritional status is infection which will eventually result in weakness, lethargy, absenteeism, poor productivity and stress (Adetunji and Rauf 2012). When we fail to consume adequate amounts of protein, it result in growth retardation with the body being prone to infections and poor wound healing (Adetunji and Rauf 2012). As such Optimum consumption of meat is necessary and important.

It is also known that the civil servants salary has been grossly eroded by inflation since the ten percent wage increase in 2009 prompting low consumption. This study is therefore an attempt to evaluate level of meat consumption and factors that determine meat consumption among Federal civil servants in Ekiti state. To execute this study, these relevant research questions are to be addressed.

- What are the socio-economic characteristics of the civil servants in the study area?
- What are the meat consumption patterns and level of the respondents?
- What are the determinants of meat consumption of the respondents?
- Are there constraints to the meat consumption pattern of the respondents?

1.3 Objectives of the Study

The broad objective of this study is to examine the factors determining meat consumption among Federal civil servants in Ekiti state. The specific objectives are to:

- Examine the socio-economic characteristics of the respondents in the study area.

1.4 Justification of the study

This study is of paramount importance as it examined a contemporary issue in the Nigerian economy: the nature of meat consumption in Nigeria.

This study will help Agricultural economist to have an idea of the relative well-being of a country because meat consumption can be used an indicator of the economic status of a country or individual. As a nation industrializes and improves its economic position, its meat consumption increases. Moreover, as persons raise their social or economic status, they tend to demand a greater and higher quality of meat products through households' consumption expenditure spent on food.

This study will help firms and organization to understand the meat consumption pattern of consumer, how they feel, reason and select between different alternatives and how their consumption pattern is influenced by the environment.

This study will assist firms to organize their production to meet the rising demand.

This study will help the government in the decision making of how much and when to increase the purchasing power of people incomes which will invariably contribute positively to the improvement of the nutritional status of the respondent.

This study will help to enlighten the people on the importance of complete protein source in the diet which will help reduce malnutrition and other protein related deficiency.

This study will help policy makers to develop strategies on equitable income distribution among civil servants.

This study will be useful to policy makers in formulating policies that will stimulate the demand

This study will unveil those factors influencing meat consumption among civil servants which will therefore serve as a pointer to policy options that could be adopted by stake-holders in the livestock industry.

This study will also attempt to make further contribution to the previous studies and can be used as a source of reference for further studies.

1.5 Research hypothesis

Based on the objectives above, the hypothesis that guide this study is therefore stated as follows

- Null hypothesis (H_0): Consumption of meat is not influenced by respondents socio-economic characteristics; education level, age, religion, sex and household size of the respondent and its Determinant.
- Alternate hypothesis (H_a): Consumption of meat is influenced by socio-economic characteristics (Education level, Age, Religion, Sex and household size) of the respondent and its determinant.

1.6 Plan of study

The remaining part of the study includes the following: Chapter two presents the review of relevant literature for the study. Chapter three presents the methodology. Chapter four presents the results and discussion while Chapter five presents summary, conclusion and recommendation.

CHAPTER TWO

2.0 LITERATURE REVIEW

This chapter of research work focuses its attention on the work of other scholars and authors that are relevant to the topic and takes a critical look at the various views expressed by various writers. The brief literature review for this study focuses on

1. Consumption Pattern of Households.
2. Brief description of protein
3. Various source of protein
4. Differences between animal and plant source of protein
5. Protein Consumption patterns.
6. Meat Consumption Patterns.
7. Effect of meat consumption

2.1 Consumption Pattern of Households

Food is a basic human need and a major source of nutrient for main existence (Olarinde and Kuponiyi 2005). Food is a basic necessity of life. Essential food is the mixture of chemicals which could be separated into different component having different function in the body (Omotoso et al undated). Food is of high importance in matter of human well being and economic productivity (Omotoso and Lawal, 2009). Eating good food is vital for a healthy and active life. Many people in virtually all countries do not eat well because of poverty and lack of

A balanced diet can be defined as one that contains all the six classes of food components: carbohydrate, protein, vitamins, mineral salts, fat and oil and water. Food can also be classified either as proper food (i.e. carbohydrates, protein, fats and oil) for energy supply or as accessory food (i.e. water, inorganic salt, vitamins) which are essential for life but do not supply energy (Omoteso et al undated). Food is however a combination of macro and micro nutrients (Kushwaha et al 2007). Deficiency in both diet quality and diet quantity is today a global problem (Abdullahi and Aubert, 2004).

Despite the fact that the world food production has doubled during the past three decades the number of malnourished people are soaring above 900million around the world. Malnourishment exists when household calorie intake goes below the minimum dietary requirement which may be regarded as an indication of food security. In considering the sustainability of the wealth of a nation, the food intake must be secure (Adegboye 2004).

The nutritional status of a nation is difficult to assess because it can be related to social, educational and economic condition. It may be good, fair, or poor depending on the dietary essentials, relative needs for them, and body's ability to utilize them.

Nutritional status of an individual depend solely on food intake in terms of quantity or quality, there is always interplay of many factors (Adetunji and Adepoju 2011).

According to (Olayide 1993), lack of sufficient food both in quantity and quality will account for low production which could lead to a decline in agricultural production, at the same time hindering development. (Cyril et al 1998) discussed that all human beings have common nutritional needs; there may be variations from one section of the community to another; and

location. said that despite the differences in preference, consumer seem to follow general phase in the evolution of their consumption behaviour. This is described in a well established law in economics called the Engel curve, which reflect that as household income rises, the proportion of income spent on food declines, s(Jacinto 2005), uggesting relatively low income elasticity for food. per day) respectively. Also there is decrease in dietary protein consumption (gm per caput per day) for the period 1995-1997 and 2001-2003. The per caput protein was 62 between 1995-1997 but dropped to 61 between 2001-2003.

Apart from the fact that the consumption pattern differs with changes, According to (FAO 2006) the structure of Nigeria food consumption has been undergoing dramatic change for some years now. There was a decrease in the dietary energy consumption for the period of 1990-1992, 1995-1997 and 2001-2003 that was input at 2540, 2750 and 2700 (kcal per caput in the physiological state of the body, it also depends on various factors that are attached to different households. Among the factors that dictates consumption pattern is, household income, cost of food, environment, and household size. The prices of foods particularly those of protein source affects its consumption since majority of the consumer are in low-income groups, they tend to appeal for the in-expensive food commodities which in most cases are the starchy food with low nutritional value, in essence, they opt for quantity rather than quality (Alderman, 1986).

Also according to (Koutsoyianis 2001), consumption pattern of a family is determined by family income, sexes in the family, household income, composition of age, price sales, taste, education status, religion etc.

(Olarinde and Kuponiyi 2005) affirmed that the average composition of rural households' food is

and non-food items, households' income and how it is shared among basic needs. In addition, we have socio-cultural variables like family size and composition, occupational groups, taste and preferences as well as the educational level of the household head. These factors punctuate the food composition and habits of household

According to (Priya Rampal 2018) the analysis of consumption patterns in a developing country has to take into account several factors. The process of development is accompanied by rising levels of income, leading to increases in real per capita expenditure, changes in institutions and organisations, and, in general, a change in preferences. Change in global prices is another important factor that affects the consumption patterns in any country.

2.2 Brief description of Protein

Man obtains his necessary proteins from either animals or plant sources. Proteins form the foundation for muscles, skin, bone, heart and billions of biochemical activities (Adetunji and Rauf 2012). Furthermore proteins are the major structural components of all cells of the body and amino acids are the building blocks of human proteins. Protein can function as enzymes, membrane transporters and hormones.

Protein is an essential nutrient for growth and development and also plays important role in assisting overweight and obese people in losing weight fast. It is a good source of phosphorus, which is a very essential mineral for the body phosphorus, maintains the health of teeth bones and also healthy functioning of the kidneys, liver, and the central nervous system (Luz, 2009). One of the significant needs of protein on a world population basis is in infants after

The basic unit of proteins are called amino acids. As far as the human body is concerned there are two types of amino acids. There are essential and non-essential amino acid. The former cannot be produced by the body while the latter can be produced out of other biochemical products in the body. And the only means of obtaining essential amino acid is through feeding (Bopape and Myers, 2007). Nonessential amino acids are amino acids that the body can create out of other chemicals found in the body. Essential amino acids cannot be created, and therefore, the only way to get them is through food.

Protein contains approximately 22 amino acids, eight of which are essential because the body cannot produce them. Therefore, they must be obtained from our food. The sulphur-containing amino acids: methionine, cystine and cysteine are particularly important for the health of the brain and nervous system (Addo, 2005). Protein is required for the growth, maintenance and repair of all body tissues. Protein is 90% of the dry weight of blood, 80% constituent of enzymes, hormones and antibodies (Fallon and Eing, 2001). Proteins encompass many important chemicals including immunoglobulin and enzymes. In short, they form the foundation of muscles, skin, bone, hair, heart, teeth, blood and brain and the billions of biochemical activities going on in our bodies every minute.

When we fail to consume adequate amounts of protein, the blood and tissues can become either too acidic or too alkaline. Lack of dietary protein can retard growth in children and in adult, can be a contributing factor in chronic fatigue, depression, slow wound healing and the decreased resistance to infections (Iyangbe and Orewa (2009)). Low protein composition also results in protein malnutrition which manifests itself in form of diseases such as marasmus, kwashiorkor or

2.3 Various sources of proteins

Protein is available in a variety of dietary sources. These include foods of animal and plant origins.

2.3.1 Animal Protein

Typically, all dietary animal protein sources are considered to be complete proteins or high quality proteins because they contain all the essential amino acids and are easier for the body to digest and utilize. Examples of animal sources of proteins according to (Zieve 2009) include:

- a) Meat (beef, chevon, mutton, pork)
- b) Chicken or turkey
- c) Various types of eggs,
- d) wild game
- e) Dairy products such as milk, cheese and whey.
- f) fish
- g) shrimp, crab, lobster e.t.c

2.3.2 Vegetable Protein

(According to journal of sports science and medicine 2004) Proteins from vegetable sources are incomplete in that they are generally lacking one or two essential amino acids. so it is important to eat a variety of plant proteins every day. Thus, someone who desires to get their protein from vegetable sources (i.e. vegetarian) will need to consume a variety of vegetables, fruits, grains, and legumes to ensure consumption of all essential amino acids. Examples of plant sources of

- c) Chick peas, black-eyed peas
- d) Soy milk
- e) Pumpkin seeds
- f) Nuts
- g) Peanut butter
- h) Grains
- i) Certain fruits such as avocado e.t.c

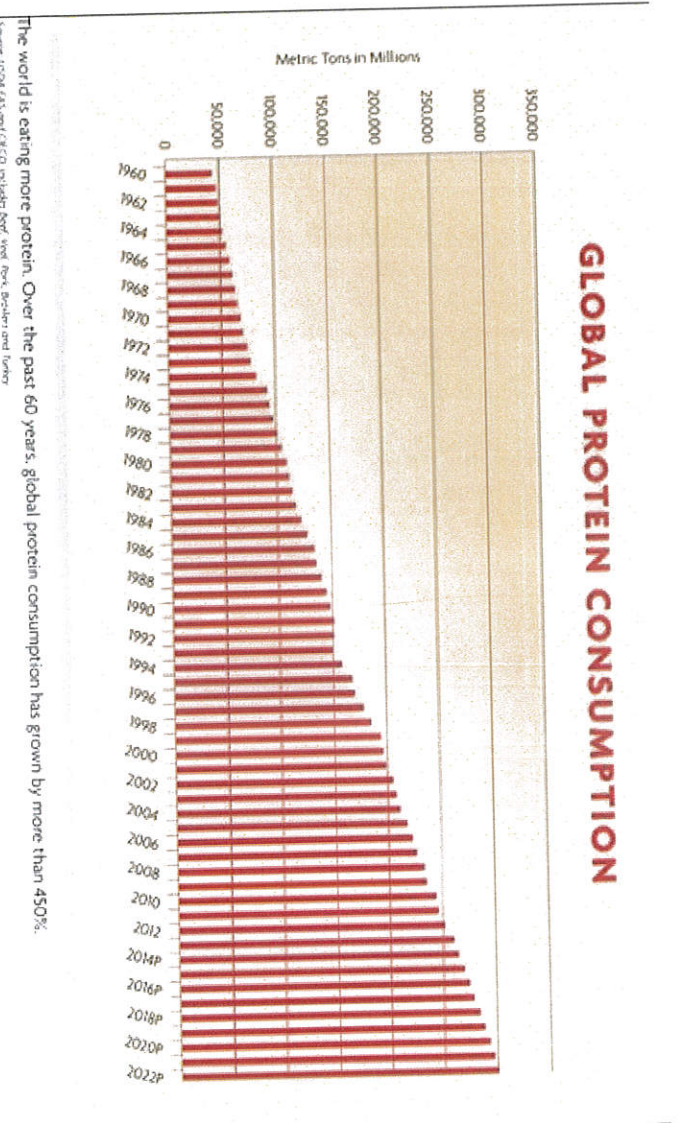
2.4 Differences between plant protein and animal proteins

One of the main differences between plant and animal proteins involves their amino acid contents. Amino acids are the building blocks of protein. When the body digests the proteins in food, it breaks them down into amino acids. The body may need different amino acids at different times. Many people believe that the diet should include complete sources of protein, which contain all nine essential amino acids. Most plant proteins are incomplete, which means that they are missing at least one of the essential amino acids (Jon Johnson 2018).

(According to Justin Moore-Brown 2015) Animal products contain saturated fat and higher levels of cholesterol than sources of plant protein. All of which is accredited to growing health problems heart disease. A person may wish to avoid animal products for these reasons.

2.5 Protein Consumption patterns

Image 1: Global protein consumption pattern from 1960-2012



Sources: USDA foreign agricultural service OECD (2015)

these underfed people of the world are located in the countries of South and Central America,

Africa and Asia (Oyedepi). According to Oyedepi, these countries daily intake of protein is far

below the requirement. Africa is only meeting 32g of the daily protein requirement of 52g by

(FAO). The net protein utilization is 62% in Africa as against 110% in North America. (FAO)

has recommended that 1/3(one-third) of the daily protein intake should be of animal origin.

Again in Africa only about 20% of the low protein intake is of animal origin compared to about

70% in the United States. Thus it can be calculated from the above figures (using the protein

with NPU of 62), that the average African is meeting only 33% of his daily animal protein

requirement while meeting about 66% of his daily plant protein requirement (oyedepi). It is then

this situation, He suggested that we have to, as a nation and as a matter of urgency increase the quantity of available animal protein either by importation or by increasing our level of production.

It has been estimated that the daily minimum crude protein requirement of an adult in Nigeria varies between 65 and 85g per person. However it is recommended that 35g of this minimum requirement should be obtained from animal products (Oloyede, 2005).

Most of the foods consumed in Nigeria are carbohydrates which are obtained mainly in the form of starch (Lupien and Menza, 2004). According to (Adetunji and Adepoju 2011) a hard-working adult farmer needs approximately 3,500 calories and 50grams of protein per day; a one-year-old child needs about 1,000 calories and 15grams of protein per day. Yet, these quantities of essential nutrients are missing in the diets of many rural Africans, which are based on staples of grains such as maize, without nutritional supplements. Africa's staples do not provide adequate protein of micro nutrients such as vitamins and iron. Thus, if there is dependence on these staples or there is absence of these staples food it can cause widespread malnutrition, especially, among children.

(Aromolaran 2001) confirmed that Nigeria is still struggling to meet up with the minimum food and nutrient requirements. The evidence of poor nutrition is reflected particularly amongst low income groups. It has been estimated that 7,300 children die of malnutrition annually in Nigeria, before they reach the age of four years; while 73,000 to 84,000 infants born every year suffer from malnutrition. The pre-school children are not left out of the ill wind of malnutrition blowing

in Nigeria (Aiayi and Chukwu, 2008). Low nutrient intakes, Leanness, low midarm

Pregnant and lactating women in Nigeria were reported to have low intakes of many nutrients such as protein, calcium, niacin and riboflavin. Figures on average crude protein consumption per day in Nigeria fall short of the recommendations of Food and Agriculture Organization (FAO) (EneObony, 1990; Ajayi and Chukwu, 2008). This low consumption of animal protein is closely related to low level of income in developing economies since protein products are more expensive than other foods. Many low income earners therefore, consume more of plants and less of animal protein because of its cost despite potential (in terms of utility) of animal protein compared to plant source in the body (Akinbile, 2002).

Scientific literature in the area of protein consumption patterns is very rich, with increasing number of papers, studies and books considering it.

According to (Pitt 1983) the differences in personal taste, educational level, religion, custom and beliefs, may affect the consumption of protein since most of the rural dwellers engaged in one agricultural activities or the other and this makes the availability of other classes of food to be very high (Pitt 1983).

AMAO (2013) also examined the determinants of protein consumption in Ila Local Government Area of Osun State, Nigeria. A multistage sampling technique was used to select the respondents for the study. The analytical tools used were descriptive statistics and Logit regression model to analyse the determinants of protein consumption in the study area. The study revealed that sex, age, income level and affordability of protein were the significant factors that determine the level of protein consumption in the study area. The study recommended that the need for pricing policy in order to bring down prices of protein food to make it affordable for those who claimed

tools used are multiple regression and chi square analyses. The study revealed that marital status, educational status, household size, and household income per annum were statistically significant to animal protein consumption patterns of the respondent. He recommended that government and non-government organizations should intensify nutrition campaign to rural dwellers that would help in enlighten them on the importance of protein of animal sources in their diets.

In addition Inyang et al (2014) also examined the consumption of animal protein in adamawa state specifically the consumption of meat, fish, milk and egg. The analytical tools include the arithmetic mean, percentages, income elasticity marginal propensity to consume and multiple regressions. The study reveals that education, marital status, gender and total household expenditure were the major determinants of household expenditure on major animal protein products. The study recommends the reduction on income taxations, introduction of informal education, public enlightenment campaign, and investment in livestock production in order to make animal protein available and credit facilities through banks and other financial institution should be made available to livestock farmers.

Furthermore Yusuf (2012) analysed the demand for animal proteins in Ibadan, Oyo State, Nigeria. The analytical technique used in the study was the linear Approximately Almost Ideal Demand System (LA/AIDS) model. The results showed that the demand for fish and beef in Ibadan was elastic while that of chicken is inelastic. He also inferred that the demand for animal protein in his study area is mostly affected by socio-demographic characteristics the price of the

descriptive and inferential statistics. The findings showed that income of the household heads, educational level and household size are significant factors affect the amount spent on the proteineous diets. It was therefore recommended that rural dwellers should be encouraged to engage in planting legumes and rearing of livestock in order to increase personal consumption and distribution to the urban centre. Educational programmes should be organized for enlightenment about the importance of protein in their diet. Finally, family planning programme should be emphasized to rural households in order to reduce the large household size prevalent in the study area.

Finally Gwandi et al (2014) also conducted a survey on socio-economic characteristics influencing the consumption of animal protein in Gombi local government areas of Adamawa State. Stratified random sampling technique was used to select the respondent. Descriptive statistics, regression analysis and average propensity to consume were used in data analysis. The study showed that protein consumption is positively influenced by age, expenditure on other foods, approximate monthly income and education. It is recommended that corporate bodies and individual should be encouraged to establish family livestock and fish pond for reduced expenditure on animal protein.

2.6 Meat Consumption Patterns

Meat refers to all animal products that are consumed by people. Examples of meat products such as beef mutton, pork, chevon, Bush meat, wild game and chicken. Meat is a complete protein

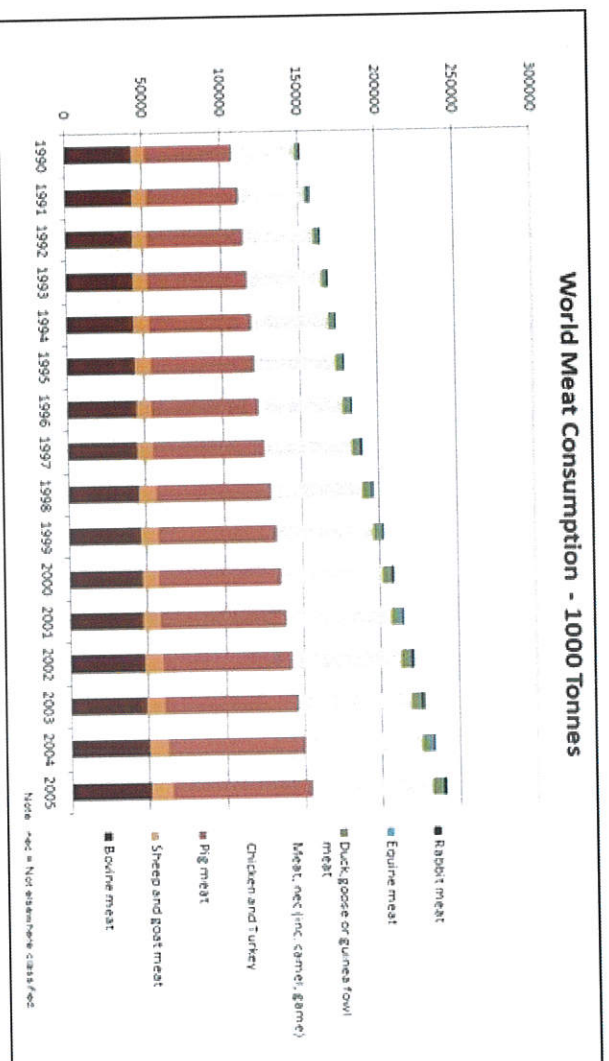
Table 1 : Essential Amino Acid in different Food commodities

Essential amino acids	Meat	Fish	Wheat
Valine	50	52	42
Leucine	82	76	70
Isoleucine	52	50	42
Lysine	93	97	20
Threonine	47	45	29
Methionine + cystine	42	42	31
Phanylalanine + Tyrosine	86	62	79
Tryptophane	13	10	13

Source: Adebayo (2003).

Meat is a rich source of valuable proteins, vitamins, minerals, micronutrients and fats. In addition to the supply of long chain 3 omega fatty acids, meat consumption is supposed to supply conjugated linolinic acid that provides multifaceted nutrient for human health, and It is also said that meat consumption reduces risk of cancers, arteriosclerosis and adiposity, while delaying the onset of diabetes (Raghavendra, 2007). Meat is a nutritious food containing quantities of

Image 2: world meat consumption pattern in tonnes from 1990- 2005



Source: World ostrich organization (2013)

But (FAO 2000) revealed that the protein diet of an average Nigerian contains about 20% less than the recommended requirement and meat protein consumption in most African countries is very low at a level of 25g which is drastically low when compared to the recommended requirement of an average of 200g animal protein on daily basis.

There have been many studies on Factors influencing the consumption of meat around the world but from critical observation, and few studies have been conducted on factors influencing meat consumption in Nigeria. Previous studies on Meat consumption and other related issues concerning Meat in Nigeria have been at the State level but not Ekiti state.

Anyiro et al (2010) conducted a study on Meat Consumption Patterns among Different Income Groups in Imo State, Nigeria. A combination of purposive and simple random sampling

influenced by age, annual income, price and household size of the respondents. However, the result of the multiple regression analysis with the double log as lead equation showed that quantity of meat of high income group is influenced by age, income, price, household size, and sex of respondents. It was recommended that meat consumers should endeavour to maintain equilibrium in the consumption of both red and white meat because of increased nutritive value and low cholesterol content of white meat.

In addition Osadebamwen (2015) examined Meat Industry Development in Nigeria: Implications of the Consumers' Perspective. A convenient non probability sample was used to select the respondent and the data was then analysed with Stata 12 analysis software. The study revealed that Lean meat was the most preferred, followed by lean meat with moderate fat. Price, availability and social economic factors were significant in determining consumer preference.

Furthermore M. Uzunöz, G. Karakas conducted a study on the socio-economic factors affecting red meat consumption habits and consumer preferences of families, living in urban areas of Tokat province in Turkey. The factors affecting red meat consumption preferences of consumers were analysed using binary logistic regression model. According to the results from binary logistic regression analysis; gender, education, household size and income are significant and associated with red meat consumption. A negative relationship was determined among red meat consumption, education level and household. It is expected that this results have important implications for the supermarket, butchery shop and other food supplier industries in the research area and policymaker.

Santos Alimi (2013) also examined household's preference for and meat consumption pattern in

income households and high income households, compared middle income households. The most important factor considered by households while purchasing meat was the taste and habits, followed by nutritional value and prices. Other factors observed were freshness, tenderness and religious sentiments.

Furthermore Yaylak et al. (2010) also used the logistic regression method to determine beef, sheep, and goat meat consumption preferences (consume, not consume in Odemis town, Izmir. It was found out that gender, age, education and income levels have significant effect on choosing beef, sheep and goat meat of consumers.

Also Yakaka et al 2012 conducted a study on the determinant of meat demand among income groups, in Maiduguri borno state. The analytic technique used was multiple regression. A stratified random Sampling was used to select the respondents. The multiple regression results revealed that gender was an insignificant determinant of expenditure on ruminant for all the income groups, and was negatively related to high income group. However, the coefficients of gender were positive for low and middle income groups. Household size and income had positive coefficients and were significant at 1% level for all the income groups. Age had positive coefficients for all the income groups and was significant at 1% for middle income group. On the contrary it was not significant for low and high income. Educational level of the respondents had positive coefficients for all income groups and was significant at 1% level for low and middle income groups but was insignificant for high income group. The study recommended policies to improve income redistribution and the enhancement of the purchasing power of the

poor. Government should design efficient strategies of enhancing the low income group through

done through skills acquisition programmes. Government should subsidized animal feeds to the farmers and more easy access to credit. This will encourage the livestock farmers to increase supply, subsequently it will result to fall in retail prices and in turn lead to equilibrium of demand and supply for ruminant meat products in question in the market.

In addition Yakubu et al 2013 conducted a study on Factors influencing Consumer Preference for Fresh Beef in Sokoto Metropolis, Nigeria. A random sampling technique was used to select the respondents. A quadratic regression model was found to best explain the relationship between preference and the factors identified. Household size, level of education and expenditure on beef substitutes were significantly related to preference for fresh beef ($P < 0.01$). However, occupation and expenditure on beef did not influence preference ($P > 0.05$). As expected expenditure on beef substitutes tends to decrease preference for beef. Beef has been found to be preferred over other sources of meats.

Lastly Aborisade and carpio 2017 conducted a study on household demand for meat in Nigeria. previous research had studied demand only at a regional level but this study estimates meat demand at a national level. The analytical technique used in this study was linear approximate almost ideal demand system (la-aids) model. The results showed that beef was a necessity while goat, chicken and mutton were luxuries. The results further revealed that all the meat products considered were normal goods with own-prices that were negative and consistent with demand theory except mutton. Goat meat and mutton were price elastic and as such, price changes for these products will affect their consumers more than consumers of other meat products that were less elastic.

2.7 Effect of meat consumption

Meat is an excellent source of protein in terms of both quantity and quality. Meat is also complete protein source because it contains all the essential amino acids your body cannot make.

But has meat has benefit to human body it also has disadvantages associated with its consumption.

Benefit of meat consumption

According to organic facts 2018 the benefit of meat consumption include

a) Source of vitamins and minerals: Meat is also a very good source of certain vitamins and minerals, especially most B vitamins, iron, zinc and phosphorus.

b) Boost immunity: Different forms of meat have a high amount of zinc content, which helps to boost immunity. Due to its antioxidant properties, zinc is responsible for creating antibodies to fight free radicals that put us at a higher risk for chronic diseases. Protein, also sourced from meat, helps in the production of these antibodies to protect the body from infections. The omega-3 fatty acids from seafood are good for boosting immunity as well.

c) Promote muscle growth: The protein in meat helps in building and repairing body tissues and improving muscle activity. Tissues and muscles are made of protein which is why the individuals who are building muscle strength increase their protein intake significantly. Protein and zinc in meat aid in muscle growth and repair.

- e) Improves Blood Circulation: Iron is one of the key minerals that aids in ensuring proper blood circulation and transport of oxygen to all cells. And different types of meat are a good source of iron. Iron deficiency can lead to serious health concerns and is initially recognized by weakness, lack of concentration, and fatigue.
- f) Protects Heart Health; The good fatty acids known as omega-3 in seafood keep the heart healthy and reduce the worry of cardiovascular malfunctions. A regular consumption of omega-3 fatty acids will cut out the risk of heart attack, stroke, and arrhythmias. The types of B vitamins that meat provides are niacin, folic acid, thiamine, biotin, pantothenic acid, vitamin B12, and vitamin B6 and they help in the formation of hormones, red blood cells, and nervous system functioning. These vitamins also help produce energy in the body and keep the heart and nervous system healthy.
- g) Better Skin, Hair, & Eyes: Consumption of meat rich in omega-3 fatty acids is beneficial for healthy skin and hair. The fatty acids protect the skin from UV rays and restore the moisture to the skin for a natural glow. Vitamin A found in it ensures strong bones, teeth, healthy skin, and eyes. Intake of meat is also linked to improving the condition of a lot of skin diseases such as psoriasis, eczema, dermatitis.

Disadvantages meat consumption

According to organic facts 2018 the benefit of meat consumption include (Linda Melone, 2014)

- a) Meat is relatively high in saturated fat and cholesterol, which increase the risk of

- c) Eating meat hardens blood vessels. Carnitine, a compound found in red meat has been found to cause atherosclerosis, the hardening or clogging of the arteries.
- d) Meat can increase the risk of developing type 2 diabetes. It contains a whole lot of iron which, when eaten in excess, can raise levels of iron in the brain and may increase the risk of developing Alzheimer's disease.

2.8 Contribution to knowledge

This research contributes to the body of knowledge (gap in knowledge) through its use of econometric models to analyze factors influencing meat consumption among civil servants in Ekiti state. Other researchers have contributed extensively to factors influencing consumption patterns all around the world and Nigeria. However there has not really been any significant research that examines the determinants of meat consumption of civil servants in Ekiti state, Therefore this study wants to examine these determinants.

Based on this fact, the purposes of the research is to analyse factors influencing meat consumption among civil servants in Ekiti state.

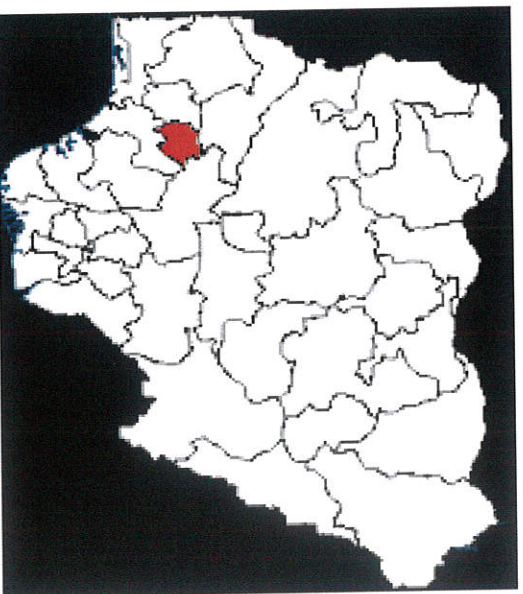
CHAPTER THREE

3.0 METHODOLOGY

3.1 Description of the study area

The study was carried out in Ekiti state. Ekiti State is situated entirely within the tropics. The state lies between the latitude $7^{\circ} 37^{\circ} 16\text{N}$ and Longitude $5^{\circ} 13^{\circ} 17\text{E}$. According National Population Commission (2006) Ekiti state has a population of 2,398,957 people. It covers a total estimated land area of $6,353\text{km}^2$ (2,453 square mile). It has a population density of $380/\text{km}^2$. It lies south of Kwara and Kogi State, East of Osun State and bounded by Ondo State to the East and to the south.

Image 3: Location of Ekiti State in Nigeria



Source: Wikipedia (2018)

The State enjoys a tropical climate with two distinct seasons. These are the rainy season (April -

raining and dry (Harmattan) seasons respectively. Tropical Forest exists in the south, while guinea savannah predominates in the northern peripheries (Ekiti state Nigeria 2018).

It is mainly an upland zone rising over 250 metres above sea level, Ekiti has a rhythmically undulating surface. The landscape consists of ancient plains broken by steep-sided outcropping dome rocks. These rocks may occur singularly or in groups or ridges and the most notable of these are to be found in Efon-Alaaye, Ikere-Ekiti and Okemesi-Ekiti.

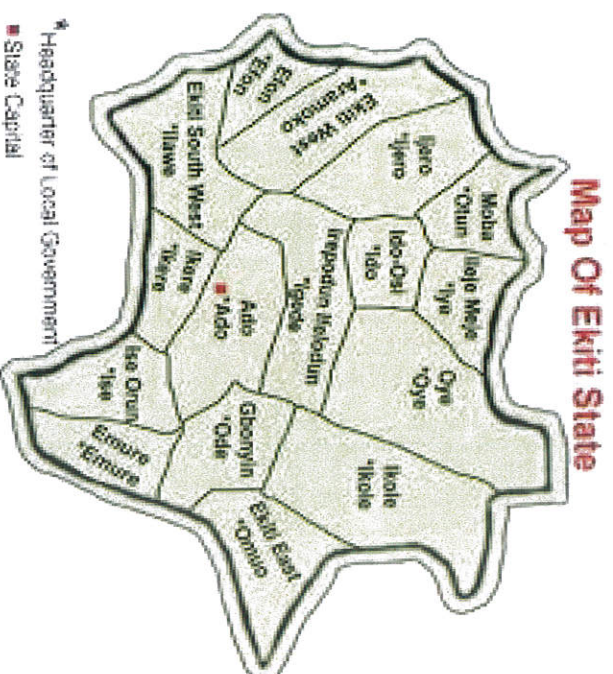
Ekiti land is naturally endowed with numerous natural resources. The state is potentially rich in mineral deposits. These include granite, kaolin, columbite, channockete, iron ore, barite, aquamine, gemstone, phosphate, limestone, gold among others. They are largely deposited in different towns and villages of Ijero, Ekiti West, Ado - Ekiti, Ikole, Ikere, Ise-Ekiti and other Local Government Areas.

The Land is also blessed with water resources, some of its major rivers are Ero, Osun, Ose, and Ogbese. More so a variety of tourist attractions abound in the state namely, Ikogosi Warm Spring, Ipole - Iloro Water Falls, Olosunta hills, Ikere, Fajuyi Memorial Park Ado - Ekiti and so on. The Ikogosi tourist centre is the most popular and the most developed. The warm spring is a unique natural feature, and supporting facilities are developed in the centre.

Moreover, the land is buoyant in agricultural resources with cocoa as its leading cash crop. It was largely known that Ekiti land constituted well over 40% of the cocoa products of the famous old Western Region. The land is also known for its forest resources, notably timber.

Because of the favourable climatic conditions, the land enjoys luxuriant vegetation, thus, it has abundant resources of different species of timber. Food crops such as yam, cassava, and also

Image 4: Map of Ekiti state



Source: Wikipedia (2018)

3.2 Study population

The study population was federal civil servants in Ekiti state. Civil servants are individuals that work with /for the government. We have various levels of government such as local government, state government, and federal government. They are people that perform professional activities and hold specific posts that aid in practical implementation of tasks and functions of the country (Stepanie Obasanho 2017).

3.3 Method of Data Collection

The data used for the study was obtained from primary source through the use of a well

meat consumed, quantities and frequency of consumption, constraints to consuming meat. The data collection will be analysed to determine factors that influence the consumption of meat by the respondents.

3.4 Sampling Technique

A multi stage (Two stages) sampling technique was used to select all the samples for the study.

Firstly a purposive sampling technique was used to select three federal institutions in the state namely: Federal University Oye (both Oye and ikole campus), Federal polytechnic Ado and federal Teaching hospital Ido-Ekiti.

Lastly a simple random sampling was used to select twenty respondents from each location making a total of eighty respondents.

3.5 Sample size

Simple random sampling was used to select a total number of 80 respondents. A structured questionnaire was administered for the purpose of the study.

3.6 Analytical Techniques

Descriptive and inferential statistical tools were used to analyze the data collected. Descriptive statistics such as frequency, arithmetic mean, median mode was employed to analyze the socio-economic factors, frequency or level of meat consumption among the respondents.

Inferential statistics such as Multiple ordinary least squares regression model was used to investigate the effects of factors such as socio economic characteristics, income, preference for

Description of terms

(i) Multiple Regression Model (Ordinary least squares)

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + B_7X_7 + B_8X_8 + B_9X_9 + B_{10}X_{10} + e_i$$

Where;

Y = consumption of meat

B_0 = Intercept

B_1 to B_{10} = Coefficient of independent variable estimate.

e_i = error term

X_1 = gender (Male= 0, Female = 1)

X_2 = Age (Years)

X_3 = Family size

X_4 = Marital status (married=0, single=1, otherwise=2)

X_5 = level of education (primary =0, secondary=1, tertiary=2)

X_6 = Nutritional status with respect to meat (1 if Yes, 0 if otherwise)

X_7 = Income (naira)

X_8 = preference for other protein sources

X_9 = Additional source of income (1 if Yes, 0 if otherwise)

X_{10} = Affordability

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

This chapter contains the results of the field survey as well as explains the implications of the result. The results will be discussed under the following subsections

1. Respondents socioeconomic characteristics
2. Response on being a member of cooperative society
3. Income of the respondents
4. Meat consumption patterns of the respondents
 - a) Response on importance of protein and consumption of meat
 - b) Types of meat consume
 - c) Frequency of Meat consumption per week
 - d) Expenditure on meat and other food items per week
5. Determinant of meat consumption
6. Future meat consumption
7. Constraint on meat consumption
8. Hypothesis Testing

4.1 SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS

Table 2 describes the socio-economic characteristics of the respondents in terms of gender, marital status, educational status, age, religion and household size.

The age distribution indicates that the mean age of the respondents was 38.16 years and 18.8% fell below 30 years, 45.0% fell within 30-39 years, 27.5% fell within 40-49 years, 7.5% fell within 50-59 years and the remaining 1.3% were 60 years and above. In addition majority of the respondents (civil servants) 56.3% were male and 43.8% were female.

Interestingly the educational level attainment of the respondents revealed that 2.5% had primary education, 6.3% had secondary school certificate, 6.3% also had OND, 3.8% had NCE, 10.0% had HND, 36.3% had BSC, 25.0 had MSc, and 10.0% had PHD. These showed that there is a

11.3% had a family size of above 5 members. This implies that there will be a higher demand and consumption for protein sources and and the respondents may be cautious of the numbers of children they give birth to and they do adopt family planning.

Result of the analysis on religion of the respondents showed 93.8% are Christian and 6.3% are Muslim. This implies that the issues of restriction on the consumption of meat were absent. The reason for the high percentage of Christian could be due to the location where the study (Ekiti state) is carried out.

Nevertheless, 48.8% had no secondary occupation, 18.8% were commercial motorbike riders, 6.3% were into farming, 6.3% were also into petty trading, 2.5% were into teaching jobs, 2.5% also were taxi drivers, 1.3% were electrician, 1.3% were barbers, 12.5% had other secondary occupation that was not listed in the study. This result implies that most of the respondents were comfortable with their primary occupation.

Table 2: Socio-economic characteristics of respondents

Variables	Frequency	Percentage (%)
Age(years)		
below 30 yrs	15	18.8
30-39 yrs	36	45.0
40-49 yrs	22	27.5
50-59yrs	6	7.5
60 yrs and above	1	1.3
Mean	38.16	
Sex		
Male	45	56.3
Female	35	43.8
Educational level attained		
Primary Education	2	2.5
Secondary Education	5	6.3
OND	5	6.3
NCE	3	3.8
HND	8	10.0
BSc	29	36.3
MSc	20	25.0
PHD	8	10.0
Marital Status		
Single	14	17.5
Married	65	81.3
Divorced	1	1.3
Family size		
Below 3 members	37	46.3
3-5 members	34	42.5
Above 5 members	9	11.3
Mean	3.48	
Religion		
Christianity	75	93.8
Islam	5	6.3
Secondary occupation		
Commercial motorbike	15	18.8
Teacher	2	2.5
Electrician	1	1.3
Barber	1	1.3
Taxi driver	2	2.5
Petty trading	5	6.3
Farming	5	6.3

4.2 MEMBERSHIP OF COOPERATIVE SOCIETY

Table 3 showed the cooperative status and income distribution of the respondents in the study area. The result in table 2 revealed that 87.5% belong to a cooperative society and 12.5% do not belong to any cooperative society. This implies that the respondents forms association of persons having mutual ownership in providing themselves some needed services. This could also influence their consumption of meat positively because they will have ready access to funds or loans from the cooperative.

Table 3: Membership of cooperative Society

Response	Frequency	Percentage (%)
Yes	70	87.5
No	10	12.5
Total	80	100

Source: Field survey, 2018

4.3 INCOME OF THE RESPONDENTS

Table 4 showed the distribution of the annual income of the respondents in the study area. The result in table 3 revealed that the respondents had an average annual income of 93,720 where 62.5% earn above 1000,000 Naira annually, 22.5% earn between 500,000 and 1000,000 Naira annually, and 15.0% earn close to a 500,000 Naira annually. These findings revealed that civil servants have a moderately huge annual income which ought to have an influence on their consumption of meat.

Table 4: Distribution of the annual income of the respondents

Annual income (₦)	Frequency	Percentage (%)
Below 500,00	12	15.0
500,000 – 1000,000	18	22.5

4.4 MEAT CONSUMPTION PATTERNS OF THE RESPONDENTS

4.4.1 Response on importance of protein and consumption of meat

Table 5 revealed that all the respondents (100%) were aware of the importance of protein. These findings could be as a result of the high level of literacy and educational level attained by the respondents in Table 1.

Table 5 also revealed that 77.5% of the respondents think meat consumption is important, and 22.5% think meat consumption is not important. The reason why majority (77.5%) think meat consumption is important from the study is as a result of their knowledge of meat as a protein source and its functions in the body. The reason the remaining 22.5% don't think it is important from the respondents response could be because of their preferences for other protein sources, and also the negative effect of high meat consumption

The table also revealed that 95.0% consume meat and 5.0% do not consume meat. The reason why majority (95.0%) consume meat from the study is as a result of their awareness of the importance of protein, and the remaining (5.0%) that don't consume meat could be as a result of their preferences for other protein sources, and they could be vegetarians.

Table 5: Response on importance of meat and protein and consumption of meat

Response	Frequency	Percentage (%)
Importance of protein		
Yes	80	100
No	0	0
Importance of meat consumption		
Yes	62	77.5
No	18	22.5
Meat consumption		
Yes	76	95.0
No	4	5.0

4.4.2 Types of meat consumed

Table 6 revealed that 45.0% of the respondents consume beef only, 16.3% consumed both beef and chicken, 12.5% consume chicken only, 7.5% consume beef, chicken and turkey, 7.5% also consume both beef and chevon, 3.8% consume Mutton (Sheep meat), 3.8% also consume chevon (goat meat), 2.5% consume pork(pig meat), and 1.3% consume other types of meat. These findings could be as a result of the availability of meat types in the study area, taste and preference for the meat types.

Table 6: types of meat consumed

Meat types	Frequency	Percentage (%)
Beef	36	45.0
Mutton (sheep meat)	3	3.8
Pork	2	2.5
Chevon (goat meat)	3	3.8
Chicken	10	12.5
Beef and chevon	6	7.5
Beef and chicken	13	16.3
Beef, chicken and turkey	6	7.5
Others	1	1.3
Mean	16.74	
Total	80	100

*Multiple responses

Source: Field survey, 2018

4.4.3 Frequency of Meat consumption weekly

Table 7 showed that 42.5% of the respondents consume meat every day, 21.3% consume meat twice every week, 17.5% consume meat thrice every week, 11.3% consume meat four times

Table 7: Frequency of meat consumption

Response	Frequency	Percentage (%)
Everyday	34	42.5
Twice	17	21.3
Thrice	14	17.5
Four times	9	11.3
Five times	6	7.5
Total	80	100

Source: Field survey, 2018

4.4.4 Expenditure on meat, other food items and quantity of meat consumed.

Table 8 shows the respondents expenditure on meat and other food items in a week.

The table showed that the average amount the respondents spend on meat in a week is 1737.1875 naira, the minimum amount the respondents spent on meat in a week is 200 Naira and the maximum amount they spent on meat in a week is 6000 naira.

The table also reveals that the average quantity of meat the respondents consume in a week is 1.95 kilogram, minimum quantity of meat the respondents consume in a week is 0.25kilogram and the maximum quantity of meat the respondents consume in a week is 12kilogram.

The Table also reveals that the average amount the respondents spend on other food items in a week is 5,477.3438 Naira, the minimum amount the respondents spent on other food items in a week is 1000 Naira and the maximum amount they spent on other food items in a week is 12,700 naira.

Table 8: Expenditure on meat, other food items and quantity of meat consumed weekly

Variables	Minimum	Maximum	Mean	Standard deviation
Expenditure on meat (₦)	200.00	6,000.00	1,737.188	1,492.174
Expenditure on other food items (₦)	1000.00	12,700.00	5,477.344	2,728.246
Quantity of meat consumed (kg)	0.25	12.00	1.954	2.317

Source: Field survey, 2018

4.5 RESPONSE TO FACTORS INFLUENCING MEAT CONSUMPTION IN THE STUDY AREAS

Table 9 show the responses of the respondents to what influences their consumption of meat

The result from the table revealed that 86.3% agreed that taste Influence their consumption of meat and 13.8% says taste do not influence their consumption of meat

Moreover the table also showed that 62.5% agreed that health effect of meat consumption influence their meat consumption and 37.5% responded that health effect of meat consumption does not influence their meat consumption.

Furthermore the table further revealed that 51.3% agreed that habit influence their meat consumption and 48.8% responded that habit does not influence their consumption of meat.

The table also showed that 41.3% agreed that price/cost of meat influence their meat consumption and 58.8% responded that price of meat does not influence their meat consumption.

Also the table also showed that 27.5% agreed that tradition influence their meat consumption and 72.5% responded tradition does not influence their meat consumption.

Table 9: Response on determinants of meat consumption

Response	Frequency	Percentage (%)
Taste		
Yes	69	86.3
No	18	13.8
Health effect		
Yes	50	62.5
No	30	37.5
Habit		
Yes	41	51.3
No	39	48.8
Price/cost of meat		
Yes	33	41.3
No	47	58.8
Tradition		
Yes	22	27.5
No	58	72.5
Religion		
Yes	20	25.0
No	60	75.0
Other reasons		
Yes	56	70.0
No	24	30.0
Total	80	100

Source: Field survey, 2018

4.6 FUTURE MEAT CONSUMPTION

Table 10 reveals the respondents response on increasing and decreasing their meat consumption in the Future

The table showed that 83.8% would like to increase their meat consumption in the future while 16.3% do not want to increase their meat consumption in the future. The reason from the study why majority (83.8%) would like to increase their meat consumption could be as a result of their knowledge of meat as protein source, expectation of increase in income, and their increasing family size.

The table also showed that 42.5% would want to decrease their meat consumption in the future and 57.5% do not want to decrease their meat consumption in the future. The reason from the study why 42.5% would like to decrease their meat consumption in the future could be as a result of their negative health effect of meat consumption, and it could be age related.

Table 10: Response on Future meat consumption

Response	Frequency	Percentage (%)
Increase meat consumption		
Yes	13	16.3
No	67	83.8
Decrease meat consumption		
Yes	46	57.5
No	34	42.5
Total	80	100

Source: Field survey, 2018

4.7 CONSTRAINT ON MEAT CONSUMPTION

Table 11 reveals the respondents response on their constraint in meat consumption,

The table revealed 45.4 73.9% 1

Table 11: Response on constraint on meat consumption

Response	Frequency	Percentage (%)
Yes	21	26.3
No	59	73.8
Total	80	100

Source: Field survey, 2018

4.8 REGRESSION RESULT FOR DETERMINANT OF HOUSEHOLD EXPENDITURE ON MEAT

The factors that influence meat consumption were examined using ordinary least squares multiple regression model at 0.05 level of significance. The dependent variable was household total expenditure in a week and the determinant or independent variables were age, family size, Marital status, educational level attained, Nutritional status, Income, Preferences for other protein source, additional source of income, awareness of the importance of protein. The coefficients (b) of all the explanatory variables had the expected signs based on economic reasoning. Six out of the eight explanatory variables were statistically significant at various levels.

The result in Table 12 revealed that Sex of the respondents (X_2) is a significant determinant of household expenditure on meat in a week at a significance level of 10%. However the coefficient was negative implying that as the sex of the respondents changes from female to male, the expenditure on meat would decrease.

Analysis of the result shows that Family size (X_3) is a significant determinant of household expenditure on meat in a week at a significance level of 10%. On the other hand negative relationship existed between Family size and expenditure on meat. This means that as households size increases the expenditure on meat will decrease or reduce. This could be attributed to the additional or extra cost of purchasing meat as a result of an additional person

respondents expenditure on meat. This could be as a result of the knowledge gained on the negative health effect of meat consumption and availability of other source high in protein apart from meat as they acquired more educational level.

Furthermore, the result in the table below revealed that income (X_7) is a significant determinant of household expenditure on meat at a significant level of 5%. Income has a positive coefficient which implies that is positively related to the expenditure on meat. This result agrees with the findings of Yakaka and Bashir 2012. This implies that it has a direct effect on the expenditure of meat which shows that as the income of the respondents increases the greater the probability of expenditure on meat in the study area. Income is usually one of the major determinants of budget share allocation among households. Ruminant meat is a normal good; therefore, the positivity of the coefficients means consumers will increase their expenditure on ruminant meat so long as incomes increase.

The result also reveals that about 25.3% variations have been explained by the independent variables while the remaining 74.7% is error as a result of non-inclusion of some explanatory variables. The model has an F value of 2.639 and it is statistically significant at 10%.

Table 12: regression for household expenditure

Variables	Coefficients	T values	Significant level
Constant		2.626	0.011*
Sex	-0.016	-0.126	0.900
Age	-0.206	-1.874	0.065*
Family size	-0.245	-1.944	0.056*
Marital status	-0.109	-0.962	0.339
Educational level attained	-0.357	-2.963	0.005**
Nutritional status	-0.053	-0.415	0.680
Income	0.398	3.338	0.001**
Preferences for other protein sources	0.147	1.281	0.204
Additional source of income	0.039	0.341	0.734
Affordability	0.035	0.288	0.774
F = 2.639			

Source: Field survey, 2018

*** Implies significant at 0.01 level (1%)

** Implies significant at 0.05 level (5%)

* Implies significant at 0.1 level (10%)

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION, LIMITATION AND RECOMMENDATION

5.1 Summary

The research was undertaken to determine the factors that influences the consumption of meat among Federal civil servants in Ekiti state, Nigeria with the following specific objectives

- Examine the socio-economic characteristics of the respondents in the study area.
- Estimate the meat consumption patterns and levels of the respondents in the study area.
- Identify the determinant of meat consumption of the respondents.
- Examine the constraints to the meat consumption of the respondent.

For the purpose of this study these hypothesis were formulated

Null hypothesis (H_0): Consumption of meat is not influenced by respondents socio-economic characteristics; education level, age, religion, sex and household size of the respondent and its Determinant.

Alternate hypothesis (H_a): Consumption of meat is influenced by socio-economic characteristics (Education level, Age, Religion, Sex and household size) of the respondent and its determinant.

Interestingly the study was conducted in Ekiti state, Nigeria. A two stage sampling techniques was used to select all the samples for the study. A purposive sampling technique was used to select three federal institutions in the state namely: Federal University Oye (both Oye and ikole campus), Federal polytechnic Ado and federal Teaching hospital Ido-Ekiti and a simple random sampling was used to select twenty respondents from each location of government making a total of eighty respondents. Data was collected primarily through the use of a well structured questionnaire while secondary data was obtained from literatures.

Analytical tools used in this study include descriptive statistics and multiple regression analysis.

5.1.1 Summary of results

within 50-59 years and the remaining 1.3% were 60 years and above. In addition majority of the respondents (civil servants) 56.3% were male and 43.8% were female.

The educational level attainment of the respondents revealed that 2.5% had primary education, 6.3% had secondary school certificate, 6.3% also had OND, 3.8% had NCE, 10.0% had HND, 36.3% had BSC, 25.0 had MSC, and 10.0% had PHD.

The result of the marital status of the respondents showed that majority 81.3% of the respondents are married, 17.5% are single, and 1.3% are divorced.

46.3% had a family size of below 3 members, 42.5% had a family size of 3-5 members and 11.3% had a family size of above 5 members.

Majority of the respondents (93.8%) are Christian and 6.3% are Muslim. Nevertheless, 48.8% had no secondary occupation, 18.8% were commercial motorbike riders, 6.3% were into farming, 6.3% were also into petty trading, 2.5% were into teaching jobs, 2.5% also were taxi drivers, 1.3% were electrician, 1.3% were barbers, 12.5% had other secondary occupation that was not listed in the study. Majority of the respondents (87.5%) belong to a cooperative society and 12.5% do not belong to any cooperative society.

The respondents had an average annual income of 93,720 where 62.5% earn above 1000,000 Naira annually, 22.5% earn between 500,000 and 1000,000 Naira annually, and 15.0% earn close to a 500,000 Naira annually.

Importance of protein and consumption of meat

All the respondents (100%) were aware of the importance of protein. 77.5% of the respondents think meat consumption is important, and 22.5% think meat consumption is not important.

Also majority of the respondents (95.0%) consume meat and 5.0% do not consume meat.

Types of meat consumed

Result in the table showed that 45.0% of the respondents consume beef only, 16.3% consumed both beef and chicken, 12.5% consume chicken only, 7.5% consume beef, chicken and turkey,

7.5% also consume both beef and chicken, 3.8% consume beef, chicken and turkey,

Frequency of Meat consumption weekly

Result in the table showed that 42.5% of the respondents indicated that they consume meat every day, 21.3% indicated that they consume meat twice every week, 17.5% consume meat thrice every week, 11.3% consume meat four times every week, and 7.5% consume meat five times every week.

Expenditure on meat, other food items and quantity of meat consumed.

The average amount the respondents spend on meat in a week is 1737.1875 naira, the minimum amount the respondents spent on meat in a week is 200 Naira and the maximum amount they spent on meat in a week is 6000 naira.

The average quantity of meat the respondents consume in a week is 1.95 kilogram, minimum quantity of meat the respondents consume in a week is 0.25kilogram and the maximum quantity of meat the respondents consume in a week is 12kilogram.

The average amount the respondents spend on other food items in a week is 5,477.3438 Naira, the minimum amount the respondents spent on other food items in a week is 1000 Naira and the maximum amount they spent on other food items in a week is 12,700 naira.

FACTORS INFLUENCING OF MEAT CONSUMPTION IN THE STUDY AREAS

Result in the table showed that 86.3% agreed that taste Influence their consumption of meat and 13.8% says taste do not influence their consumption of meat.

Majority of the respondents (62.5%) agreed that health effect of meat consumption influence their meat consumption and 37.5% responded that health effect of meat consumption does not influence their meat consumption.

51.3% agreed that habit influence their meat consumption and 48.8% responded that habit does not influence their consumption of meat.

Furthermore, 41.3% agreed that price of meat influence their meat consumption and 58.8% responded that price of meat does not influence their meat consumption.

Majority of the respondents (72.5%) responded that habit influence their meat consumption.

In addition, 70.0% agreed that other reasons not stated or capture by the study influence their meat consumption and 30.0% responded no other reasons influence their meat consumption.

FUTURE MEAT CONSUMPTION

Majority of the respondents (83.8%) would like to increase their meat consumption in the future while 16.3% do not want to increase their meat consumption in the future.

Also 42.5% would want to decrease their meat consumption in the future and 57.5% do not want to decrease their meat consumption in the future.

CONSTRAINT ON MEAT CONSUMPTION

Majority of the respondents (73.8%) had no constraint in their consumption of meat while 26.3% had constraints in their consumption of meat.

REGRESSION RESULT

Age of the respondents (X_2) is a significant determinant of household expenditure on meat in a week at a significance level of 10% but with a negative relationship.

Also Family size (X_3) is a significant determinant of household expenditure on meat in a week at a significance level of 10% but with a negative relationship.

Furthermore Educational level attained (X_5) is a significant determinant of household expenditure on meat at a significant level of 5% with a negative relationship too.

In addition income (X_7) is a significant determinant of household expenditure on meat at a significant level of 5% and it has a positive relationship.

5.2 Conclusion

The aim of this study was to conduct an economic analysis of the factors influencing meat consumption among Federal civil servant Ekiti state, Nigeria. It was found that majority were married indicating their responsibilities to provide protein needs of their family members. A greater part of the respondents were in their productive age which explains why majority of them

Also, most of the respondents were Christian which is a result of the location of the study areas and this could imply that there are no restriction on consumption of meat in the study area which also explains why most of the respondents consume meat. Furthermore most of the respondents do not have a family size that is greater than five which could be as a result of their educational level among the respondents because education makes an individual to be more enlightened. Furthermore almost half of the respondents had no secondary occupation which implies they have no other streams or other avenue for generating income which could influence their purchasing power.

From the study, it was observed that household income had a significant effect on household expenditure on meat with a positive coefficient indicating that as income of the respondents increases, the expenditure on meat will increase as well. Also from the study age, family size and educational level attained, had a significant effect on household expenditure but with a negative coefficient which means that there is an inverse relationship between the respondents expenditure on meat and these variables. The result reveals that about 25% variations have been explained by the independent variables.

5.3 Limitation

The main limitation of this research includes problems associated with:

- objectivity of answers
- Insufficient coverage of research (not included some important variables such as income of households, price of meat and fish, household spending on food).
- The sample was a convenient one and is small in size,

5.4 Recommendation

The empirical results of this study suggested several points of interest for researchers, policy makers, planners and traders with involvement in Nigeria livestock production and marketing. The findings and conclusion of this study therefore recommend that:

- There should be intensification of nutritional campaigns and there should be various means of educating people on the clinical and sub-clinical repercussion of not taking enough of animal protein in their diet. This will go a long way in helping to increase expenditure on animal protein from the respondents and the nation at large.
- There should be more enlightenment on the importance of Family planning education in the study area and the nation as a whole.
- Researchers should try to work on other reasons, factors or determinant not captured in this study.

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APPENDIX

QUESTIONNAIRE

FEDERAL UNIVERSITY OYE-EKITI, EKITI STATE, NIGERIA.
DEPARTMENT OF AGRICULTURAL ECONOMICS AND EXTENSION

A QUESTIONNAIRE ON THE ECONOMIC ANALYSIS OF FACTORS INFLUENCING MEAT CONSUMPTION AMONG FEDERAL CIVIL SERVANTS IN EKITI STATE, NIGERIA.

Questionnaire Number _____

Name of Local Government Area _____

Dear respondent,

This questionnaire is an attempt to gather important information about the Factors influencing meat consumption among civil servants in Ekiti state, Nigeria. As the main intention behind this survey is not to identify or expose any individual's name, but your responses. Please note that the completion of this questionnaire is entirely voluntary.

Please answer the questions below by ticking the box with the right answer

SECTION A: SOCIO-ECONOMIC CHARACTERISTICS

1. Age in years? _____

2. Sex: (a) Male (b) Female

3. Family size _____

4. Marital status: (a) Single (b) Married (c) Divorced (d) Separated
(e) widow/widower

5. Religion: (a) Christianity (b) Muslim (c) Traditional

6. Educational level attained? (a) primary school certificate (b) secondary School certificate (c) OND (d) NCE (e) HND (f) University graduate (BSC)

(g) Masters (Msc) (h) PHD

(e) Taxi driver (f) petty trading (g) Others (please specify) _____

SECTION B: INFORMATION ON MEAT CONSUMPTION PATTERNS OF THE RESPONDENTS

- 11. Do you consume meat? (a) Yes (b) No
- 12. Which types of meat do you consume (a) beef (b) mutton (sheep meat)
(c) Pork (pig meat) (d) chevon (goat meat) (e) chicken (f) rabbit meat
(g) turkey meat (h) others (please specify) _____
- 13. On average, how many times per week do you eat them, would you say? (a) Everyday (b)
Twice (c) Thrice (d) four times (e) Five times
- 14. What is your household total Expenditure (amount spent) on meat in a week? N _____
- 15. What quantity (Kilogram) of meat do you consume per week? _____
- 16. What is your household total Expenditure (amount spent) on other food items in a week?
N

SECTION C: INFORMATION ON DETERMINANT MEAT CONSUMPTION PATTERNS OF THE RESPONDENTS

- 17. Are you aware of the importance of protein? (a) Yes (b) No
- 18. Do you think meat consumption is important? (a) Yes (b) No
- 19. If yes to question 18 then why do you think it is important? _____
- 20. Below are options that answer the question 'What influences your consumption of meat?' Just tick the yes box if it is a yes or tick the No box if it is a no

WHAT INFLUENCES YOUR CONSUMPTION OF MEAT?

Habits		
Price or cost of meat		
Preferences for meat		
Nutritious in value		
Tradition		
Religion		
Income		
Some other reason		

21. Please specify those other reasons in question 21. _____

22. Are there any constraint in your meat consumption (a) yes (b) No

23. If Yes pleas state them. _____

24. Would you like to increase your meat consumption in future? (a) Yes (b) No

25. If yes to question 24, please state reasons. _____

26. Would you like to decrease your meat consumption in the future? (a) Yes (b) No

27. If yes to question 26, please state reasons. _____