



**FEDERAL UNIVERSITY OF AGRICULTURE  
ABEOKUTA NIGERIA**

# **66<sup>TH</sup> INAUGURAL LECTURE**

## **FOOD DEMAND DECISIONS: NOT ONLY THE NUMERICS BUT THE CHARACTERISTICS**

by

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## **FOOD DEMAND DECISIONS: NOT ONLY THE NUMERICS BUT THE CHARACTERISTICS**

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Other Heads of Departments,

Distinguished members of the University Senate,

My Academic and Professional Colleagues,

Members of my family,

Gentlemen of the Print and Electronic Media,

Distinguished Ladies and Gentlemen

Great FUNAABITES.



**1.0 PREAMBLE**

It is a unique opportunity to be requested to present the 66th Inaugural Lecture being the third from the Department of Agricultural Economics and Farm Management and the eighth in the College of Agricultural Management and Rural Development of our great University.

An inaugural lecture is an opportunity for a newly appointed professor (I am not newly appointed though) to inform colleagues, the campus community, and the public of his work to date including current research and plans.

When I was in the secondary school, the only athletic event that I found interesting enough to participate in was the triple jump aka hop, step, and jump. I am not sure that I ever met the mark, but I enjoyed trying!

Hopping, stepping, and jumping sometimes results in false take-offs, jumping far below the mark or meeting the mark. I shall return to the issues of hopping, stepping and jumping later.

A few years down the line, our College was known as the College of Agricultural Management, Rural Development and Consumer Studies. When it was changed to Agricultural Management and Rural Development, I fought tooth and nail for the name to be retained and I remember that my late colleague who was the Dean then wondered what all the fuss was about.

The area I have enjoyed much more than others is the area of consumer economics which is where I have taken my title from. I am a Professor of Agricultural Production Economics but as



Lusk *et al.* (2012) note:

“much of the research on food and agriculture in the past century has focused on issues related to production efficiency, food supply, and farm profitability. But in recent years, farmers, agribusiness, policy makers, and academics have increasingly turned their attention away from the farm and toward the food consumer and to issues related to food consumption.”

This treatise is in three parts: the first part will present the issues of Consumer demand decisions with emphasis on food demand.

The second part presents snippets of my research done in conjunction with my students over the course of my 30+years in a citadel of learning using a salad approach (A salad is a meal of small pieces of varieties of foods - vegetables, fruits, and meats). I have made contributions to various facets of the agricultural sector.

I shall therefore hop in and out of issues and occasionally step into related areas. I will then jump into my experience as a university don and venture into other issues of academic relevance since I have spent more than half of my life in the university environment. I take an opening line from Akeredolu-Ale (1999):

"...this is more of a talk from the bottom of my heart, than of an academic presentation since the issues at stake are ones about which I cannot pretend to be dispassionate".



Today's lecture centers on Consumer Economics from the Lancastrian point of view. The fuss about the name of the College (referred to earlier) was about not being sidelined in the affairs of the College! Indeed, despite the change, I can confess that I have not been sidelined but more interestingly, I have had the honour to be allowed to be part of the faculty of the Department of Home Science Management where I teach Consumer Education amongst other courses.

## **2.0 INTRODUCTION**

### **Consumer Economics**

Consumer Economics is a branch of economics concerned with microeconomic analysis of consumption behaviour in households and other economic units. It sometimes also encompasses family financial planning and policy analysis. The term largely describes what was more commonly called "home economics" in the past.

Its primary constituency is in the field of Consumer theory which is a branch of microeconomics, which shows how individuals make choices, subject to how much income they have available to spend, and the prices of goods and services. The issue of choice is how consumers decide among several alternatives, not all of which may be obtained at the same time. To become a good decision maker, the economist must be able to identify the problem and then analyze the alternatives.

### **Consumer behaviour**

Consumer behaviour are the actions a person takes in purchasing and using products and services, including the mental and social processes that precede and follow these actions. We can answer questions such as:



- a. Why people choose one product or brand over another,
- b. How they make these choices, and
- c. How companies use this knowledge to provide value to consumers

It is the study of how individual customers, groups or organizations select, buy, use, and dispose ideas, goods, and services to satisfy their needs and wants. It refers to the actions of the consumers in the marketplace and the underlying motives for those actions.

Marketers expect that by understanding what causes the consumers to buy goods and services, they will be able to determine which products are needed in the marketplace, which are obsolete, and how best to present the goods to the consumers.

The study of consumer behaviour assumes that the consumers are actors in the marketplace. The perspective of role theory assumes that consumers play various roles in the marketplace. Starting from the information provider, from the user to the payer and to the disposer, consumers play these roles in the decision process (Indirani, 2015, Kumara and Kumar (2016)).

### Nature of Consumer Behaviour

1. Consumer Behaviour is influenced by the following factors:

- Marketing factors such as product design, price, promotion, packaging, positioning, and distribution.
- Personal factors such as age, gender, education, and income level.
- Psychological factors such as buying motives, perception of the product and attitudes towards the product.



- Situational factors such as physical surroundings at the time of purchase, social surroundings, and time factor.
- Social factors such as social status, reference groups and family.
- Cultural factors, such as religion, social class, caste and sub-castes.

2. Consumer behaviour is not static. It undergoes a constant change over a period depending on the nature of products. For example, kids prefer colorful and fancy footwear, but as they grow up as teenagers and young adults, they prefer trendy footwear, and as middle-aged and senior citizens they prefer more sober footwear. The change in buying behaviour may take place due to several other factors such as increase in income level, educational level and marketing factors.

3. Consumer behaviour varies from consumer to consumer: All consumers do not behave in the same manner. Different consumers behave differently. The differences in consumer behaviour are due to individual factors such as the nature of the consumers, lifestyle, and culture. For example, some consumers are technophiles. They go shopping, spending beyond their means and even borrowing money from friends, relatives, banks, and at times even adopt unethical means to spend on shopping of advance technologies. But there are other consumers who, despite having surplus money, do not go even for the regular purchases and avoid use and purchase of advance technologies.

4. Consumer behaviour varies across states, regions, and countries. For example, the behaviour of the urban consumers is



different from that of the rural consumers. A good number of rural consumers are conservative in their buying behaviours. The rich rural consumers may think twice to spend on luxuries despite having sufficient funds, whereas the urban consumers may even take bank loans to buy luxury items such as cars and household appliances. It may differ depending on the upbringing, lifestyles, and level of development.

5. Information on consumer behaviour is important to the marketers:

Marketers need to have a good knowledge of the consumer behaviour. They need to study the various factors that influence the behaviour of their target customers. This knowledge enables them to take appropriate marketing decisions in respect of the following factors:

- a. Product design/model
- b. Pricing of the product
- c. Promotion of the product
- d. Packaging
- e. Positioning
- f. Place of distribution

6. Leads to purchase decision:

A positive consumer behaviour leads to a purchase decision. A consumer may take the decision of buying a product based on different buying motives. The purchase decision leads to higher demand, and the sales of the marketers increase. Therefore, marketers need to influence consumer behaviour to increase their purchases.



7. Varies from product to product. Consumer behaviour is different for different products. There are some consumers who may buy more quantity of certain items and very low or no quantity of other items. For example, teenagers may spend heavily on products such as cell phones and branded wears for snob appeal but may not spend on general and academic reading. A middle-aged person may spend less on clothing, but may invest money in savings, insurance schemes, pension schemes, and so on.

8. Improves standard of living. The buying behaviour of the consumers may lead to higher standard of living. The more a person buys the goods and services, the higher is the standard of living. But if a person spends less on goods and services, despite having a good income, they deprive themselves of higher standard of living.

9. Reflects status. The consumer behaviour is not only influenced by the status of a consumer, but it also reflects it. The consumers who own luxury cars, watches and other items are considered belonging to a higher status. The luxury items also give a sense of pride to the owners.

### **Consumer Education**

Consumer Education relates to imparting knowledge to and developing skills in consumers regarding consumer rights, consumer laws, product quality- standards, health aspects of various products, availabilities of various public and private services, units and measurements, redressal of consumer problems and making correct choices while buying different commodities (Gautum and Singh 2016). Consumer education is needed to build knowledge, skills, aptitudes, values and capacity to play the role of



responsible consumers. There are five important aspects to consumer education (Muralidharan 2016):

### **Informed Choice**

The consumer must learn to obtain information on goods and services, discriminate between sources of information, understand the psychology of selling and advertising. Learn to shop wisely, distinguish between needs and wants, and understand the alternatives of conserving and saving rather than buying and consuming.

### **Value Systems**

Consumer education must include the development of a Value System. The consumer must learn how to share and care, must understand that his or her individual consumer decisions have broad social impact and influence on such important things as the overall allocation of resources within the society. They can use their power as consumers to promote value for money, value to people, value to the environment, value to democracy and value to justice.

### **Recognition of Responsibilities and Rights**

In pursuing the daily business of living, it is important to articulate and understand the responsibilities as well as our rights as consumers. This will help to iron out possible conflict of roles and bring greater harmony in the relationship.

### **Wise Decision Making**

There is a need for consumers to wear their thinking caps all the time to evaluate, assess and make responsible decisions in their consumption choices and options.



### Catalyst for Action

Consumer education must catalyse action. The consumer must be aware of the available avenues of consumer complaint and redress and learn to use them for their benefit.

In the final analysis, consumer education must motivate consumers to participate proactively in the decision-making process especially those that affect their day-to-day lives. Consumer education is living and sharing. It must include both the individual concerns of the consumer and the shared concerns of society at large. Consumer education must awaken the consumer eye, inculcate the responsibilities of consumers, ensure constant vigilance of consumer rights and develop a shared value system (anon).

### Opening the Consumer Eye

The consumer eye concept means that an informed consumer looks at a product critically and analytically, first from own point of view as an individual consumer, then with the interest of the community at large in mind. The analysis of product is done on several levels like health, economics, product safety, legal and environment considerations, and social costs.

### Shared Value System

Consumer education is about living and sharing. It should assist the development of a strong consumer movement. The five pillars of the consumer movement which consumer education should help to imbibe as part of the Shared Value System are:

- (a) Caring for people: The consumer movement is people who care about others and about themselves. It's about value for money of goods. But more importantly. it's about value for people.



- (b) Protecting the earth: Consumers must be conservers, protecting and preserving the earth. They must be aware of the consequences of their actions so that the earth's resources are not squandered by the few at the expense of the many.
- (c) Knowing their Rights: Human rights are central to the consumer movement, especially the right of people to have their basic needs met.
- (d) Fighting for justice: Political and economic systems often discriminate against the powerless. Consumers can help to build fair, rational and just societies.
- (e) Discovering their power: Acting together, ordinary people can make a difference. Consumers can use their collective power to protect their interest and to fight those forces that threaten them.

### **Consumer Purchase Decision**

Behind the visible act of making a purchase before consumption, lies a decision process that must be investigated. It refers to the buying behaviour of the ultimate consumer. This is particularly important from the viewpoint of the firm supplying the commodity (Brown, 2013). A firm needs to analyze buying behaviour because:

- a. Buyers' reactions to a firms' marketing strategy has a great impact on the firm's success.
- b. The marketing concept stresses that a firm should create a Marketing Mix (MM) that satisfies (gives utility to) customers, and therefore, needs to analyze what, where, when and how consumers buy.
- c. Marketers can better predict how consumers will respond to marketing strategies.

The purchase decision process consists of the stages a buyer passes



through in making choices about which products and services to buy. (Not all decision processes lead to a purchase and consumer decisions do not always include all the stages, determined by the degree of complexity).

These stages are:

- a. problem recognition,
- b. information search,
- c. alternative evaluation,
- d. purchase decision,
- e. Purchase and
- f. post-purchase behaviour

### Problem Recognition

Problem recognition (perceiving a need) refers to the awareness of need, and it is the difference between the desired state and the actual condition. Perceiving a difference between a person's ideal and actual situations big enough to trigger a decision. It can be as simple as noticing an empty milk carton or it can be activated by marketing efforts. A consumer can see a commercial for a new pair of shoes which would stimulate his recognition that he needs a new pair of shoes.

### Information search

The information search stage clarifies the options open to the consumer and consists of two sources – the internal search and the external search.

Internal search has to do with scanning one's memory to recall previous experiences with products or brands. It is often sufficient for frequently purchased products. It is also useful when past experience or knowledge is insufficient. However, the risk of making a wrong purchase decision is high but the cost of gathering



information is low.

If more information is needed, the consumer resorts to external search. The primary sources of external information are: (a) Personal sources, such as friends and family; (b) public sources, including various product-rating organizations such as Consumer Reports; (c) marketer-dominated sources, such as advertising, company websites, and salespeople.

A successful information search leaves a buyer with possible alternatives, (the evoked set). For example, if the consumer was hungry and wants to go out and eat, the evoked set could be Chinese food, Yoruba food (bolus) or perhaps snacks.

The information environment for different intrinsic attributes could be search, experience, or credence in nature (Darby and Karni, 1973): the consumer can learn about the quality level prior to purchase (search), after purchase and use (experience), or not at all (credence). Extrinsic indicators (e.g. certification, labeling) and cues (e.g., brand name, packaging, price) also convey search information to the consumer since they are available prior to purchase (Steenkamp, 1989). The consumer's perception of quality is therefore formed from a blend of information from these multiple sources. The nutritional quality of a food product is viewed as an objective measure and is expressed by the amounts of different nutrients contained by the food product.

Food labeling is an essential information source. Its use has gained prominence in many countries as regulatory tool to inform consumers and influence market for food quality (Caswell and Padberg 1992). This perception of quality includes food that has visual appeal; good flavor; good nutritional quality; freedom from bio toxins, proper labelling and handling; prevention from



exposure to environmental contaminants among other quality indicators. The food label was designed to assist people to make purchase decision and access food information because by reading food label, consumers can compare the nutrient content of similar foods, see how foods fit into their overall diets, and understand the relationship between certain diet related diseases.

Effective and efficient information on food labels is important for all the stakeholders in the food chain because it helps in reducing information asymmetry and providing consumers with information that can actively help them in making informed choices and stimulate healthier eating and act as an important element in ensuring their right to be properly and correctly informed.

It was partly to make nutrition information available to consumers in Nigeria, that NAFDAC was established by Decree No 15 of 1993. It is a parastatal of the Federal Ministry of Health in Nigeria with the mandate to regulate and control quality standards for foods, drugs, cosmetics, medical devices, chemicals, detergents, and packaged water imported, manufactured locally, and distributed in Nigeria. It was established to protect and promote public health by ensuring the wholesomeness, quality and safety of food and drugs consumed in Nigeria.

#### Evaluation of Alternatives

This has to do with the need to establish criteria for evaluation, features the buyer wants or does not want. The consumer rank or weighs the alternatives or resumes search. A consumer may decide that he wants to eat something spicy. If not satisfied with the choice made, he returns to the search phase. Perhaps he thinks of another restaurant.

#### Purchase decision



There are three possibilities:

- a. From whom to buy which depends on such considerations as: terms of sale, experience buying from the seller, return policy.
- b. When to buy which can be influenced by store atmosphere, time pressure, a sale, or the pleasantness of the shopping experience.
- c. Do not buy

### Post-Purchase Behaviour

After buying a product, the consumer compares it with expectations and is either satisfied or dissatisfied. Satisfaction or dissatisfaction affects:

- consumer value perceptions
- consumer communications
- repeat-purchase behaviour.

Many firms work to produce positive post-purchase communications among consumers and contribute to relationship building between sellers and buyers.

**Cognitive Dissonance.** The feelings of post-purchase psychological tension or anxiety a consumer often experiences.

Firms often use ads or follow-up calls from salespeople in this post-purchase stage to try to convince buyers that they made the right decision.

### Consumer Demand theory

This is the branch of economics concerned with the study of consumer behaviour, especially as it applies to decisions related to purchasing goods and services through markets. The theory is largely centered on the study and analysis of the utility generated



from the satisfaction of wants and needs. The key principle of consumer demand theory is the law of diminishing marginal utility, which explains the law of demand and the negative slope of the demand curve.

Consumer demand is defined as the 'willingness and ability of consumers to purchase a quantity of goods and services at a given price in a given period of time, or at a given point in time.' The willingness must be supported by an ability to pay. In short, desire needs purchasing power to turn it into effective demand. Purchasing power is determined by current consumer income (or disposable savings) in relation to the current price level.

Potential consumers decide how much of a good or service to buy based on its price and many other factors including their own tastes, information, prices of other goods, income and government actions (see Figure1). Although many factors influence demand, economists usually concentrate on how price affects the quantity demanded. Demand curves are derived from Consumer theory.

A consumer's ordinary demand function (called a Marshallian demand function) shows the quantity of a commodity that he will demand as a function of market prices and his fixed income. Demand functions can be derived from the utility-maximising behaviour of the consumer (i.e., maximisation of  $u = f(x_1, x_2)$ , subject to  $\bar{m} = p_1x_1 + p_2x_2$ ).

Where  $u$  is the utility function,  $\bar{m}$  is the fixed money income,  $p_1$ ,  $p_2$  are the prices of commodities  $x_1$  and  $x_2$  respectively.

The first-order conditions for maximisation consists of the



following three equations in the three unknowns:  $x_1$ ,  $x_2$  and  $\lambda$ : ( $\lambda$  is called the Lagrange constraint).

$$\frac{\partial L}{\partial x_1} = f_1 - \lambda p_1 = 0 \dots\dots\dots (1)$$

$$\frac{\partial L}{\partial x_2} = f_2 - \lambda p_2 = 0 \dots\dots\dots (2)$$

$$\frac{\partial L}{\partial \lambda} = \bar{m} - p_1 x_1 - p_2 x_2 = 0 \dots\dots\dots (3)$$

The demand functions are derived by solving this system for the unknowns. The solutions for  $x_1$  and  $x_2$  are in terms of the parameters  $p_1$ ,  $p_2$  and  $\bar{m}$ . In general, the quantity of  $x_1$  or  $x_2$  that the consumer buys depend upon the prices of all commodities and his income.

As noted above, there are other factors which are usually held constant in determining the amount of a commodity that is demanded (see figure 1).

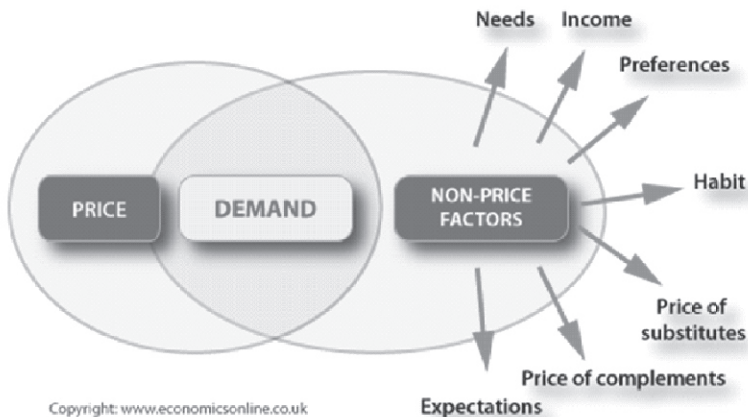


Fig 1: Factors affecting Consumer Demand



**Characteristics demand theory**

The Lancaster approach is opposed to traditional demand theory in that the characteristics or attributes of goods are demanded by the consumers, not the goods per se. This approach has the advantage of explicitly considering technology and quality attributes of products. Thus, intertemporal changes in quality and technology can be explicitly considered. The demand for consumer goods satisfies relatively few simple needs such as food, shelter, and entertainment. These demands are met through the production of various goods and services. Thus, basic human needs can be satisfied through many combinations of materials and technologies. Many goods produced in an advanced economy meet similar needs; consumers apparently select only a few goods on the basis of their price and different qualities or attributes (Marcin, 1993).

The traditional analysis of consumer demand deals with consumer choice under budget constraints in which preference ordering is used to maximize utility when price changes. This kind of analysis provides no way for using information about the properties of goods. Lancaster (1971) proposed an alternative theoretical approach based on the principle that all goods possess characteristics or attributes that are demanded by the consumers, not the goods themselves. For example, consumers do not demand food in itself, but rather the nutrients and flavors in the food. Lancaster stated that traditional analysis cannot predict how demand will be affected by a specified change in one or more properties of a good or how a new good fits into preference patterns over existing goods. Moreover, changes in the characteristics of a good imply a new preference pattern. Consequently, "we must throw away any information derived



from observing behaviour in the previous situation and begin again from scratch" (Lancaster 1971). In the Lancaster model of consumer demand, the concept of product attributes enters into the demand functions. The theoretical model of demand is based upon estimates of these attributes rather than simply the products themselves (Marcin, 1993).

### Theoretical Basis

The Lancaster characteristics demand model is theoretically based upon estimates of product characteristics rather than simply the products themselves. If  $z_{ij}$  is the measure of attribute  $i$  in good  $j$ , then the demand for good  $q$  can be written as a function of its attribute  $z$  and price  $p$  as follows:

$$q_j = f(Y, p_1 \dots p_m, z_{1j}, \dots, z_{mj}) \dots \dots \dots (4)$$

where in a general sense, the model of utility maximization is

$$U = U(Z) \dots \dots \dots (5)$$

subject to

$$z = g(x) \dots \dots \dots (6)$$

Furthermore, the model can be expressed as a transformed utility function

$$U = U(g) = V(x) \dots \dots \dots (7)$$

subject to

$$p_x = Y \dots \dots \dots (8)$$

This model is then equivalent to the standard utility model, assuming  $V(x)$  functions possess the same curvature properties as utility functions, i.e., continuous, quasi-concave with positive first order derivatives. To simplify the model to make it observable and to structure the alternative technologies, Lancaster assumed  $g(x)$  is



linear where  $z = B(x)$  and  $B$  is some matrix of fixed or Leontief coefficients. Furthermore, consumers are assumed to behave the same when  $x$  values are converted into  $z$  values, or at least consumers can be grouped into similar behavioural groups.

The characteristics model of demand behaviour offers great potential for analysis of new products. The inclusion of quality attributes into the theory of demand using the Lancaster approach makes it possible to derive "Shadow prices" for different attributes. This broadens the theoretical approach to demand analysis and increases our understanding of the determinants of demand. Operational use of the model requires identification of relevant technology and demand on consumption technology. Meeting these requirements in turn presents some interesting and difficult problems.

First, the conceptual problem of defining the relevant characteristics must be addressed. Second, the appropriate data may not be readily available. The characteristics must possess a unique universal property; for example, the calorie or nutrient content of food. The definition of an acceptable attribute is based upon the physical characteristics of the product or good under consideration. These include basic physical, chemical, biological, and engineering properties. This modeling approach has been most successful when applied to goods with additive and nonconflicting attributes, such as the case of nutrient value for foods (Silberberg 1990). Under the simplifying assumptions of linearity and fixed coefficients, solving this type of problem - that is, of attribute utility maximization subject to a budget constraint—is similar to that of the linear programming problem. The products (or goods) under consideration may be grouped



according to the relevant attributes for their intended market. Customers using specific products can include households, firms, and other organizations. The products are used as either inputs into the production process or for consumption.

The customers may also be grouped according to their distinct characteristics (Lancaster 1979). Product groups can consist of products that (1) have similar relevant characteristics or (2) are used to meet similar needs or purposes. Then, for each defined product group, there is a related set of relevant characteristics and price. Preferences for each of these product groups may vary in characteristics for different customer groups.

### **Food demand decisions**

Food is an inevitable resource to human beings because it is a major determinant of health, normal growth, daily work/earning, labour productivity and mental development of an individual, which affect the economy of a nation. It is said to be the best medicine to keep up good health. It also accounts for over half of the expenditure of the average urban households.

Food security is a major consideration in the world today. It exists when all people, always, have physical, social and economic access to **sufficient, safe and nutritious** food to meet their dietary needs and food preferences for an active and healthy life. New technologies, scientific discoveries, information about linkages between diet and health and the mass communication of this knowledge to consumers had led to increased demand for higher quality food. A healthy and nutritionally well-fed population is indispensable for economic growth and development. Abdullahi and Aubert (2004) posited that the sufficiency of input of human



resources in economic growth and development of a nation invariably depends on adequacy of food and body nutrients. According to Menon et al. (2004), nutritional status affects the capacity to learn, which in turn determines productivity and economic growth.

As the world agricultural system moves ever closer to market-based economy, providers of agricultural commodities have become increasingly attentive to specific consumer demand. The principal determinants of successful farming which used to be yield and production efficiency have been complemented by the quality of the food. Today's consumer expects food to have visual appeal, good flavour, to be of good nutritional quality, to be free from bio-toxins, to be properly handled, and must be prevented from exposure to environmental contaminants among others quality indicators (Jensen and Basiotis, 1993).

In the developed countries, governments have been put under pressure to create and strengthen food laws to give protection to consumers to ensure adequate and safe food supplies. In recent times, concerns about food adequacy, including how it is being produced, processed, and sold in the market are being replaced by concerns about food safety.

In Nigeria, the rapidly increasing national population and therefore increasing demand for food makes Nigeria a big market for both locally produced and imported foods. There is, therefore, enormous responsibility on stakeholders in the food supply chain to ensure that food to be consumed is safe, wholesome, and nutritious and is purchased at affordable prices.



Indeed, Dr Margaret Chan (former Director General of WHO) said:

'governments need to give food safety just as much attention as they devote to quality and safety of pharmaceutical products; not everyone needs to take medicine every day, but all people need food, each and every day'(Chan, 2014).

My interest in food safety was borne out of the fact that it dawned on me that though traditional economics hypothesized that the consumer demand for commodities depend on economic variables such as income, the price of the commodity, prices of substitutes and other measurable socioeconomic variables, there are other inherent variables that contribute to the consumer's decision to consume.

According to Schroeter (2001), consumers make their purchasing decisions based on a number of factors. Besides the price of the product, factors such as appearance, convenience and perceived quality determine the decisions made at the marketplace. She noted further that in an ideal world, consumers would base their choices on perfect information about product attributes and hence purchase foods that maximize their well-being. However, without perfect information, the consumer is faced with a more difficult decision when buying food as he does not know the level of food borne-illness risk of certain foods.

It is doubtful whether the developing countries such as Nigeria have put enough premium on the issue of safety. I posit that the factors which affect food demand decisions in Nigeria are largely economic but amongst certain members of the population, there



are educational factors. Amongst the low-income consumers, the issue of food adequacy still holds sway and therefore their food demand decisions are based mainly on the prices and their levels of disposable income. It is indeed likely that this is also true for those who dwell in the rural areas.

For the urban consumer or the high-income earner, the earlier assertions could be true except that the factor of education will come into play. Quality issues such as nutrition and safety are likely to be major considerations when the purchase decision is to be made. Food quality concerns the characteristics of food that make it acceptable to consumers. These include external factors like appearance (size, shape, colour, gloss, and consistency), texture, flavour and internal (chemical, physical and microbial).

Food quality is an important food manufacturing requirement because food consumers are susceptible to any form of contamination that may occur during the manufacturing process. Many consumers also rely on manufacturing and processing standards, particularly to know what ingredients are present, due to dietary, nutritional requirements (vegetarian) or medical conditions (e.g. diabetes or allergies).

Consumers' perception of quality is also influenced by the product's intrinsic attributes as well as by extrinsic indicators and cues provided by the seller of the product. Intrinsic attributes refer to a broad array of attributes including food safety, nutrition, convenience, composition, and process attributes such as eco-friendliness (Caswell et al., 2002).

Lack of food safety or unsafe food has been a major health challenge in both developed and developing countries. Ensuring food safety is key to preventing food borne illnesses which are



contracted through consumption of unsafe foods. Food borne illness is a global phenomenon affecting billions of people who suffer diseases caused by contaminated and poorly cultivated, handled, processed or prepared foods along the food supply chain.

Food safety has been an issue of growing importance due to several worldwide trends that contributed to increasing safety risks in food systems: These were the growing movement of people, live animals, and food products across borders; rapid urbanization; changes in food handling; and the emergence of new pathogens or antibiotic resistance in pathogens (Unnevehr and Hirschhorn 2000).

#### How else can food be produced?

In recent years, organic farming has been one of the fastest growing segments of agriculture. It has become an increasingly viable alternative for many farmers in various continents including Africa. The move to organic agriculture which has gripped the developed world because of the harmful effects of the use of agrochemicals and inorganic fertilizers on the environment has reached Nigeria. There has been a renewed awareness of organic agriculture on the part of the public, interest groups, marketing organizations, and agricultural researchers.

In the countries of the European Union and the United States of America, the demand for produce grown without chemicals has increased to the extent that many supermarkets now carry certified organic produce. Certified organic products are those which have been produced, stored, processed, handled and marketed in accordance with precise technical specifications (standards) and certified as organic by a certification body.



According to Tent (1999), potential undesirable residues in foods span a broad range, from natural (e.g. mycotoxins) and environmental contaminants (e.g. dioxins) to agro-chemicals (e.g. nitrates and pesticides), veterinary drugs, growth promoters, packaging components, and many more. Microbiological considerations are an even greater challenge to safety of food because potentially harmful micro-organisms have the ability either to grow rapidly from very low numbers in food or to proliferate in the human body once ingested. Dipeolu (2004) catalogued various studies that investigated the presence of antibiotic residues in meat sold in urban markets for human consumption and reported that the residues present in the meat were above World Health Organization (WHO, 1995) recommended Maximum Residue Limits.

### **Consumer attitudes towards food safety**

According to Buzby (2002), consumer perception about food safety were the result of a complex function of factors such as differences in each country's baseline food safety risk levels; food safety risks from internationally imported food; access to and extent and nature of information about food safety, risk levels and related topics; trust in the different sources of information and experience with major food safety incidents.

Consumer attitudes are important because they have been found to influence and predict much behaviour (Kraus, 1995). According to Brewer *et al.* (1994), the attitudes towards food safety depend on the type of food safety issues of concern.

Some other studies have looked at the behaviour of consumers using Ajzen–Fishbein Theory of Reasoned Action models. According to them, an attitude is an individual's positive or



negative feeling associated with performing a specific behaviour (Ajzen and Fishbein 1980). In general, an individual will hold a favourable attitude toward a given behaviour if he/she believes that the performance of the behaviour will lead to mostly positive outcomes; on the other hand, if the individual believes that mostly negative outcome will result from the behaviour, he/she will hold a negative attitude toward it (Myktyyn and Harrison 1993).

The underlying argument of the models is that individuals make rational decisions about health behaviour when they are aware of the associated health problems, have some knowledge concerning these problems, and have some judgement as to the level of risk involved in not changing their behaviour. This means that the consumers' perceptions and beliefs will determine their willingness to change. In order to change, people have to perceive that their current behaviour endangers their health, and that taking action has a strong likelihood of reducing their risk (Wilcock et al., 2004).

### **3.0 MY RESEARCH EXPERIENCE**

As noted in the preamble, I have researched into many areas of agricultural Economics. I present in this section some of the work that I have carried out myself and in conjunction with other researchers.

#### **Research into the Economics of Food Safety**

Appalled by the environment in which a lot of canteens, bukas and restaurants were situated, in conjunction with others in Akinbode *et al.*, (2011), looked at the willingness to pay (WTP) for street food safety in Ogun State, Nigeria. Street foods are "ready-to-eat" (RTE) foods and beverages prepared and / or sold by vendors and hawkers, especially in the street and other similar public places.



Dipeolu *et al.* (2007) had earlier reported that some of the street food stalls were dirty and located in dirty environment with hordes of flies. It was further reported that some were also located near sources of contamination such as sawmills and carpentry sites; refuse dumps, and along dusty roads. The street food vendors were frequently unlicensed and untrained in food hygiene or sanitation and worked under crude and unsanitary conditions. This could cause food poisoning and serious health problems (Johnson and Yawson 2000).

It is against this background that Akinbode *et al.* (2011) had examined WTP for the safety of street foods. It described the attitudes of consumers toward the safety of foods in street canteens (usually referred to as bukas or, among the educated, as bukaterias) and identified factors determining the disposition of a consumer to paying extra for food safety, as well as those affecting the consumption of such foods in Ogun State. This study showed that foods sold in bukas have come to stay, as they are visited by the rich and poor, particularly in urban centers. They found that age, education, income, sex, and safety consciousness were factors that significantly affect the attitude of consumers to pay a premium for food safety. In the case of age and income, it would seem that these factors bestow a high sense of valuation of life –wanting to stay alive rather than dying as a result of consuming unsafe food. Education also had positive relationship perhaps because educated people are informed about food safety and poisoning hazards and are thus should be willing to pay a premium for safer foods.

Evidence from Akinbode *et al.* (2011) also revealed that the sex variable had a negative sign implying that females were more willing to pay than males (since male was assigned 1 and female assigned zero in the analysis). This is in conformity with Henson (1996) which suggested that females were more willing to pay for



reduction in the risk of food poisoning in the United Kingdom. It was also found that consumers who were classified as safety conscious ended up being willing to pay more.

In a similar study, Akinbode *et al.* (2012) estimated consumers WTP for safe street foods using different approaches to determine factors affecting WTP for safe street foods. The study found that street food had become an important aspect of the food bundle of the average Nigerian. However, consumers' consciousness of the safety of these foods is still low. In contrast to the earlier study, some of the respondents still do not perceive any danger in the consumption of these foods. To this extent, some of consumers offered to pay very low amount to ensure food safety while some others stated zero WTP.

Furthermore, the study confirmed earlier results that income and education are the main important variables that affect consumers WTP for safe street foods. It was also demonstrated that different approaches can be used to estimate WTP provided the methods, and the data are handled with caution. To establish safe street food canteen, investors can utilize the WTP figures (which ranged between 12.37 and 17.1% mark-up from different approaches of Contingent Valuation Methods used) estimated in this study to project their expected income vis-à-vis prevailing prices and patronage.

In conjunction with others in Akerele *et al.* (2010), an assessment of consumers' awareness and perception of kilishi safety was made. The study also estimated consumers' willingness to pay for its safety. Kilishi is a form of processed meat among others such as suya, sere, balangu, and kundi (Ogunsola and Omojola 2008; Abdullahi *et al.* (2004). Consumption of these sun-dried and/or



smoked barbecued meats is common in the northern part of Nigeria, partly due to the abundance of cattle and camels whose flesh are used for these RTEs. Compared with other types of sun-dried, smoked, and/or processed beef products, kilishi can be stored for longer periods, if kept at room temperature. This special feature has made the product a household name in Nigeria, especially in the North. Nevertheless, concerns of cleanliness often discourage some people from eating kilishi.

Evidence in Akerele *et al.* (2010) revealed that most of the consumers were quite aware of the potential food safety problems posed by kilishi and were willing to pay some amount extra to ensure safety. Education and income were identified as the major factors affecting willingness to pay. The implication of the findings is that people are safety conscious and would compensate for the safety of kilishi by paying some premium.

Dipeolu *et al.* (2007) studied the supply side of the street food business and noted that the food vendors were generally unaware of the laws governing the operation of food businesses which are rarely enforced. Furthermore, the study observed that even though the number of street food stands had increased over the years in Nigeria, little had been documented about their operations. In other developing countries like Ghana, Malaysia and Peru, governments have stepped into monitoring and control of the street food sub-sector. The study estimated the costs and returns of some street foods vending businesses in the south western part of Nigeria and assessed the safety and hygienic practices of the vendors. It found that street food vending in Nigeria provided cheap source of nutritious food away from home. It is a profitable enterprise, which could serve as a primary occupation to earn a living and also serve as a source of employment generation.

### **Other consumer issues**



Akinbode and Dipeolu (2012) looked at fresh fish consumption in households in South western Nigeria within the framework of a double hurdle model. The study sought to determine factors affecting participation (first hurdle); factors affecting level of consumption (second hurdle) and compare the double hurdle estimates with the estimates of a single step process of the Tobit model. The study brought out the beauty of modeling consumption as a two-step process (double-hurdle modeling) thereby corroborating existing literature on double-hurdle modeling. The deficiency of the Cragg's independent double hurdle model was the assumption that the participation and the consumption processes were independent of each other. This was flawed in this study by the significant correlation in the error terms of the first and the second hurdles. Moreover, the dependent double-hurdle model came out with the highest number of significant variables in both hurdles and with the best model fitness indicators. These underscore the importance of modeling consumption as a two-step process and the joint estimation of the two hurdles (dependent double-hurdle modeling). In the first hurdle (participation), husband income and expenditure on beef were positive while wife's income and dependency ratio were negative. In the second hurdle (extent of consumption), household size, husband's educational level, husband's income, wife's income and expenditure on fish were all positive and significant while dependency ratio was negative. The fact that different variables were significant in the two stages confirm the importance of modelling consumption in a double-hurdle fashion. It is, therefore, recommended that consumption of products with possibility of zero dependent variable for some respondents should be modeled as a two-step process as different sets of variables may affect decision to consume (first hurdle) and the extent of consumption



or how much to consume (second hurdle).

Dipeolu *et al.* (2014) assessed the factors affecting customer satisfaction and its effect on repurchase intention at selected Fast-Food Restaurants (FFRs) in Ibadan metropolis, Nigeria. The respondents' satisfaction level towards FFRs were assessed by Customer Satisfaction Index (CSI). The data were analyzed using a combination of descriptive techniques and Ordinary Least Square (OLS) regression. The regression analyses were used to identify the relationship between service quality dimensions of tangibility, reliability, responsiveness, assurance, empathy and customer satisfaction. Analysis of responses to various indicators of customers' satisfaction in CSI revealed that 76.2% of the customers considered services of the FFRs as satisfactory, while 74.5% considered the services as ideal. Regression analysis revealed that customers' satisfaction with services of the FFRs increased significantly with increase in customer's perception of tangibility dimension of the service quality ( $p < 0.01$ ), empathy ( $p < 0.01$ ), responsiveness ( $p < 0.05$ ) and assurance ( $p < 0.05$ ).

#### Research into Economics of Nutrition

Ayinde *et al.* (2010) examined the calorie intake status and its associated determinants among farm household members in Odeda Local Government of Ogun State, Nigeria. Data collected, were subjected to nutrient intake estimation procedure, t-test and OLS multiple regression analysis. There was inadequate food calorie intake among younger household members with male and female preschool children being the worse hit; consuming only 87.96% and 65% of their daily requirements, respectively. The study also revealed that calorie intake of male household members was significantly higher than that of their female counterparts across all age groups. The socioeconomic factors affecting calorie



intake of household members among others were household monthly income ( $\alpha < 0.01$ ) and farm size ( $\alpha < 0.05$ ).

### **Research into Food Information**

Oke *et al.* (2015) delved into the types of food information that homemakers in Abeokuta used in purchasing packaged foods and the factors affecting such usage. The study found that the homemakers who are mostly females (82.7%) were within the active working ages. Most of these homemakers considered information on food labels before purchasing packaged foods. The most commonly considered food label information was found to be the NAFDAC number followed by the expiry date, brand name, country of manufacture, and nutritional facts. These results are attestations to the positive attitudes towards food safety. The reasons for using food label on packaged foods include past food-borne illness and health need. Results from logit regression models showed that sex, education, marital status, occupation, income and health status were the key factors that significantly influenced nutritional label use. All the health explanatory variables included in the model were significant with the expected signs. They found that the most commonly considered food label information was the NAFDAC number followed by the expiry date. The study also found that sex, education, marital status, occupation were among the key factors that significantly influenced nutritional label use.

### **Hopped into Consumer Issues in Organic Agriculture.**

Organic Agriculture had been introduced by a dear friend, Ore Aiyelaagbe and through his spirited efforts we started the Organic Agriculture Project for Tertiary Institutions in Nigeria which has evolved into a duly registered organisation - Organic Agriculture Professionals in Tertiary Institutions in Nigeria (OAPTIN).



Alongside some of my colleagues and students, I tried my hands on some organic research and even presented a lead paper at one of the conferences (Dipeolu, 2009). Other studies included Dipeolu and Akinbode (2005), Dipeolu *et al.* (2006), Dipeolu *et al.* (2009), Phillip and Dipeolu (2010), and Oyawole *et al.* (2015). What we found in general was that there was consumer awareness of organic agriculture (particularly vegetables) due to, among other things, interest shown by consumers in food safety issues involving real or perceived quality risks. Logit regression indicated that education positively and significantly influenced consumer WTP (Oyawole *et al.*, 2015). This was consistent with Dipeolu and Akinbode (2005). Interestingly, I am still part of the organic movement – the Community Box Scheme (COBs). I am also part of the Work Earn and Learn Project which is organized on a nearly yearly basis.

### **My other research efforts**

#### **Agriculture in the hands of small-scale farmers**

The agricultural sector has been dominated by small scale farmers who produce over 90% of the total food of the country. These engaged in traditional methods of production using tools such as hoes, cutlasses, axes and knives (Olayemi 1980). They made do with the two principal inputs of land and labour. Their farms, which are small with sizes ranging usually between about 0.1 and 5.99 hectares are fragmented and scattered. Their scales of production are partly constrained by the land tenure system and limited access to other resources. Various authors have identified the low level of farm investment and agricultural production technology as significant constraints in the development of agriculture.

Other factors which have contributed to the low production levels



are the progressive decrease in labour availability in the agricultural subsector of the rural areas arising from rural-urban migration, and the engagement in other profitable activities different from farming. According to Oberai (1981) confirmed by Shittu (2011), the major pressures that pushed migrants towards the urban centres were the low incomes, high unemployment and underemployment in agriculture. This pattern of rural out migration has continued until recent times particularly because of the flow of domestic remittances which reduces the poverty level of rural households (Tolorunju *et al.*, 2018).

Agricultural expansion in traditional agriculture can be fostered by:

- a. Enhancing productivity in the use of land and other resources.
- b. Re-organising or increasing the use of traditional inputs in an effort to improve the efficiency of production, and
- c. Using inputs singly or in combination with traditional production factors in a new technical relationship (Etuk, 1979).

The agricultural sector in any country is supposed to contribute to the economy in a number of ways. Indeed, many authors charge it with food security. Agricultural development has taken place largely in the rural areas in Nigeria, (although policies have been made far away from the centre of activities to the effect of falling into the errors of the top-bottom approach).

### Agricultural Production Economics

I like Olayide and Heady's manner of explaining the objectives of Production Economics to a first timer. According to them there are



four main objectives of agricultural production economics (Olayide and Heady, 1982):

1. Determine and outline those conditions which give optimum use of resources (capital, labour, land, water and management) in the production of crops and livestock.
2. Determine the extent to which the existing use of resources deviates from what is considered the optimum use level.
3. Analyze the forces which condition production patterns, and resource use in relation to the existing opportunities of facilities for product sales operations and
4. Explain the means and methods adoptable in moving from existing level to the optimum use of farm resources.

In furtherance to the above, my research delved into a number of traditional enterprises that are commonly found in the southern parts of Nigeria. First time out, Dipeolu and Kazeem (1997) looked at the Itoikin Irrigation project in Lagos (under the auspices of the Ogun-Oshun River Basin Development Authority) which had lowland rice as its commodity to determine if the project had achieved its aims. Using simple linear regression and gross margin analysis, the study found that farmers were not economically efficient in their use of resources with a low gross margin of? 1893.42.

In order to determine the effect of technology on labour use in small scale cassava / maize farms, Dipeolu and Akintola (2000) categorised farms into low and high technology farms. With the use of production function analysis, found out that family labour time among users of low technology ranged from 1.75 man-days in fertiliser operations to 23 man-days in weeding operations. In the case of those with high technology, it ranged from 9.18 man-days



in fertiliser application to 56.46 man-days in weeding. The study further found out that there was a neutral shift in production with the increased use of technology. The intercept term was higher by 34.2 percent for high technology users implying a higher value of output per unit of inputs used.

In 2000, Dipeolu *et al.*, utilized the Linear Programming model to develop optimal farm plans for food crop farmers in UNAAB Model villages in Ogun State subject to environmental and economic constraints. The study found that farm sizes ranged from 1.03 ha in Ilewo-Orile to 2.67 ha in Ijemo-Fadipe. The operating expenses varied from ₦ 13, 547 in Ilewo-Orile to ₦ 52,988 at Ajura. The optimal farm plans indicated that the cassava/ maize intercrop gave the best results in Ijemo-Fadipe and Ajura while cassava / melon and sole cassava enterprises were best in Ijale-Papa and Ilewo-Orile respectively. Operating expenses was the most limiting factor in all the villages. The study noted that despite the positive roles by the Agricultural Media Resources and Extension Centre (AMREC) in the farming activities of the villages, the farmers were not operating at the optimum level. It was recommended that optimal farm plans be derived after major extension efforts in order to estimate incremental levels of attainment.

Years down the line, another study was carried out on lowland rice but this time looking at the effect of disease burden on technical efficiency among the rice farming households in North-Central Nigeria (Akinbode *et al.*, 2011). Amusan (2004) had found that mosquito prevalence was high in rice fields (see also Diuk-Wasser *et al.*, 2007 in Mali, Muturi *et al.*, 2008 in Kenya). The implication of these findings was that high incidence of episodes of malaria are likely among rice farming communities and households. Common



diseases prevent people from putting in their maximum labour effort into farm production. The study sought in the main to estimate the economic burden due to diseases through cost of illnesses (COI) among rice farming households, estimate efficiencies of rice farmers and determine farming household characteristics and health indices affecting efficiencies of rice production in the study area. We found out that rice farming households incurred substantial cost of illness (₦ 12,411) and an average household lost about 17 days due to illnesses during the rice production cycle. Malaria was the most frequently occurring disease in the study area.

Comparing the disease burden of the lowland ecology with the upland rice ecology in South-West Nigeria, Akinbode and Dipeolu (2011) found that more days were generally lost due to malaria in the lowland areas than in upland areas. The COI represents 6.1% of the net income from rice farming which was ₦ 94,036 in the upland zone while in the lowland zone, the COI represents 4.7% of the net income accruing to the household from rice farming which was ₦ 254,340.96. We recommended an improvement in health care delivery in rice farming communities through construction of more clinics.

In a related study, Ibrahim *et al.* (2010) had estimated the economic cost of malaria and determined production and malaria related factors affecting farm revenue. The results revealed that about 6.5 % of sampled households sought health care in the government hospitals, while 30.5 and 20 % of the sampled households patronized patent medicines stores and traditional carers respectively. The sum of ₦ 7,415.41k was incurred as economic cost of malaria per household per annum in the study area. Farm size, hired labour, combined malaria treatment costs and days lost



to malaria attack were significant factors affecting farm revenue. The study recommended priority attention to rural areas in malaria control programme; improvement in health care delivery system and incorporation of traditional medical practitioners in the health care system.

Two other researchers and I in Akinbode *et al.* (2011) also examined the efficiencies among Ofada rice farmers in Ogun State. Ofada rice is a popular local upland rice grown in Ogun state and other states in South-West Nigeria. This rice hitherto unpatronized, has gained more prominence in the last decade possibly due to its good taste and natural flavour, higher nutritive value compared to polished rice, higher fibre content and health consideration. Inefficiency in rice production had been identified as one of the factors contributing to low productivity in agricultural production in Nigeria. The presence of shortfalls in efficiency meant that output can be increased without the need for new technology. If this is the case, then empirical measures of efficiency are necessary in order to determine the gains that could be obtained by improving performance in rice production with a given technology. This study was thus carried out with the objectives of determining the productivity of rice production. The production function estimations revealed a RTS value of 1.209 which meant that Ofada rice farmers were operating in stage I of the production surface and that more production resources could be employed to maximize benefits. The means of Technical Efficiency (TE), Allocative Efficiency (AE) and Economic Efficiency (EE) values were 0.726, 0.928, and 0.674 respectively. Given the shortfall in the technical efficiencies of farmers, there was substantial potential to improve output of an average farm without the need for any change in existing technology. One of the crucial issues highlighted by this study was that labour is the most significant cost item in the rice farming enterprise and the



reduction in the workdays expended could turn around the fortune of the enterprise positively, especially the workhours used in bird scaring, planting and harvesting the farms.

We returned to the issue of rice in 2016 because the demand for rice had been increasing at a much faster rate than domestic production and the volume of domestic rice had been unable to bridge the demand and supply gap. To this end, along with other researchers, Ogbe *et al.*, (2017) studied the production of rice across ecologies and determined the technical efficiency of production across the ecologies and the technology gap ratios of rice production across the ecologies. The result revealed a mean economic efficiency of 0.64, 0.87 and 0.76 respectively for deep water, upland and lowland ecologies. Private cost ratio ( $PCR < 1$ ) and private benefit cost ratio ( $PBCR > 1$ ) as measures of competitiveness showed that rice production was profitable in all three ecologies. All three ecologies had comparative advantage in rice production with domestic resource ratios of 0.102, 0.204 and 0.224 for deep water, upland and lowland ecologies respectively. The Stochastic Metafrontier Analysis (SMF) revealed that farmers require 28.3%, 25.8% and 10.4% increase in rice output respectively for the three ecologies to be able to produce at the metafrontier. Stochastic Cost Function (SCF) indicated that price of fertilizer ( $p < 0.05$ ), labour wage ( $p < 0.01$ ) and rent on land cultivated ( $p < 0.05$ ,  $p < 0.01$ ) significantly affected the total cost of rice production in upland and deep-water ecologies respectively.

Further results from Ogbe *et al.* (2017) showed that 86.1%, 72.0% and 66.3% of household with children are food insecure in deep water, upland and lowland respectively at different levels of food insecurity category. Ordered logistic regression revealed that competitiveness ( $p < 0.01$ ), economic efficiency ( $p < 0.05$ ), income



( $p < 0.01$ ), age ( $p < 0.01$ ) and rice farming experience ( $p < 0.05$ ) had significant effect on the likelihood of being food secure. The study concluded that rice ecologies had comparative advantage and competitiveness in rice production, though with a substantial gap in technology between deep water and upland ecologies. The study recommended that Nigeria should expand rice production in the three ecologies as an import substitute to meet household food security. Effort should be made to create environment for commercialization through the presence of up-takers that provide market access for rice farmers to generate income from products thereby reducing household possibility of being food insecure.

### **Economics of other commodities**

Dipeolu and Akinbode (2009) also examined the technical, allocative and economic efficiencies in pepper production in South-west Nigeria and found an average technical, allocative and economic efficiencies of 0.737, 0.893 and 0.658 respectively. It should be noted that it appeared that AE contribute more to gains in EE than TE. This means farmers generally take good decisions as relates to resource allocation in cost minimization strategies. Meanwhile, decisions in the transformation of physical inputs to outputs appeared relatively more imperfect. Given the significance of extension contact as an important factor affecting the three types of efficiencies considered in this study, intensive extension training which may improve technical knowledge of pepper farmers and possibly their price – quantity decision knowledge was recommended. The extension service should focus more on native, older and female farmers as suggested by the inefficiency model.

In conjunction with others, we compared the Technical Efficiency and profit differentials in palm oil processing between processors in Nigeria and Benin Republic. Multi-stage sampling technique



was used to select a total of 170 processors from palm oil processing communities in Ohaji/Egbema LGA, Nigeria (90) and Pobe LGA, Benin (80). The results revealed that palm oil processing is profitable in both areas of study. Profitability level was higher among the sampled processors in Nigeria than those in Benin. Fresh Fruit Bunch (FFB) accounted for over 70% of the total cost of production. An average of 49FFB t/month was processed in Nigeria and 18t/month in Benin. The Nigerian processors produced palm oil of 10,015.6 l/month while the Beninese produced 2,887.6l. Hydraulic extraction technique was exceptionally used in Nigeria. The mean efficiency levels of 97 % and 89 % were observed for the Nigerian and Beninese' processors respectively (Ogwuike *et al.*, 2016).

### **Side stepped in and out of Health Economics.**

An area which fascinated me early in my career at the intermediate level was health economics perhaps because my wife was in the Veterinary profession. Indeed, years before then, I had thought we could do research together and almost changed my research focus to livestock economics!

We studied the incidence and prevalence of a number of disease conditions in animals and humans as well as the latter's attitudes and responses to health. My foray into such matters started with the duo of Eruvbetine and Dipeolu (Dipeolu *et al.*, 2000), and while they were concerned with the incidence of fascioliasis, I examined the trend and seasonal influence. We estimated a trend equation:  $C = 4.22 - 0.32 T$ ,  $C = \text{Incidence}$  and  $T = \text{time}$  showing that as the months went by, the incidence of fascioliasis decreased. Tests performed to see the influence of season on the incidence showed that there were no significant differences between the seasons. We also examined the data to see if there were any



consistent seasonal patterns and we found none. I also partnered with colleagues in the Technical Sciences and looked at diseases such as dracunculus.

### **Economics of animal products**

One of our earlier studies, (Dipeolu *et al.*, 1999) looked at the production of cheese in the Odeda Local Government Area of Ogun State. The study found that it was a female dominated enterprise. Cheese production was profitable with an average monthly profit of N964 from 309 litres of milk. The return on investment was 1.51 which meant that for every ? 1.00 spent there was a margin of 51 kobo.

Dipeolu, *et.al.*,. (1999) evaluated the structure, conduct and performance of the sheep and goats marketing in four markets in the four agricultural zones of Ogun State. The study found that the retailers consisted of both men and women in the economic active age group. There were no wholesalers in the markets except the market in Sabo. Animals were obtained from the northern parts of the country. Market concentration ratio was lowest in Guffanti market with a Gini coefficient of 0.42 showing that there was much competition among the retailers. Retail marketing margin ranged from ? 277.47 per head of animal in Guffanti market to ? 455.71 per head in Imowo market.

Alongside other researchers, Kareem *et al.* (2008) applied the stochastic frontier production analysis to estimate the technical efficiency, allocative efficiency and economic efficiency among the fish farmers in Ogun State. The results revealed that fish farming was economically efficient ranging between 55% and 84%. The efficiency was due to the fact that farmers are



experienced and fairly educated. On the basis of findings, policy was suggested to be directed towards the encouragement of entrepreneurs in fish farming in the state by providing credit facilities, public enlightenment programmes and the provision of social amenities like feeder roads and pipe-born water.

Furthermore, Kareem *et al.* (2008) also compared the efficiency of concrete and earthen pond systems in the State. Findings revealed an average of 76% in concrete pond system while earthen pond system made as high as 84% economic efficiency level. The results of the analysis of the mean technical efficiency for both systems revealed the concrete pond system with 88% while earthen pond system was 89%. Similarly, the allocative efficiency results revealed that concrete pond system was 79 percent while earthen pond had 85%. Further analysis showed that pond area, quantity of lime, quantity of labour, and quantity of fingerlings were significant factors that contributed to the technical efficiency of concrete pond systems. The quantity of feed, labour, fingerlings, and other materials were significant factors in earthen ponds (Kareem *et al.*, 2009).

Olawumi *et al.* (2010) examined the determinants of revenue of homestead fish production in Ogun State, Nigeria. Farmers in the study area practiced mono-culture and poly-culture fish farming. Sole clarias enterprise recorded the lowest net farm income while Tilapia/ heteroclarias enterprise has the highest net farm income. The cost and returns to homestead (concrete) tank fish farming in Ogun State showed that homestead fish farming was profitable at the level of technology and resources. The net farm income (NFI) ranged from ₦ 102,660.65 for Tilapia /heteroclarias enterprise of average farm of 90m<sup>2</sup> to ₦ 2,296.56 for sole clarias of average farm



size of 170.92m<sup>2</sup>. The result further showed that the labour cost, cost of fingerlings and cost of feed constituted the lion share of the variable cost in tilapia / heteroclaris enterprise, tilapia /clarias and sole heteroclaris respectively. The quadratic functional form was chosen as the lead equation. The pond size, quantity of fish seeds stocked, labour in feeding and harvesting and the use of poultry waste feeds are the major determinants of the revenue that accrue to homestead fish production in Ogun State, Nigeria. The study, therefore, suggested that policy variables such as pond size, labour and fingerlings that influence the aquaculture revenue should be strengthened for sustainable fish production to be attained in Ogun State and in Nigeria

#### Stepped into Environmental issues

Akin to the hops, steps and jumps into the organic sector, is my foray into geography à la the effects of climatic variables in certain crops. With the kind invitation of Lateef Sanni, I was drawn into a project which aimed at improving the livelihoods of smallholder cassava farmers through better access to growth markets (CassavaGmarkets). I was charged with Work Package 1 (WP1) whose overall objective was to assess the impact of climate change on cassava flour value chains. An M Agric student, Miss O. R. Adams (now Mrs Ogunpaimo) was recruited to study the impact of climatic changes on the cassava value chain and the smoothing methods to mitigate effects. Arising from this, we found that different adaptation strategies are adopted by processors in combating the negative effects of climate variability in order to maintain and/or to improve their livelihoods. The study found that the value chain actors adopted various strategies to adapt to the climate variability. These strategies included diversifying into other non-processing activities, changing processing time, storing



produce, diversifying into the processing of other products.

We, (Ogunpaimo and Dipeolu, 2019) employed the multivariate probit model to determine the factors influencing processors choice of adaptation strategy. The result of the model revealed that family size, secondary income, access to extension contact, years of processing experience, educational level, length of residence in the community, and marital status were crucial factors that shaped the processors' decisions to adopt adaptation strategies.

Another fallout of the study (which then dovetailed into her Master's dissertation), was to determine the implications of climate variability on food security of farming households. This study confirmed the prevalence of household food insecurity in the country and also concluded that climate variability negatively affected household food security status.

### **Side stepping into International Trade**

No nation is an island unto itself, its policies and actions are to a very large extent influenced by the actions of other nations. Thus we, Edewor *et.al.* (2018) delved into issues of international trade to critically examine the effect of foreign direct investment (FDI) on the performance of the agricultural sector in Nigeria.

We noted as in Oloyede (2014), that the over-dependence of the Nigerian economy on the oil sector had been detrimental to the agricultural sector which has been faced with neglect and under-investment. The lack of private and public investment in this sector had led to lower productivity growth and stagnation in production.

The study analysed the trend of FDI into the agricultural sector in



Nigeria, estimated the agricultural productivity of farmers in Nigeria and attempted to determine the factors that influence agricultural productivity in Nigeria. The study revealed that there has been decline in FDI inflow into the country since 2015 with a resultant decline in the allocation to the agricultural sector. The factors that affect agricultural productivity in Nigeria include the GDP, exchange rate, interest rate and FDI inflow into the agricultural sector. The study therefore concluded that agricultural productivity in Nigeria will be boosted by factors such as exchange rate of the dollar for a Naira, the banks' interest rates, the GDP as well as FDI inflow into the agricultural sector.

**Research projects and Consultancy undertaken.**

In 1999, I had the good fortune of being invited by two colleagues who had been my very good students in their undergraduate days, Lateef Sanni and Kolawole Adebayo to join a team as a Collaborating Social Scientist headed by Sola Oyewole in a Department for International Development (DFID) - sponsored study on the Commercialization of Traditional Foods and Sustainable Rural Livelihoods (1999-2002). Idris Ayinde later joined the group.

This study dovetailed into another related study sponsored by the European Union on the Development of Small and Medium Scale Enterprises for producing Cassava-based products to meet Urban demand in West Africa (2003-2006). The fufu factory which has been updated was one output which the team contributed to the University.

Yet again, when the Cassava: Adding Value for Africa (C:AVA) project hit the stands, I participated in Value Chain Analysis,



Scoping Studies, Gender & Diversity Audit, Skill Gap Workshop. I was first appointed as Monitoring and Evaluation Advisor to Country Manager, Nigeria from June 2008 to April 2009 and eventually became the Monitoring and Evaluation Specialist in Nigeria till 2012. For a brief period, I assisted Kola Adebayo in the Phase II of C:AVA project, Nigeria from 2015 to 2016.

In July 2011, I was as invited as Agricultural Economist, to be part of a Sweet Potato Value Chain Study in Nigeria. Gideon Onumah of the Natural Resources Institute (NRI) was Head of the team whilst Yinka Olatunde was the Food Technologist on the team. Our report gave rise to a bigger project which was abandoned midway because the then Minister of Agriculture, Dr Akinwunmi Adesina was no longer the Minister. I was Team Leader of the Diversified Products Value Chain of the Sweetpotato for Heath and Wealth Project in Nigeria from 2013 to 2015.

At about that time, I was also invited by Chris Addy Nayo, a Trade Consultant based in Brussels to head the Nigerian Team of the ACP/EU-funded EDULINK "Enhancing of Capacities on International Agriculture Agreements for Development of Regional Agriculture and Food Markets" which also took place in Ghana, Liberia and Sierra Leone in the West African sub-region till 2017. The overall objective of the project was to contribute to the capacity building on International Agriculture Trade Agreements in developing the agricultural sector in the region.

I have had stints in various other projects. These include the AAU-MRCI Partnership for Regional Food Developers Initiative, Education Partnerships in Africa, and the work, learn, earn programme (WELP) for developing entrepreneurship in organic agriculture in Nigeria).



#### **4.0 CONCLUSIONS AND RECOMMENDATIONS**

Food demand decisions will certainly continue to be affected by the prices and income levels of consumers, but the attributes of the food items will also be taken into consideration particularly among the educated and particularly in the light of an emerging health savvy population. As shown from our research, socioeconomic and demographic factors also play important roles in demand for food commodities.

The level of hygiene and hence the safety of the food sold in the informal sector is questionable, but some consumers are willing to pay a premium for the safety of street foods, the Nigerian government should encourage vendors to prepare foods in a more hygienic environment and with better facilities which may ensure safety. This effort may be preceded by a well-organized public food safety enlightenment program for consumers and producers in order to raise awareness levels among them.

At the period of undertaking some of these studies, the Nigerian laws aimed at sanitizing the street food sector were grossly outdated. These laws failed to state how often the Health Officer must inspect the premises of sale of food and the food. They also failed to describe in explicit terms, the levels of cleanliness expected of the regulated premises, and the penalties attached to violations of the clauses need to be reviewed. However, there is a documented situation analysis report of the Food Safety System in Nigeria (FAO, 2005).

One would love to see the implementation of the conclusions in that report. Continuous inspection and enforcement of relevant laws are needed.

Government agencies such as NAFDAC and Consumer Protection



Council (CPC) should intensify their efforts to ensure that food sold in public spaces or even in supermarkets receive due certification before circulation into the market so as to reduce substandard and expired products being sold. In this wise, it is important that NAFDAC should extend its tentacles into the informal food markets to monitor and ensure adequacy in simple hygiene rules. True, the health inspectors (wole wole) move from place to place but their levels of enforceability is in doubt. For instance, in South Africa, the government and FAO have created educational products to help vendors, food inspectors and consumers to make the sale of street foods a safer and more profitable enterprise (FAO, 2001). It was recommended that the government in Nigeria should intervene in this sector as it has been done in other developing countries in training, education and supervision of food vendors to raise the hygiene and profit levels in this informal food sector.

It is also important that traceability structures are put in place so that if there is a need for recall, it becomes fairly easy.

Another important area affecting decisions is the amount of information made available on the labels of packaged foods and drugs. Food labelling regulations should be taken much more seriously to prevent frivolous claims. Claims with no scientific backing should not be allowed because they will mislead users.

## **5.0 HALF MY LIFE IN THE CAMPUS – MY WISHES**

This year is my 37<sup>th</sup> year in the University having been a part of the Federal University of Technology (from 1984) which metamorphosed into the present University. Given that I grew up in two and a half university campuses – University of Ibadan,



University of Ife (Ibadan Campus) which is now the premise of the Polytechnic, Ibadan; and the University of Ife (now Obafemi Awolowo University) Ile-Ife; I had high expectations of my role among peers in the development of this University.

For me, a university differs from a Research Institute because of the student component. So many of us lecturers seem to forget that we should act as *loco parentis* to these students. It is not unusual to hear many-a-lecturer say that the students ought to be mature enough to know why they are in the university. I hear them say advising students is extra work which should be remunerated. For me, I have found it significant to make student business my business and I can say with all pride that I am revered amongst so many of my students locally and worldwide. Without any embarrassment, I have paid good attention to the Man-O-War Club, the Boys Brigade, ENACTUS, AIESEC, NAAS, and AECOSA to mention a few.

My understanding at the onset of the agricultural dimension of this university, (we had first been a University of Technology) was that we were going to train employers of labour in the agricultural sector making up, as it were for the failure of the Faculties of Agriculture in the universities we had at the time in Nigeria. As I mentioned elsewhere, the midwives of the agricultural universities really had no experience of any sort in the land grant models of agricultural universities so how could they have trained employers of labour?

I have dealt with the challenges of the establishment of Universities of Agriculture elsewhere (Dipeolu, 2008); suffice to say that the university was meant to be a small university and I thought we could inculcate the entrepreneurial spirit in our students right from the start of their programmes. Teach some



theory in class, give each student a farmland with which he practices what he has been taught with the farm bursary which would have been given at the beginning of the session and grade him on his productivity on the farm. Perhaps I am a dreamer but that I would have loved to see.

The one other thing that I would have thought we could do was match research to society's demands. Budworth 1985 said:

'It is that element of commercial shrewdness which is the key factor that is missing from the simple linear model of progress from research. Research gives understanding; that understanding may lead to the development of a range of new technologies which in turn open up a cornucopia of new practical possibilities; but it is the market that determines whether or not there will be a commercial payoff from any one of those possibilities (bolding mine).

He said further:

“... In practice, the process of development consists of matching a technical possibility to a market, and knowledge of both must develop in parallel. The processes are not sequential, but concurrent, and the ability to combine the two is both rare and valuable, much undervalued by the pure science community.”

He continued:

“...the motives of the person who carries out the research, and most p]robably who formulates the project, can be very different from the motives of those who finance it.”

Researchers must recognize that the private sector will only give funds when they know that the outputs will benefit them. Our research and development efforts must be tailored more than ever



to provide the impetus for improvements among small and medium enterprises. It should not all be research for promotion alone!

### **Community Service**

I have had the pleasure of participating in many facets of the University through the kindness of various Vice Chancellors. I worked in UNAAB Consult as its Director for five years, worked briefly as Acting Programme Leader in IFSERAR and as Director in the Centre for Entrepreneurial Studies.

I served as the President of the UNAAB Multipurpose Society for a total of 18 years! I can only thank the members for that amount of confidence reposed in me. It was that same avenue that gave me the opportunity to be on the Board of Directors of the UNAAB Microfinance Bank, an experience that was both exciting and revealing.

## **6.0 ACKNOWLEDGEMENTS**

I cannot end this lecture without acknowledging the efforts of a number of people in my life and on the path to where I have now found myself.

I give all glory first to the Most High God without whom I could not have reached where I am. My early days (high school to PhD) were marked with a carefreeness that could have marred my life if He hadn't made plans for me. Jeremiah 29:11 says - 'For I know the plans that I have for you,' declares the LORD, 'plans for well-being, and not for calamity, in order to give you a future and a hope.'



I dedicate this lecture to my junior brother, Dr Olufemi Olagoke Dipeolu (*Don Dipsonius*) who passed on to glory on 28<sup>th</sup> February 2021, and my younger first cousin, Mr. Enitan Akinpelu Dipeolu who passed on to glory on 8<sup>th</sup> September 2019. He called me *Baba Professor* from the day I started work as a lecturer.

I am grateful to my late parents Mr Jonathan Olusesan Dipeolu of Oke-Ijeun, Abeokuta and Mrs Claudianah Ashabi Dipeolu (nee Okoya) of the Rademo Ruling House in Ikorodu. They gave my siblings and I, good education. I owe a debt of gratitude to his good friends (some late), but I choose to mention a few of those surviving – Dr Segun Osoba, Dr F. B. A. Coker, Mr F. O. Aramide, Prof. Wole Soyinka and Mrs Yewande Ekundayo-Adededeji. They kept us all on our toes, I in particular because I was more or less an identical twin to my dad.

I cannot but also acknowledge my late uncle – Major (rtd) Nathaniel Ladeinde Dipeolu (baba kekere), my aunt, Mrs Beatrice Ajibola Shomefun and my younger uncle – Mr Joseph Olumuyiwa Dipeolu and his wife Eniola. I also celebrate my mum's cousin Mrs Ogunjobi and her sons – Folabi and Duro.

I appreciate and love my siblings Adeyemi and Omowale Dipeolu, Gbolahan and Omotayo Alli-Balogun, Olufemi and Nokwazi Dipeolu, and Andrew and Olaperi Aghadiuno. A shout out to all my nephews and nieces – Omowunmi, Folajimi and Bade, Odedeyi, Folakemi, Folatomi, Adediji and Olisa.

I acknowledge the encouragement of my late father-in-law, Alhaji (Chief) Olaitan Sunmola. Special greetings go to my mother-in-law, Alhaja (Chief) Muyibat Olufadebi Sunmola and my inlaws – Dr and Mrs Funlade Sunmola, Prof and Mrs Gbenga Sunmola, Dr Bolanle Abudu, Pastor and Mrs Niran Odukomaya, Babajide and



Olusoji Olaleye and all their wonderful children – Omolade, Fadebi, Moyo, Tele, Seun, Obafemi, Olayinka, Tobi, Boluwarin and Ayobaye.

Appreciation to my cousins, Mrs Toyin Kwasima, Mosunmola Dipeolu (the Hon Chief Judge of Ogun State), Larry and Ibidun Toweh, Prof Funmi Banmeke, Deji and Julianah Dipeolu, Jimi and Toyin Dipeolu, Deinde and Ronke Dipeolu, Emeka and Gbemisola Okoye, Taiwo and Nekisha Dipeolu, Kehinde Olayemi Dipeolu and Tobi Dipeolu.

I acknowledge the Dipeolu Descendants Foundation of Abeokuta of which I am currently the Chairman, Board of Trustees.

I started my rascality after I had passed out of Government College Apata, Ibadan (GCI). I had been treated unfairly (or so I thought at the time) and I determined to show the world that I was not the dunce (jogo) I was made out to be. The rest is history but suffice to state that no one is a lost case no matter the extent of deviant behaviour.

I acknowledge the class of 1968 of Government College Ibadan (GCI). We are still incredibly good friends till date through our Old Boys activities to our alma mater. I was in Compro (Comprehensive High School, Aiyetoro) for HSc from October 1973 to 1974. I met a lifelong friend there - Ore Aiyelaagbe. My appreciation also goes to GCIOBA Abeokuta Branch where I am Vice Chairman and the National Executive Council of GCIOBA where I am currently an ex-officio member.

In 1975, I moved to the Faculty of Social Sciences in the then



University of Ife after a fall in the Faculty of Technology. I thank Prof MacFabro Fabayo who gave me the impetus to be a lecturer when he allowed me to take tutorials even as an undergraduate.

I acknowledge the Unife Economics Class '79 of which I am the Secretary. I thank close friends from the Ife days who have always encouraged me. They include Ambassador Ayo Olukanni, Dr Olufemi Ogundusi, Prof Biodun Onilude, HRM Oba Adedokun Abolarin (the Orangun Oke-Ila), and Dr Dokun Adedeji.

I obtained my Masters in the Department of Economics in the University of Ibadan and I acknowledge all my colleagues although I am only in touch with Mrs Chidinma Dike. I started a Ph.D in that department but eventually obtained one from the Department of Agricultural Economics in the same university, I acknowledge the kind support of my supervisor, Dr J. A. Akintola.

I made some good friends at the postgraduate level – particularly in Balewa Hall, in the University of Ibadan. These include Niyi Gbadegesin (former Vice Chancellor, LAUTECH), Kayode Bamgbose (we had known each other when we were kids), Segun Alegbeleye, Biyi Daramola, (former Vice Chancellor, Federal University of Technology, Akure), Dr Yinka Adebayo, Chryss Onwuka, O. J Ariyo, Kayode Oyesiku (former Vice Chancellor, Tai Solarin University of Education), Abiodun Sanni, Ndubisi Ekeoku (now Nwokoma) of the University of Lagos, Adebayo Aromolaran, Victor Okoruwa, M. A. Y. Rahji, T. T. Awoyemi and Niyi Togun. In Unife (now Obafemi Awolowo University), I acknowledge E. O. Idowu and Adeolu Ayanwale.

In 1984, I was employed at the then Federal University of



Technology (FUTAB now FUNAAB) where I have been to date. I give thanks to a number of colleagues: Folake Henshaw, Aanu and Dayo Akinsete (now in Ohio, USA), it was he, Akinsete and Okoroafor who gave me a chance to teach Pre-degree Mathematics. Others are Moyo Alimi, Toyin Arowolo, Nnamdi Ezeri, Eno Ibanga (former Vice Chancellor, Akwa Ibom State University), Francisca George, Messrs Jide Ojo and S.T. Rufai, Alaba Jolaoso, Chiedu Mafiana, Gani Olatunde (Vice Chancellor, Olabisi Onabanjo University), Tunde and Funmi Idowu (Tunde is now Vice Chancellor, Glorious Vision University), Mike Ozoje, Ade and Idowu Enikuomelin, and Bolanle Akeredolu-Ale.

Here in the university, many of my students (those I taught and others I didn't actually teach) are now also my colleagues and friends. They include Lateef Sanni, Idris Ayinde, Kola Adebayo, J. J. Atungwu, J. I. James, Siji Sowande, Jacob Olaoye (Pa J), O. M. O. Idowu, Sammy Sam Wobo, Eniola Fabusoro, A<sup>3</sup>Agboola, Festus Adeosun, Sola Adebawale, Adewale Salau (also shares my birthday), Adewale Obadina and M. F. Adekunle. They are all now full professors. Others who worked with me in UNAAB Consult include Dele Akinbode who was my supervisee at all the levels, Bayo Oni, Adeboye Fafiolu, and Richard Sobayo. I also acknowledge Biodun Badmus, OGF Nwaorgu and ALA Shotuyo who were Presidents of ASUU at various times.

I acknowledge the 1988 set of UNAAB (some I have mentioned above) - Mrs Bola Ogbodu, Mr Kunle Awosika both of whom gave books to AEFM department and a scholarship endowment in my name; and Mr Henry Ndiulo (gave money to me to buy books for the AEFM department). Others are Mr Oreitan Adigun, Ayo Adenaike, Laitan Okechukwu to mention a few. Suffice to say that



I have a very cordial relationship with very many of my former students.

I cannot but give thanks to those I consider as my academic mentors – Prof Y. Fabiyi, Prof S. B. Williams, Prof T.O. Tayo, Prof E. B. Otesile, Prof Yele Onadeko, Prof and Prof (Mrs) S. Afolami, to mention a few.

Special mention goes to the trio of Comrade (Prof) Toye Olorode, Comrade (Prof) Idowu Awopetu and Comrade (Dr) Dipo Fashina and in recent times, Comrade (Prof) Biodun Ogunyemi.

Coming home, I thank all my colleagues in COLAMRUD especially the current Dean, Prof E. O Fakoya, his deputy who was also my deputy, Prof Richard Oyeyinka. I acknowledge all the Heads of Departments who worked with me when I was Dean - Comfort Onifade, Stephen Adeogun, Kolade Bolarinwa, Olubunmi Ashimolowo; staff in the Dean's office – Mrs Kemi Idowu, Mr Ejikeme, Mrs Oduntan, Mrs Kemi Showemimo, Alhaji Adeyemo, Mrs Mosaku. Benjamin Cheleng and Jumu'ah Olarewaju. I must not forget a very good friend, Tope Olaifa.

I thank all my colleagues in AEFM especially the HOD, and particularly some who are my supervisees turned colleagues – Dr Esther Tolorunju, Dr Sade Oke and Mr Funminiyi Oyawole.

I extend my appreciation to colleagues in COLFHEC particularly the Departments of Home Science Management, and Nutrition and Dietetics where I have lectured a number of courses for upwards of six years.



I have had the benefit of being major supervisor and research colleague to a number of students at the Ph.D level. They are Dele Akinbode, Wasiu Sanusi, O. A. Adekoya. Esther Tolorunju, Sade Oke, Sarah Edewor, Agatha Ogbe, Philomena Ogwuike and Hope Onugbogu. Seven others are in the pipeline. I have also contributed as second supervisor or internal / external supervisors to other students in various departments.

I must extend appreciation to all the Vice Chancellors of this university from its inception. I thank Prof Oluwafemi Balogun most sincerely and the present Vice Chancellor, Prof Felix K. Salako.

One area which altered the course of my life was the salvation of my soul. I acknowledge and thank the Christian circle of brethren in the Chapel of Grace, FUNAAB led by the Chaplain, Prof. Christian Ikeobi; his wife, Mrs Banke Ikeobi and Prof Bamidele Oduguwa (now Oluwatosin); the Full Gospel Business Mens' Fellowship International (FGBMFI) with Prof and Dr. (Mrs) Sam Oluwalana, Dr and Prof (Mrs) Akin Eniolorunda, Engr. and Mrs Abiodun Fijabi, Mr and Mrs Kola Lambo, Dr and Dr (Mrs) Akin Akinhanmi, Mrs Yinka Kukoyi, Mrs Ibiyemi Lawal, Pastor (Dr) and Dr (Mrs) Ayo Ajasa to mention a few. I thank the members of Kemta Chapter where I am President and the Kuto Eminent Chapter where I am both Treasurer and Voice Chairman.

In recent times, my family worship at the Foursquare Gospel Church and we acknowledge and appreciate Revd. and Pastor (Mrs) Kayode Talabi, and Revd. and Pastor (Mrs) Ibikunle Onasanya and all members of Rehoboth Chapel in Kemta and KCA Chapel in Ibara respectively.



I thank my family friends – Adebayo and Sola Adebisi, Kayode and Funke Shonibare, Mr Lanre Amosun, Adeboye, Oluwatosin and Olufunke Fafiolu, Oladele and Funmi Oladeji, the Odedinas, the Mafianas, the Lawales, the Adeboyes, and the Shopejus.

I remember my late friends and colleagues – Mr Abiodun Lawale, Mr Adeleke Adeboye, Mr Obafemi Oginni, Prof. Depo Adedire, Prof Siaka Momoh, Prof Olusegun Apantaku, Prof Peter Adebola Okuneye, Prof S. Awonorin and Prof Oluwaseyi Oluwatosin. May their souls rest in perfect peace.

Lastly and certainly not the least – my family of orientation, my darling wife Morenike Atinuke Dipeolu. I appreciate her for the love she has for me and has shown to me these 31 years! I also thank my son, Oluwaseyi Oluwapamilerinayo, the wonderful gift from the Lord.

I would like to end this occasion with a hymn:

1

Through all the changing scenes of life,  
In trouble and in joy,  
The praises of my God shall still  
My heart and tongue employ.

2

Oh, magnify the Lord with me,  
With me exalt His name;  
When in distress to Him I called,  
He to my rescue came.

3

The hosts of God encamp around  
The dwellings of the just;



Deliverance He affords to all  
Who on His succor trust.

4

Oh, make but trial of His love,  
Experience will decide  
How blest they are, and only they,  
Who in His truth confide.

5

Fear Him, ye saints, and you will then  
Have nothing else to fear;  
Make you His service your delight,  
Your wants shall be His care.

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