*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

# Enhancing Small Firms' Growth through Marketing Orientation: the Case of Women Home-Based Businesses in a Young Market

Hassan Barau Singhry[1], Maria MacDonald[2], Jamila Hassan Barau[3], Rabi Abubakar Barau[4]
Hashiya Yakubu[5]

[1,3,4&5]Abubakar Tafawa Balewa University Bauchi, Nigeria

[2]Central Bank of Nigeria, Gombe office

**Abstract**

*Women home-based entrepreneurship is a worldwide phenomenon. However, in Nigeria, the businesses are mostly engaged in a relatively underperforming sector, characterized by low growth, low profit, and high discontinuity rates. One of the predominant issues confronting women home-based businesses is poor marketing. Thus the purpose of this study was to examine the effect of marketing orientation on the growth of women home-based businesses. The study was conducted in the Gombe and Akko metropolis of Gombe State, Nigeria. The study adopted the quantitative research design using cross-sectional studies. 86 questionnaires were distributed and 79 were found useful for analysis. The unit of analysis were women home-based entrepreneurs. Multiple regression was used to analyze the data, with the aid of the statistical package for the social sciences (SPSS). The results found that customer orientation, competitor orientation, and interfunctional coordination are significant predictors of firm growth. The major limitation of the study is the focus on the informal sector whose database is not available. Secondly, due to lack of database on women home-based businesses in the study area, convenience and snowball sample were employed in a quantitative study. This study is significant to both the theory and practice. It extend the model of marketing orientation to WHBBs. It will also benefits women entrepreneurs who aspire to grow their businesses. This is the first empirical study to investigate the effect of customer orientation, competitor orientation, and interfunctional coordination on sales growth in an emerging market of Nigeria.*

**Keywords:** Marketing Orientation, Customer Orientation, Competitor Orientation, Inter-functional Coordination, Firm Growth.
**JEL Codes**: M31, M21

## 1. Introduction

Business growth is one of the fundamental indicators of small and medium enterprises (SMEs) performance. Every firms irrespective of size or type has growth aspiration and aims to grow faster and stronger that competitors. The concept of growth especially the adage 'grow or die' fascinates or frightens business owners (Schwab, Gold, Kunz, & Reiner, 2017). It is fascinating because growing firms attract customers and build reputation. Small firms which aspire to grow are more innovative. Growth can improve firms' competitiveness. Growth aspirations is also associated with the aptitude to survive environmental shocks (Wolff, Pett, & Ring, 2015). Businesses which grow employ more people, decrease poverty, pay taxes, and improve Gross Domestic Product (GDP).

Despite the importance of firm's growth, conflicting findings have been reported for SMEs. For example, Wolff et al. (2015) reported that while firm growth influences profit performance, there are instances where there is no or there is even negative relationship between growth and profitability. Nonetheless, lack of growth can make SMEs to remain stagnant and in the long run disappear. This type of debates call for further attention on variables affecting firm growth. Small firms do not only need collaboration or networks, better infrastructure, financial capital, new mentoring and coaching, and more employees to grow. They also have to understand the marketing perspective that will make them satisfy the needs and wants of customers and satisfy them better than competitors (Dalborg, 2015).

Within the context of micro and small enterprises, this paper is interested in the growth of women home-based businesses (WHBBs). Although research into home-businesses has existed for some time, a specific interest in the growth of WHBBs has emerged only recently. Women constitute 49.34% percent of the Nigeria's over 180 million population in 2016, and they owned and manage about 40% percent of the country's registered businesses, and mostly operating from the home (Halkias et al., 2011). The homes serve as commercial offices, as well as incubators where women entrepreneurs test their business ideas. It is now common to come across women firms especially in many homes in developing and masculine countries like Nigeria. Some of them view home-based businesses (HBBs) as a hobby (a lifestyle businesses) while others view it as a source of secondary income (Al-Roomi & Ibrahim, 2004). However, growth remains a major issue for WHBBs in Nigeria, because as the businesses are started, many close down quickly.

The types of WHBBs in Nigeria include animal husbandry, poultry, fish farming, nursing services, internet cafes and business centres. Others include hairdressing and beauty salon services, bakeries, fashion design and tailoring services, education, restaurant, retailing of food stuff, and bits making. These businesses contribute to GDP, job creation, innovations and societal welfare (Modarresi, Arasti, Talebi, & Farasatkhah, 2017). Other benefits include gender economic empowerment, wealth creation, family income, community vitality, and economic development at a local and regional level (Dwelly, Maguire, & Truscott, 2005; Walker, Webster, & Walker, 2006). However, the firms growth aspirations are challenge by limited capital, small size, inexpensive location, narrow knowledge about customer needs and competitor strength and weaknesses, as well as less predisposition towards rapid growth (Newbery & Bosworth, 2010). As such, studying the growth of WHBBs is complex but topical.

Business growth is not easy. Some small businesses experience rapid or even meteoric growth, some grow slowly, while others do grow or even decline. It takes many years to witness growth. For example, Dalborg (2015) shows that today's large corporations have been established in the early 1900s. Long before large, most businesses were established as small firms. Most of today's large businesses grow by being resilient. However, a paradox was suggested for WHBBs – 'they remain micro even if they survive'. Besides, the firms are most likely to employ only its founder. May be, the myth that women-owned businesses are not concern with growth is true. However, Bogren, Friedrichs, Rennemo, and Widding (2013) argued that business growth is not connected to gender.

Although many factors can stimulate the growth of WHBBs, research involving marketing factors that stimulate WHBBs' is not adequately investigated. This research identifies marketing orientation (MO) as one an important factor influencing firm growth. MO describes how a firm relates to its markets (Huhtala, Sihvonen, Frösén, Jaakkola, & Tikkanen, 2014). MO will support WHBBs to satisfy customer needs better, and to understand competitors' strengths and weaknesses. Researches have suggested that MO influences SMEs learning (Keskin, 2006), innovation capability (Huhtala et al., 2014; Kibbeling, Bij, & Weele, 2013), as well as growth and performance (Hardeep & Raina, 2016).

This paper is motivated by four issues. The first is a concern over the slow growth rates of WHBBs. Modarresi, et al. (2017) suggested that many WHBBs do not experience growth. This indicates that women firms have a high turnover rate per annum. Poor growth will make WHBBs smaller affecting their contributions towards job creation, gender empowerment, wealth creation, and economic growth. These assertions are discouraging for the growth aspirations of WHBB entrepreneurs. As such, a marketing philosophy capable of enhancing the growth of WHBBs need to be explored. This philosophy is herein argued as marketing orientation.

Secondly, the bulk of the new venture growth literature concentrates on understanding the motivations, the barriers, and the successes of WHBBs (Loscocco & Smith- Hunter, 2004; Holmes, Smith, & Cane, 2004). There are also concentrated studies on why some ventures grow more than others, while neglecting the marketing perspectives of the growth. Although Breen and Karanasios (2010) pointed that marketing skills make WHBBs grow, most of firms have a restricted outlook and non-aggressive attitudes toward the market. Modarresi et al. (2017) revealed that most women do not know the market, do not understand the customer nor the competitor. These make it challenging to sell what is produced. Thus there is a need to depart from Breen and Karanasios (2010) marketing skills approach to integrate marketing orientation with business growth. This may help WHBBs to understand their customers and competitors.

Thirdly, previous research investigated the effect of learning and entrepreneurial orientations on SMEs growth (Farja, Gimmon, & Greenberg, 2016; Wolff et al., 2015). Similarly, Reijonen, Pardanyi, Tuominen, Laukkanen, & Komppula (2014) found that market orientation influences women firms' growth in Finland. There are also studies in the Western countries (Walker, Wang, & Redmond, 2008), and Islamic societies (Modarresi, Arasti, Talebi, & Farasatkhah, 2016). However, the role of marketing orientation among WHBBs in Nigeria, and specifically in a young market of Gombe environs is unclear. In order to cover the identified gabs, this paper aims to explore the effect of marketing orientation on the growth of WHBBs.

*Home-based businesses*

A home-based business has been defined as "any business entity engaged in selling products or services into the market operated by a self-employed person, with or without employees, that uses residential property as a base from which they run their operation" (Mason, Carter, and Tagg, 2011). A HBB is perceived to be smaller, more informal, less professional, and often operated by a self-employed person /sole proprietor who works from a private residence and selling commodities or services in the market or within the home (Holmes, et al., 2004; Sayers & Monin, 2005). Instead of using commercial premises, business operations are conducted using family residential property. Thus there is savings in public transport and rent payment. The home may also serve as an "administrative base" but sales could take place in a market away from the home (Modarresi et al., 2016).

Women preferences for self-employment in HBBs occur due to push and pull factors. The push factors include the desire to balance work and family chores, to ease frustration, to achieve financial security, to lessen poverty, diminish the difficulty of women entry into the workforce (Holmes et al., 2004). Other push factors are to avoid overheads associated with rented premises, to reduce perceived lack of opportunity for advancement, to avoid low-paid occupations, and to reduce psychological risks (Walker et al., 2008). The pull motivation includes the desire to test the market first (Walker et al., 2008), to achieve more with less seed capital (Loscocco & Smith- Hunter, 2004), to be independent, a need for personal development, and job satisfaction (Walker et al., 2006).

Some of the barriers to HBBs include lack of business financing, lack of skills and experience, low physical ability, family responsibilities, family members' disapproval, and lack of concentration and repeated work interruptions. Other obstacles are lack of sufficient space, no place to sell the products, negative attitude of the society toward HBBs (the perceptions that HBBs are associated with poor quality), lack of support services (Modarresi, et al., 2017), lack of stability of income, no privacy in the home, and poor social networking (Holmes et al., 2004). In addition, poor recordkeeping, low demand for products or services, multiple tax burdens, and unfair competition can add to the barriers. According to Doern (2011), barriers could stop owner-managers from intending to grow; undermine intentions to grow; add to the ambivalence around intentions to grow; provide incentives to grow; postpone intention realization; and slow down the process of realizing intentions to grow. Therefore, these barriers should be reduce in order to enhance the growth of WHBBs.

*Small Business Growth*

Venture creation and business growth are of interest to many stakeholders including prospective and current business owners. Business growth was originally defined as 'an increase in amount; e.g., in output, export, sales or an increase in size or improvement in quality as a result of a *process* of development from one period to another' (Penrose, 1959). Thus the major indicators of firm growth include sales/turnover, revenues, number of employees, market shares, profitability, net worth, company value, and assets growth. Other measures include subjective entrepreneur's satisfaction, and increase in customer and target market (Reijonen, et al., 2014). A firm cannot survive being static and stagnant, and it is not correct to assume that firms which are not dynamic are not growing.

Many factors affect the growth ambitions of small firms. Some of the critical factors include communication technology (Newbery & Bosworth, 2010), capital and financial support (Modarresi et al., 2017), balance between family obligations and work commitments (Ramadani Hisrich, and Gërguri-Rashiti, 2015), gender perceptions, cultural norms, and societal values (Welter, Brush, and De Bruin, 2014), networking or social capital, and managerial experiences. Others factors are human resources, age of firm, infrastructure of a country, and legal or regulatory structures (Mitchelmore & Rowley, 2013).

*Marketing orientation and business performance*

Market orientation is defined as an "organization's purpose to identify needs and wants in its target markets, and then to satisfy those needs more effectively and efficiently than its competitors" (Narver & Slater, 1990). MO is a philosophy or a shared belief which implies that a firm should focus on its customers, competitors and internal functions. It is therefore, a firm's internal driving force employ to obtain information from customers and competitors in order to develop and implement a customer and competitor oriented marketing approach. Thus, MO is essentially a market-driven insights aims at offering superior value to customers and achieving competitive differentiation and advantage (Newman, Prajogo, & Atherton, 2016; Pehrsson, 2016). Narver & Slater (1990) conceptualized market orientation as a combination of customer orientation, competitor orientation, and interfunctional coordination. The three interconnected dimensions of MO vary in their performance implications (Huhtala et al., 2014).

Customer orientation is a behavioural aspects that described a shared set of beliefs and willingness to understand and consider the customer's interest first and satisfy the needs and wants. Putting the customer first is a major determinants of business success. Therefore, firms should stay close to the customer, and produce products and services that will satisfy the needs and want of target markets more effectively and efficiently than competitors. Firms with a high degree of customer orientation will acquire higher market intelligence, build close customer relationships, and obtain customer feedback on a regular basis (Newman et al., 2016). Correspondingly, businesses that are customer-oriented delight customers by developing quality products or services, respond promptly to customer complaints and queries; and deal sensitively with community issues.

Competitor orientation is when a firm generates information to reassess and understand the marketing strategies, actions, capabilities, strengths and weaknesses of current and potential competitors relative to its own (Narver & Slater, 1990; Newman et al., 2016). Analysis of current and potential competitors will help a WHBBs to understand their rivals' technology capability, production efficiency, human resource functions, employee retention, pricing methods, on-time delivery systems, customer satisfaction, innovation, and market share.

Interfunctional coordination refers to the alignment of organizational subunits to a firm's market-oriented vision and objectives. This can be achieved through a strong collaboration between marketing and other functional areas with the needs and wants of customers (Luca, Verona, & Vicari, 2010). The goal is to coordinate all business resources and activities to create superior value for target customers, which will improve financial and non-financial performance. Based on the marketing orientation concept above and based on the insights of Narver & Slater (1990), the research model of this study is presented in Figure 1.

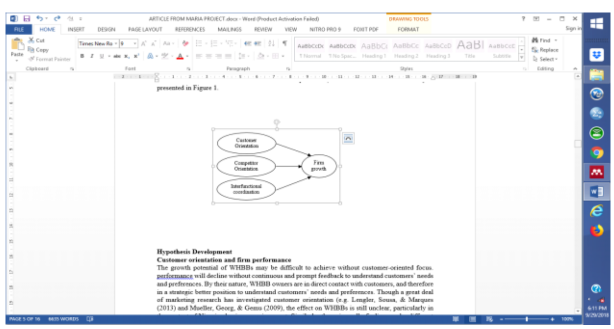



*Figure 1: Market orientation and firm growth*

## 2. Hypothesis Development

*Customer Orientation and Firm Growth*

The growth potential of WHBBs may be difficult to achieve without continuous and prompt feedback to understand customers' needs and preferences. By their nature, WHBB owners are in direct contact with customers, and therefore in a better position to understand customers' needs and preferences. Though a great deal of marketing research has investigated customer orientation (e.g. Lengler, Sousa, & Marques, 2013; and Mueller, Georg, & Gemu, 2009), the effect on WHBBs is still unclear, particularly in the context of Nigerian business environment. Apart from this, there are mixed results. CO has a significant relationship with SMEs performance in the Mangaung Metropolitan Municipality in the Free State province of South Africa (Neneh, 2017). However, Sorensen (2011) suggested a negative effect. In addition, while the relationship between CO and sales is positive, it is negative on firm profit (Lengler et al., 2013). Today, WHBBs are facing stiff competition from SMEs and large enterprises. Therefore, engaging in customer-oriented behaviour is imperative for their growth, survival and performance. Since the relationship between customer orientation and performance of WHBBs is not clear, there is to understand the nature of the association in a young market. Hence, it is postulated that:

H1: If customer orientation goes up, the performance of WHBBs will go up as well.

*Competitor Orientation and Firm Growth*

Customer focus only may not be enough to enhance SMEs growth. Therefore, a need to balance customer and competitor orientation is critical for success. Competitor-oriented firms understand the strengths, weaknesses, capabilities and strategies of key rivals. However, it has been noted that firms which assess and understand their competitors are likely to copy their rival's marketing mix, making only incremental improvements to the values they offer (Newman et al., 2016). Nevertheless, it is also clear that continuous evaluation of competitors' actions will trigger firms to think ahead of their competitors' and to win market share (Lengler et al., 2013). Besides, empirical evidence reveals that while competitor orientation is positively related to a firm's market share (Sørensen, 2009) and profit, it is insignificant on sales (Lengler et al., 2013). The inconsistency in findings lead to the following hypothesis:

H2: There is a significant relationship between competitor orientation and firm performance

*Interfunctional Coordination and Firm Growth*

It is not possible to use customer and competitor orientations without interfunctional coordination. A business must integrate its internal functions effectively to create superior value for buyers. Hence, interfunctional coordination focuses on the entire business and not merely on a single department. Even with few employees and low seed capital, firms which coordinates their internal functions with customer and competitor focus are more likely to perform better. Hence, the following hypothesis:

H3: There is a significant relationship between interfunctional coordination and firm growth

## 3. Research Methodology

This study employed the quantitative research design based on cross-sectional survey strategy. The population of the study consists of women owned home-ventures in Gombe metropolis. The unit of analysis was the female entrepreneurs of these ventures. Gombe and Akko metropolis are the two largest cities and commercial hubs of Gombe State. Due to the absence of a database of women entrepreneurs in Gombe State, convenience and snowball sampling techniques were adopted for this study. Through a snowball counting in each ward (Designated clustered area), the researcher and 3 assistants counted 110 WHBBs in the city (Snowball counting, 2017). Convenience sample enabled the researcher to collect data directly from women entrepreneurs in the two cities. Based on Krejcie and Morgan (1970), the sample size of the study was 86. The 86 respondents were selected based on simple random sampling technique.

Questionnaires were distributed and collected. Thus, the questionnaire is the primary source used to collect the data in this study. Questionnaire is a useful option to consider when conducting a survey. Questionnaire administration was adopted because it is cheaper than personal interview. It is also faster and quicker if the sample is large or widely dispersed. Furthermore, the measurement instruments of all the variables were adopted and modified from reliable academic articles. For example, while the measurement items of market orientation (customer orientation, competitor orientation, and interfunctional coordination) were adopted and modified from Narver and Slater (1990) as well as Ledwith ans Dwyer (2009), that of firm growth were selected from measurement of firm performance as used by Murphy and Callaway (2004), and Murphy, Trailer, and Hill (1996). The measurement items of the questionnaires were measured on five-point Likert type scales from 1 (Strongly disagree) to 5 (strongly agree). Data was analyze based on descriptive and inferential statistics (multiple regression) with the tool of Statistical Package for the Social Sciences (SPSS).

**4. Data Analysis**

The information collected from the questionnaires collected was presented and analyzed. Out of the 86 questionnaires distributed all were returned. This success was as a result of the face-to-face methods of data collection and the resiliency of the researchers and their assistants. However, 7 of the questionnaires were not filled appropriately and therefore, have not been use. This means 79 questionnaires were found useful. The results of the respondents' profiles were presented in Table 1.

*Respondent Profiles*

This section analyses the frequency data on gender, educational qualification, and years of doing business. Table 1 shows that all the 79 respondent are women. This is in line with the intent of the study.

Table 1: Socio-demographic profiles of respondents

| S/No | Profiles | Categorization | Frequency | Per cent |
|---|---|---|---|---|
| 1 | Gender | Female | 79 | 100 |
| 2 | Certificate | Certificate/diploma | 64 | 81 |
| | | HND/Degree | 15 | 19 |
| 3 | Years in Business | ≤ 10 years | 37 | 46.8 |
| | | ≥ 10 years | 42 | 53.2 |

Table 1 shows that 64 of the respondents representing 81 per cent hold certificate and diploma while 15 of the owners are holders of Higher National Diploma and University Degree. This means that all the respondent have formal knowledge. Formal education is seen as providing the necessary cognitive skills to become familiar to business management. Education is a source of knowledge, skills, discipline, motivation and self-confidence for success of entrepreneurial venture. Highly educated entrepreneurs are more skillful at identifying opportunities and are better likely to obtain a higher return.

The Table also shows that 37 representing 46.8 per cent of the women-owned businesses have operated between 1 and 10 years. Similarly, 43 representing 53.2 per cent of the firms have been in business for more than 10 years but less than 20 years. Firm age has been considered to be the determinants of firm growth. Younger firms will have higher growth rates, as they have less understanding of the costs related to their activities and of how these change with the passage of time. For this reason, the 37 firms are more likely to witness higher growth rates, while older firms will be better at maximize their levels of efficiency. Therefore young firms are likely to make less efficient use of resource than older firms, because older firms have had the opportunity to experiment with different types of resources and select the ones that best fit their demands.

*Descriptive Results: Mean, Standard Deviation, Factor Loading, and Cronbach's Alpha*

Factor analysis is a multivariate statistical analysis for interpreting self-reporting questionnaires. The purpose of factor analysis is to identify and categorize underlying dimensions and their manifest items which accounts for larger explanation of the variance of a variable (Arbuckle, 2010). In order to uncover the underlying dimensions of the construct (marketing orientation), exploratory factor analysis was performed. Based on the results, it can be concluded that the output of EFA can be used for further analysis. EFA has uncovered four underlying dimensions with total variance explained of 40.9%. The items and the corresponding 4 dimensions are provided in Table 2. Based on the items under each factor (dimension), the names of the different factors are: Factor 1 – customer orientation; factor 2 – competitor orientation; factor 3 – interfunctional coordination; and factor 4 – financial performance. The items have acceptable loading ranging from 4.32 to 9.45.

Correspondingly, reliability is the internal consistency of an instrument. The popular method of measuring reliability is the Cronbach's alpha. First, reliability of the four constructs was assessed based on Cronbach's α above 0.7 (Nunnally, 1978). Table 4 shows that the reliability values of all variables surpassed the 0.4 threshold and therefore, satisfied the requirement for reliability. Sometimes alpha might be so low either because you have a negative question or the items have serious measurement errors.

Table 2: Factor Loading and Reliability

| Variables and measurement items | Factor loading | | | | Reliability |
|---|---|---|---|---|---|
| | COO 1 | CPO 2 | IFC 3 | FP 4 | |
| *Customer Orientation* | | | | | |
| My business aims at increasing customer value | .784 | | | | .736 |
| Understanding customers' needs is a priority | .756 | | | | .694 |
| I frequently measure customer satisfaction | .755 | | | | .707 |
| My business is driven by customer satisfaction | .540 | | | | .690 |
| *Competitor orientation* | | | | | |
| I respond quickly to competitive actions | | .729 | | | .708 |
| My employees knows how to obtain competitors' information | | .707 | | | .717 |

| Variables and measurement items | Factor loading COO 1 | CPO 2 | IFC 3 | FP 4 | Reliability |
|---|---|---|---|---|---|
| I try to satisfy my customers more than competitors | | .553 | | | .736 |
| I consider my competitors' strength and weaknesses in my decision | | .432 | | | .778 |
| *Interfunctional coordination* | | | | | |
| I regularly visit my customers | | | .921 | | .754 |
| Information about customers is freely communicated to employees | | | .775 | | .718 |
| I give more attention to marketing as compared to other sectors | | | .896 | | .714 |
| My firm has strong internal coordination for serving customers | | | .645 | | .700 |
| *Financial and nonfinancial performance* | | | | | |
| I experience remarkable market growth | | | | .793 | .470 |
| My Business sales volume is increasing | | | | .728 | .417 |
| My revenue has increased over the last few years | | | | .720 | .531 |
| My business is becoming more profitable | | | | .701 | .453 |
| My cost of operation is decreasing | | | | .945 | .532 |
| My Business provides jobs | | | | .830 | .488 |
| Employees are satisfied with my firm | | | | .821 | .507 |
| My firm trains workers to be self-employed in the future | | | | .712 | .469 |
| Last year I had a higher number of employees than my competitors | | | | .553 | .423 |

*Regression Results*

The R-square in the model summary shows the amount of variance in the dependent variables that can be explained by the independent variables. Thus, the independent variables (customer orientation, competitor orientation, and interfunctional coordination) account for .409, of the variance in the dependent variable (firm performance). The adjusted R square adjusts for bias in $R^2$ as the number of variables increase. Table 3 shows that the construct "marketing orientation" has significant relationship with firm performance ($r = .639$, $p < .01$). It means that when marketing orientation goes up 1, firm performance goes up by .639.

Table 3: Multiple Regression Results of the Model

| Relationship | Standardized Beta | t | $R^2$ | P | Remarks |
|---|---|---|---|---|---|
| Customer orientation and FP | .261 | 2.636 | | .010 | Significant |
| Competitor orientation and FP | .210 | 2.031 | | .046 | Significant |
| Interfunctional coordination and FP | .395 | 4.196 | | .000 | Significant |
| Overall: Marketing orientation and FP | .639 | 5.499 | .409 | .000 | Significant |

Table 3 shows the extent at which the independent customer orientation, competitor orientation, and interfunctional coordination predict the performance of women-owned enterprises in Gombe. The Unstandardized coefficients B column gives the contributing coefficients of the independent variables. The standardized beta column showed the contribution that the individual independent variables make to the model. The t test were performed to test the two tailed hypothesis that to confirmed whether the beta values are significantly higher or lower than zero. The t test enable researchers to determine which predictors is more significant.

*Discussion*

The aim of this study was to examine the relationship between marketing orientation and growth of WHBBs in Gombe and Akko. From the results of the study, it was found that marketing orientation is a significant predictor of firm growth. Thus the aim and the specific objectives of the study have been achieved. The significant relationship between market orientation and firm growth is consistent with the work of Ledwith and Dwyer (2009) who found significant relationships between market orientation and organizational performance.

Hypothesis 1 was tested based on the data in Table 3. The results shows that customer orientation is a significant predictor of the growth of WHBBs. The statistics indicates that there is a 99 per cent confidence of accepting this hypothesis. Thus, the relationship is statistically explained as ($r=.261$, $p< .001$). Therefore, if customer orientation goes up by 1 standard deviation, firm growth will increase by .261 standard deviation. The decision rule here is to reject the null hypotheses and accept the alternate hypotheses. This finding is consistent with This finding is consistent with Neneh (2017) who suggested showed that customer orientation had a significant positive association with SMEs performance, thus supporting the calls for probing the relationships between customer orientation and firm performance.

Hypothesis 2 states that "there is significant relationship between competitor orientation and growth of women home-based enterprises. Data in Table 3 clearly suggests that competitor orientation is a significant determinant of the growth of women home-operated enterprises. The significant level is statistically explained as ($r=.210$, $p< .005$). Therefore, if competitor orientation goes up by 1 standard deviation, firm growth is predicted to go up by .210 standard deviation. The decision Rule is accept that competitor orientation has a significant predictor of the growth of WHBBs. This result is similar to the study conducted by Ledwith and Dwyer (2009) who found that competitor orientation is a significant factor predicting financial performance of small firms.

Lastly, the test of hypothesis 3 also revealed a promising result. It is found that interfunctional coordination has a strong relationship with the growth of WHBBs. This finding is statistically explained as ($r=.395$, $p< .001$). Therefore, if interfunctional coordination goes up by 1 standard deviation, WHBBs will grow by .395 standard deviation. The decision rule is to accept the alternate hypotheses which states interfunctional coordination has significant relationship with the performance of women-owned enterprises in Gombe. This finding is supported by Katharina and Hofer (2015) who found that interfunctional coordination had positive effect on firm performance.

## 5. Conclusion and Recommendation

*Conclusion*

This study has brought to light the need to promote and support the growth of WHBBs. Women home-based entrepreneurs have been recognized during the last decade as an untapped source of economic growth. Notwithstanding, women entrepreneurs are creating new jobs for themselves and others, while also helping to solve social and economic problems of the society. This study has both theoretical and practical value. Theoretically, this study has the potential of adding a new knowledge to the field of gender entrepreneurship. It brought the model of market orientation into the context of the growth of WHBBs in Nigeria. To this end, this study will provide insights into how female entrepreneurs who are largely discriminated by gender, culture norms, and religion values can enhance the growth of businesses operated from the homes.

Practically, this study will help WHBBs to increase sales, grow market share, and improve profit. In addition, the growth of the firms will enhance job creation, wealth creation, tax collection, and economic growth. Nonetheless, these benefits shall be attained if WHBBs are driven by customer focus, customer needs, customer values, and customer satisfaction. WHBBs should also be proactive, and respond to competitive pressures effectively by seeking relevant information about competitors' strategies, strengths and weaknesses. Equally important is the coordination of internal processes with marketing objectives. By their interpersonal relationship and contact with customers, home-based women entrepreneurs should leave the comfort zone and visit customers, share information in a way to enhance future values. The results of this study will also be use by policy makers interested in promoting women empowerment, poverty alleviation and job creation.

*Limitations and Recommendations*

One of the major limitation of the study is the determination of the population of WHBBs. There is no formal nor informal database on this type of businesses. This signifies the lack of attention given to the micro and small business sector. The researchers and assistant had to visit numerous wards to determine the population and sample size. This lack of databases led to the identification of small population and thus small sample size. Therefore future research should be combine the neighboring state capitals of the north-east Nigeria in order to arrive at a larger population and sample size. This comprises of Gombe, Bauchi, Yola, Damaturu, Jalingo, and Maiduguri. Secondly, although marketing orientation is a starting point for the marketing success of WHBBs, there is need for further studies about the use of social media marketing and advertising. Another limitation is the quantitative and cross-sectional nature of the research, where factors of marketing orientation had been identified to predict firm growth. Future studies should can explored the phenomenon through an in-depth or focus group interview technique.

Social media is a wide range of online, WhatsApp, word-of-mouth forums and repository of consumer information including blogs, company-sponsored discussion boards and chat rooms, consumer-to-consumer email, consumer product or service ratings websites and forums, Internet discussion boards and forums, moblogs (sites containing digital audio, images, movies, or photographs), and social networking websites (Parveen, Jaafar, & Ainin, 2016). Social media is good for micro and small business marketing as it is cheap and connects to consumers widely and globally. It helps to enhance organizations' market presence, knowledge sharing, and build social network and customer relationships with the online public. Other benefits of social media include ability to influence consumer attitude and behavior, and education and training (Ngai, Moon, Lam, Chin, & Tao, 2015). Scholars have suggested that social media has significantly impacted marketing communication (Hutter, Hautz, Dennhardt, & Fu¨ller, 2013). Organizations that take advantage of the latest social media technologies outperform their competitors and delight the customers (Parveen et al., 2016). Thus, social media can play an important strategic role as an efficient marketing tool to enhance the growth and performance of WHBBs. There is also a practical recommendation. First, accurate and thorough information about customers the competition is a foundation of all successful business ventures. Therefore, WHBBs should conduct periodic market research to gather, interpret information about their product or service.

**References**

Al-Roomi, O., & Ibrahim, M. (2004). Performance Determinants of Home-Based Businesses in Dubai. *Journal of Economic and Administrative Sciences*, *20*(2), 61–82.

Arbuckle, J. L. (2010). *IBM SPSS® Amos™ User's Guide 19*.

Bogren, M., Friedrichs, Y. von, Rennemo, Ø., & Widding, Ø. (2013). Networking women entrepreneurs: fruitful for business growth? *International Journal of Gender and Entrepreneurship*, *5*(1), 60–77. http://doi.org/10.1108/17566261311305210

Breen, J., & Karanasios, S. (2010). Growth and expansion of women-owned home-based business. *International Business & Economics Research Journal*, *9*(13), 33-46.

Dalborg, C. (2015). The life cycle in women-owned businesses : from a qualitative growth perspective. *International Journal of Gender and Entrepreneurship*, *7*(2), 126–147. http://doi.org/10.1108/IJGE-06-2014-0019

Doern, R. (2011). Understanding how perceived barriers influence growth intentions and behaviours Accounts from small business. *International Journal of Entrepreneurial Behavior & Research*, *17*(5), 488–514. http://doi.org/10.1108/13552551111158826

Dwelly, T., Maguire, K., & Truscott, F. (2005). *Under the Radar: Tracking and Supporting Rural Home Based Business, A report for the Commission for Rural Communities from Live Work Network,*. London.

Farja, Y., Gimmon, E., & Greenberg, Z. (2016). The effect of entrepreneurial orientation on SMEs growth and export in Israeli peripheral regions. *New England Journal of Entrepreneurship*, *19*(2), 25–41.

Halkias, D., Nwajiuba, C., Harkiolakis, N., Caracatsanis, S. M., Halkias, D., & Harkiolakis, N. (2011). Challenges facing women entrepreneurs in Nigeria. http://doi.org/10.1108/01409171111102821

Hardeep, C. R. C., & Raina, D. S. (2016). Marketing orientation, strategic orientation and their synergistic impact on business performance A case of SMEs in emerging context (India). *Journal of Research in Marketing and Entrepreneurship*, *18*(1), 27–52. http://doi.org/10.1108/JRME-03-2016-0004

Holmes, S., Smith, S., & Cane, G. (2004). Gender issues in home- based business operation and training: an Australian overview. *Women in Management Review*, *12*(2), 68–73.

Huhtala, J.-P., Sihvonen, A., Frösén, J., Jaakkola, M., & Tikkanen, H. (2014). Market orientation, innovation capability and business performance: Insights from the global financial crisis. *Baltic Journal of Management*, *9*(2), 134–152. http://doi.org/10.1108/BJM-03-2013-0044

Hutter, K., Hautz, J., Dennhardt, S., & Fu¨ller, J. (2013). The impact of user interactions in social media on brand awareness and purchase intention : the case of MINI on Facebook. *Journal of Product & Brand Management 22/5/6*, *22*(5/6), 342–351. http://doi.org/10.1108/JPBM-05-2013-0299

Katharina, T. G., & Hofer, M. (2015). Market orientation, entrepreneurial orientation and performance in emerging markets. *International Journal of Emerging Markets*, *10*(3), 560–571. http://doi.org/10.1108/IJoEM-05-2013-0076

Keskin, H. (2006). Market orientation, learning orientation, and innovation capabilities in SMEs: An extended model. *European Journal of Innovation Management*, *9*(4), 396–417. http://doi.org/10.1108/14601060610707849

Kibbeling, M., Bij, H. Van Der, & Weele, A. Van. (2013). Market Orientation and Innovativeness in Supply Chains: Supplier's Impact on Customer Satisfaction. *Journal of Product Innovation Management*, *30*(3), 500–515. http://doi.org/10.1111/jpim.12007

Krejcie, R. V, & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educ Psychol Meas*, *30*(3), 607–10.

Ledwith, A., & Dwyer, M. O. (2009). Market Orientation, NPD Performance, and Organizational Performance in Small Firms. *Journal of Production Innovation Management*, *26*, 652–661.

Lengler, F. J., Sousa, C. M. P., & Marques, C. (2013). Exploring the linear and quadratic effects of customer and competitor orientation on export performance. *International Marketing Review*, *30*(5), 440–468. http://doi.org/10.1108/IMR-03-2011-0087

Loscocco, K., & Smith- Hunter, A. (2004). Women home-based business owners : insights from comparative analyses. *Women in Management Review*, *19*(3), 164–173. http://doi.org/10.1108/09649420410529870

Luca, L. M. De, Verona, G., & Vicari, S. (2010). Market Orientation and R&D Effectiveness in High-Technology Firms: An Empirical Investigation in the Biotechnology Industry. *Journal of Product Innovation Management*, *27*, 299–320.

Mahmoud, M. A., & Yusif, B. (2012). Market orientation, learning orientation, and the performance of nonprofit organisations (NPOs). *International Journal of Productivity and Performance Management*, *61*(6), 624–652. http://doi.org/10.1108/17410401211249193

Mason, C. M., Carter, S., & Tagg, S. (2011). Invisible businesses: The characteristics of home-based businesses in the United Kingdom. *Regional Studies*, *45*(5), 625-639.

Mitchelmore, S., & Rowley, J. (2013). Growth and planning strategies within women-led SMEs. *Journal of Small Business and Enterprise Development*, *51*(1), 83–96. http://doi.org/10.1108/00251741311291328

Modarresi, M., Arasti, Z., Talebi, K., & Farasatkhah, M. (2016). Women's entrepreneurship in Iran: How are women owning and managing home-based businesses motivated to grow? *International Journal of Gender and Entrepreneurship*, *8*(4), 446–470. http://doi.org/10.1108/IJGE-03-2016-0006

Modarresi, M., Arasti, Z., Talebi, K., & Farasatkhah, M. (2017). Growth barriers of women-owned home-based businesses in Iran: an exploratory study. *Gender in Management: An International Journal*, *32*(4), 244–267. http://doi.org/10.1108/GM-03-2016-0069

Mueller, T. A., Georg, H., & Gemu, H. G. (2009). Founder team interaction, customer and competitor orientation in software ventures. *Management Research News*, *32*(6), 539–554. http://doi.org/10.1108/01409170910962975

Murphy, G. B., & Callaway, S. K. (2004). Doing well and happy about it?

Explaining variance in entrepreneurs' stated satisfaction with performance. *New England Journal of Entrepreneurship*, *7*(2), 15-26.

Murphy, G. B., Trailer, J. W., & Hill, R. C. (1996). Measuring performance in entrepreneurship research. *Journal of business research*, *36*(1), 15-23.

Narver, J., & Slater, S. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, *54*(4), 20–35.

Neneh, B. N. (2017). Customer orientation and SME performance: the role of networking ties. *African Journal of Economic and Management Studies*, *9*(2), 178–196.

Newbery, R., & Bosworth, G. (2010). Home-based business sectors in the rural economy. *Society and Business Review*, *5*(2), 183–197. http://doi.org/10.1108/17465681011055596

Newman, A., Prajogo, D., & Atherton, A. (2016). The influence of market orientation on innovation strategies. *Journal of Service Theory and Practice*, *26*(1), 72–90. http://doi.org/10.1108/JSTP-02-2015-0044

Ngai, E. W. T., Moon, K. K., Lam, S. S., Chin, E. S. K., & Tao, S. S. C. (2015). Social media models, technologies, and applications: An academic review and case study. *Industrial Management & Data Systems*, *115*(5), 769–802.

Nunnally, J. (1978). *Psychometric theory*. New York: McGraw-Hill.

Parveen, F., Jaafar, N. I., & Ainin, S. (2016). Social media's impact on organizational performance and entrepreneurial orientation in organizations. *Management Decision*, *54*(9), 2208–2234. http://doi.org/10.1108/MD-08-2015-0336

Pehrsson, A. (2016). Firm's strategic orientation , market context, and Literature review and opportunities for international strategy research. *European Business Review*, *28*(4), 378–404. http://doi.org/10.1108/EBR-11-2015-0142

Penrose, E. (1959). *The Theory of the Growth of the Firm*. New York, NY: Oxford University Press.

Ramadani, V., Hisrich, R.D. and Gërguri-Rashiti, S. (2015), "Female entrepreneurs in transition economies: insights from Albania, Macedonia and Kosovo", *World Review of Entrepreneurship Management and Sustainable Development*, Vol. 11 No. 4, pp. 391-413.

Reijonen, H., Pardanyi, S., Tuominen, S., Laukkanen, T., & Komppula, R. (2014). Are growth-oriented SMEs more likely to adopt market and brand orientations? *Journal of Small Business and Enterprise Development*, *21*(2), 250–264.

Sayers, J., & Monin, N. (2005). *The Global Garage: Home-based Businesses in New Zealand*. Palmerston North: Thomson Learning Dunmore Press.

Schwab, L., Gold, S., Kunz, N., & Reiner, G. (2017). Sustainable Business Growth: Exploring Operations Decision-Making. *Journal of Global Responsibility*, *8*(1).

Sørensen, H. E. (2009). Why competitors matter for market orientation. *European Journal of Marketing*, *43*(5/6), 735–761. http://doi.org/10.1108/03090560910947025

Walker, E., Wang, C., & Redmond, J. (2008). Women and work-life balance: is home-based business ownership the solution ? *Equal Opportunities International*, *27*(3), 258–275. http://doi.org/10.1108/02610150810860084

Walker, E., Webster, B., & Walker, E. (2006). Gender issues in home-based businesses. *Women in Management Review*, *19*(8), 404–412. http://doi.org/10.1108/09649420410570216

Welter, F., Brush, C.G. and De Bruin, A. (2014), "The Gendering of Entrepreneurship Context", InstitutfürMittelstandsforschung Bonn (Hrsg.): Working Paper, 01/14, Bonn.

Wolff, J. A., Pett, T. L., & Ring, J. K. (2015). Small firm growth as a function of both learning orientation and entrepreneurial orientation: An empirical analysis. *International Journal of Entrepreneurial Behavior & Research*, *21*(5), 709–730.

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

# Entrepreneurship Culture and Commercial Orientation: A Pathway to addressing Problem of Dwindling Resources Occasioned by Economic Recession in the Nigeria's Public Service

Bello Ayuba[1], Mohammed Bashir[2]

[1&2] Department of Business Administration, University of Abuja, Gwagwalada, Abuja, FCT

**Abstract**

*The main objective of this study is to examine the impact of entrepreneurship culture and commercial orientation on the dwindling resources in the Nigeria's Public Service occasioned by economic recession in the country. As part of the methodology, both primary and secondary sources of data were utilised, while Descriptive Statistics and Regression Analysis were used to analyse the data. As part of the major finding, the study revealed that entrepreneurship culture and commercial orientation in the Nigeria's Public Service has significant impact on the dwindling resources occasioned by economic recession as the study found out that its adoption will to a larger extent help in addressing the dwindling resources for governance and improved performance of the Nigeria's Public Service which will go a long way in cutting-down cost of running government, promoting transparency and accountability, as well as complimenting the anti-corruption drive of the present administration. Among the major recommendation is the need for Federal Government to adopt entrepreneurship culture and commercial orientation as an alternative to addressing the protracted problems of dwindling resources facing the Nigeria's public service so as to serve as an antidote to inefficiency and ineffectiveness which characterised the service. The study concludes that adoption of entrepreneurship culture and commercial orientation in the Nigeria's public service is a veritable tool which should be embraced in all facets of public life by recognising key potential business entities, units and divisions in MDA's for its proper application to help in meeting the current and future performance expectations needs of the agencies of government so as to reposition them for effective and efficient performance.*

**Keywords:** Entrepreneurship Culture, Commercial Orientation, Dwindling Resource, Economic Recession, Public Service
**JEL Codes**: M10, M13

## 1. Introduction

The quest for entrepreneurship culture in the public service is propelled by the enormous pressures that confront the modern day government. Traditionally, Government is concerned with the security and welfare of millions of its citizens, whereas businesses are profit oriented enterprise that focused on customers satisfactions (Mintzberg, 2017). The concept of entrepreneurship is not solely a private sector phenomenon, although it is usually studied in the context of private enterprises, entrepreneurship as a process can also be found in the public sector organisations, especially nowadays that our society have undergone several changes that have brought private and public sector organisations closer to each other.

Due to the challenges of dwindling resources occasioned by economic recession, the public sector organisations have faced severe problems, which are both economic and ideological in nature. These changes have forced public sector organisations to renew and re-evaluate their activities. In practise it resulted to the opening up of public sector activities towards more market and customer oriented concepts as well as accountability and efficiency.

Public sector organisations have started to prefer the adoption of business philosophy in the actualisation of their mandate due to increasing demands for accountability (Damanpour & Schneider, 2009). The provision of services to millions of citizens is no longer a monopoly of the public sector. The private sector is also involved in the provision of social services in the form of cooperate social responsibility, as well as public/private partnership, which places premium on wider co-operation between public sector organisations and private enterprises, that have brought public and private sector organisations closer to each other for the purpose of providing effective service delivery to the citizenry.

In Nigeria, the government has felt the need to transfer the advantages of an owner-managed organisation to public sector units; with a view to cut down cost of running government, promoting transparency and accountability and complimenting the anti-corruption drive of the government, which are in line with the changed agenda of Buhari led administration. Any economy is composed of three major sectors: the private sector, the social or non-profit sector, and the public sector. Because of their extreme mutual dependencies, the combined effectiveness of these three sectors significantly determines a country's performance and thereby its standard of living and its status and role as a nation within the global community. Therefore, a country weak in one or more of these sectors is likely to underachieve, at least to some degree. In addition, the effect of a weak sector can be reflected on one and likely both of the other sectors, thereby affecting the performance of an economy as the case in Nigeria today.

It is in view of the quest for meeting up with the challenges of the 21st-century and the need to exploit on more business opportunities and reposition government in its derive for national economic development that this study on entrepreneurship culture and commercial orientation: a pathway to addressing problem of dwindling resources occasioned by economic recession in the Nigeria’s public service is conducted so as to examine those entrepreneurial concepts, philosophies and cultures needed for the growth of the Nigeria’s public service for national economic development. Even though, several studies were conducted by researchers (e.g. such as those of Damanpour & Schneider, 2009 and Pacheco, York, Dean & Sarasvathy, 2010) on entrepreneurship culture and commercial orientation, their studies are limited in scope as they did not focus on entrepreneurship culture and commercial orientation in the Nigeria’s public service which this study is designed to accomplish.

*Statement of the Problem*

Government everywhere is in serious trouble. Not only do its citizens and consumers constantly complain, but some also are finding alternatives to satisfy themselves. Some products are failing the tests of quality and innovation, and it costs more than users want to pay for governmental services (Schnurer, 2013). As a result, government has failed in its quest to provide efficient service delivery for millions of citizens, which is one of the primary functions of government in any economy. The situation is even worst in Nigeria, as nothing seems to be working in the country as a result of the successive failure of the government to live up to expectation (IMF, 2008). If governments were private firms, they would have been facing the prospect of either been taken-over to "rescue" them or death in the competitive marketplace as their customer base migrates to newer alternatives. This is what prompted the need for this study on the adoption of entrepreneurship culture and commercial orientation to investigate the problems so that at the end of the study some policy recommendations aimed at salvaging the situation will be made.

*Research Questions*

In a bid to address the above problems, the following research questions were raised:

- How does entrepreneurship culture and commercial orientation impact on the Nigeria's Public Service?
- To what extent does dwindling resources occasioned by economic recession impact on the adoption of entrepreneurship culture in the Nigeria's Public Service?
- To what extent does entrepreneurship culture and commercial orientation in the Nigeria's Public Service impact on the dwindling resources occasioned by economic recession in Nigeria?

*Objectives of the Study*

The main objective of this study is to examine the impact of entrepreneurship culture and commercial orientation on the dwindling resources in the Nigeria's Public Service occasioned by economic recession in the country. The specific objectives are to:

- Assess how entrepreneurship culture and commercial orientation impact on the Nigeria's Public Service.
- Examine the impact of dwindling resources occasioned by economic recession on the adoption of entrepreneurship culture in the Nigeria's Public Service.
- Evaluate the impact of entrepreneurship culture and commercial orientation in addressing the problems of dwindling resources in the Nigeria's Public Service.

*Hypotheses*

***$Ho_1$****: Entrepreneurship culture and commercial orientation has no significant impact on the Nigeria's Public Service.*

***$Ho_2$****: Dwindling resources occasioned by economic recession has no significant impact on the adoption of entrepreneurship culture in the Nigeria's Public Service.*

***$Ho_3$****: Entrepreneurship culture and commercial orientation in the Nigeria's Public Service has no significant impact on dwindling resources occasioned by economic recession.*

*Significance of the Study*

Dwindling resources occasioned by economic recession coupled with mismanagement and pervasive corruption are the major challenges facing the Nigeria Public Service today, a situation that has rendered the Public Service inefficient and ineffective as a fundamental instrument for the implementation of government policies and programmes. Unfortunately, the Nigeria Public Service of today is in a sorry state, as it has perpetually failed to play it primary function in the Nigeria political economy (IMF, 2008). This study will therefore be beneficial to the Government, the Public Service and all public institutions in their unbridled quest to strengthen and diversify their revenue base for effective governance towards speedy economic recovery for the benefit of all. This study is also significant to the civil service in the inculcation and promotion of entrepreneurship culture toward improving the performance of the sector for effective service delivery to millions of citizens who are yearning for improvement and betterment of their lives. It will as well serve as a stepping stone for other researchers who may wish to undertake a study in a related field.

*Scope of the Study*

This study investigated the need for entrepreneurship culture (e.g. autonomy, competitiveness, pro-activeness, motivation, risk taking and commercial orientation, efficiency cost effectiveness, customer care, production and market knowledge) in the Nigeria's Public Service with a view to addressing the lingering problem of dwindling resources occasioned by economic recession in Nigeria. In the course of this study, effort was made to examined the various concepts of entrepreneurship, the Public Service and dwindling resources occasioned by economic recession in Nigeria with a view to proffering a way forward to a more efficient and effective Public Service. The research work covers the Office of the Head of Civil Service of the Federation and Fourteen selected Ministries, Departments, Agencies and Commissions (MDA's) in Abuja, the Federal Capital Territory from the year 2016 to 2017. This period witnessed acute economic recession which precipitated protracted dwindling resources for governance in Nigeria. Three categories of employees and other stakeholders were investigated in the study. This includes; Top Management Staff (Directorate Cadre GL 15 TO 17), Middle-Level Cadre Officers (GL 7 to 14) and Junior Staff (GL 2 to 6) of the selected organisations.

## 2. Literature Review

*Concept of Entrepreneurship*

An entrepreneur, according the Small Business Association, is a business that accepts associated risk to make a profit. While this definition may sound quite simple it however gives an accurate description of entrepreneurs, but it fails to explain the phenomena of entrepreneurship itself. Even though there is no great theory of entrepreneurship, the concept of entrepreneurship is based on entrepreneurial opportunities, without entrepreneurial opportunities there is no entrepreneurship (Shane & Venkataraman, 2000). Entrepreneurship is a process of becoming, not a static phenomenon. The change involved usually takes place in quantum jumps, being a holistic process in which existing stability disappears. (Bygrave, 1989) Therefore entrepreneurship is about identifying opportunities, creatively breaking patterns, taking and managing risk, organising and co-ordinating resources (Landström, 1998).

Entrepreneurship integrates seeing (vision) and doing (action). As Pinchot (1985) puts it, entrepreneurs are "the dreamers who do". Entrepreneurship is a concept closely related to entrepreneurship emphasising the entrepreneurial process (entrepreneurs carry out new combinations) and innovativeness (Guth & Ginsberg, 1990). The entrepreneur acts like an entrepreneur in that he/she realises his/her own ideas without being the owner of the enterprise (Cunningham & Lischeron, 1991). Entrepreneurship is here defined to mean entrepreneurial way of action in an existing organisation – more specifically, in a public sector organisation. The basis of entrepreneurship is recognising an opportunity, exploiting it and trusting that exploiting an opportunity in a new way that deviates from previous practise will succeed and support the realisation of the organisation´s aims. (Heinonen, 1999).

Entrepreneurship in public sector organisations is aimed at reducing wastage as well as promoting efficient service delivery thereby combining the advantage of both private and public sector organisations. Entrepreneurship in the public sector is a process, which occurs in interaction with the environment (Van de-Ven, 1993). Management interpretation of environmental changes is quite imperative – whether threats or opportunities – and the resources available to the organisation to react to the changes in its environment (Stevenson *et al*., 1990). Entrepreneurship therefore, improves the performance (both economic and non-economic) of the organisation (Pearce *et al*, 1997). It is easier for a successful organisation to exploit opportunities – to innovate and change – when it has the necessary resources at its disposal. (Guth & Ginsberg, 1990).

*Entrepreneurship Adoption in the Nigerian Public Sector*

Movement for the adoption of entrepreneurship in the Nigeria public sector was flag-off in the strategic plan of the Head of Civil Service Federation for the year 2017 to 2019. That was the first major move by the Nigeria government for the adoption of entrepreneurship culture and commercial orientation in the public service. This goal is aimed at transforming the civil service from being perceived as cost centre to improved revenue earner. Every Ministry, Department and Agency (MDA) has latent capacity to create wealth and generate revenue. The current dwindling government revenue calls for new innovative ways of generating revenue. The current system where MDAs are totally reliant on subventions/appropriations from government, hence limiting achievement will be transformed to a state where MDAs generate viable business strategies and commercialise these to generate revenue. Currently, most ideas from the civil service and MDAs remain on the shelf and are not commercialised. (OHCSF Strategic Plan, 2017).

Thus, entrepreneurship covers not only the goals set for the running of the organisation, but also the entrepreneurial way of action involved to achieve them. At the same time, the entrepreneurial way of action gives personal satisfaction at the individual level. Security Work against added value Order Untidy Continuity Insecurity Functional expertise Holistic Rules Customer driven Planning Intuitive Loyalty Added value Right/moderation Topmost Formal standards Personally monitored Adjustment Revolution Static level of income Encouraging rewards, self-development Time, quantity Knowledge, skills, know-how Formal performance appraisal Customer/network exposed. (Gibb, 1999) A change in the work culture of a public sector organisation is not, however, without problems, because an organisation is a mixture of different cultures and ways of action.

The modes of action in public sector organisations have, traditionally, followed the modes of action adopted in enterprises. To follow the ideas of Williamson (1975) and Walsh, (1995) the movement of a public organisation on a continuum between organisation (hierarchy) and markets can be described as follows (At its purest form the traditional office mode is planning oriented, hierarchy-led activity, where things are done "in the right way". With the increasing demands brought by changes, public sector organisations have tried to get rid of the planning oriented hierarchy and to find greater effectiveness through more entrepreneurial ways of action. In the effectiveness oriented way of action the financial effectiveness of the unit is emphasised. Customer orientation is usually connected to the utmost markets end on the organisation-markets continuum. In the customer oriented way of action, the role of the customer is emphasised and the possibilities offered by the entrepreneurial way of action are taken to use.

The Ministry/MDAs planning and democratic decision making are expressions of the planning oriented mode found in the empirical data of this study. The central steering system affecting units´ strategic choices and resources, again, represents the effectiveness oriented mode. The actions of the units in the fields of cost cutting, strict accountability, and overall tendency towards "business like" behaviour can be seen as an effectiveness oriented mode of action. Running the MDAs support agencies in the limited company form is also an expression of this effectiveness oriented concern model. Even though this model has "business-like" characteristics, it does not necessarily involve any entrepreneurial practises (Heinonen 1999).

*Public Service*
Public service is a service which is provided by government to people living within its jurisdiction, either directly (through the public sector) or by financing provision of services. The term is associated with a social consensus (usually expressed through democratic elections) that certain services should be available to all, regardless of income, physical ability or mental acuity. Even where public services are neither publicly provided nor publicly financed, for social and political reasons they are usually subject to regulation going beyond that applying to most economic sectors. Public policy when made in the public's interest and motivations can provide public services. Public service is also a course that can be studied at a college or university. Examples of public services are the fire brigade, police, air force, and paramedics. In modern democracies, public service is often performed by employees known as civil servants who are hired by elected officials. Government agencies are not profit-oriented and their employees are motivated differently. Studies of their work have found contrasting results including both higher levels of effort and fewer hours of work. A survey in the UK found that private sector hiring managers do not credit government experience as much as private sector experience. Public workers tend to make less in wages when adjusting for education, although that difference is reduced when benefits and hours are included. Public workers have other intangible benefits such as increased job security (Anderfuhren *et al*, 2014).

A public service may sometimes have the characteristics of a public good (being non-rivalrous and non-excludable), but most are services which may (according to prevailing social norms) be under-provided by the market. In most cases public services are services, i.e. they do not involve manufacturing of goods. They may be provided by local or national monopolies, especially in sectors which are natural monopolies. They may involve outputs that are hard to attribute to specific individual effort or hard to measure in terms of key characteristics such as quality. They often require high levels of training and education. They may attract people with a public service ethos who wish to give something to the wider public or community through their work (Frank et al, 2004).

There are several ways to privatize public services. A free-market corporation may be established and sold to private investors, relinquishing government control altogether. Thus it becomes a private (not public) service. Another option, used in the Nordic countries, is to establish a corporation, but keep ownership or voting power essentially in the hands of the government. Regulated corporation can also acquire permits on the agreement that they fulfil certain public service duties. When a private corporation runs a natural monopoly, then the corporation is typically heavily regulated, to prevent abuse of monopoly power. Lastly, the government can buy the service on the free market. In many countries, medication is provided in this manner: the government reimburses part of the price of the medication. Also, bus traffic, electricity, healthcare and waste management are privatized in this way. One recent innovation, used in the UK increasingly as well as Australia, Canada and most recently in Nigeria is public-private partnerships. This involves giving a long lease to private consortia in return for partly funding infrastructure.

*Dwindling Resources/Economic Recession*
There is no official definition of recession, but there is general recognition that the term refers to a period of decline in economic activity or a period of dwindling resources for governance. Very short periods of decline are not considered recessions. Most commentators and analysts use, as a practical

definition of recession, two consecutive quarters of decline in a country's real (inflation adjusted) gross domestic product (GDP - the value of all goods and services a country produces *(*Gregory, 2010). Although this definition is a useful rule of thumb, it has drawbacks. A focus on GDP alone is narrow, and it is often better to consider a wider set of measures of economic activity to determine whether a country is indeed suffering a recession. Using other indicators can also provide timelier gauge of the state of the economy. The National Bureau of Economic Research (NBER), a private research organization, which maintains a chronology services, eventually resulting in a recession. Some recessions, including the current one in Nigeria, are rooted in financial market problems. Sharp increases in asset prices, corruption, fall in crude oil price in the global economy, and a speedy expansion of credit, which coincided with rapid accumulation of debt.

As corporations and households get overextended and face difficulties in meeting their debt obligations, they reduce investment and consumption, which in turn leads to a decrease in economic activity. Not all such credit booms end up in recessions, but when they do, these recessions are often more costly than others. Recessions can be the result of a decline in external demand, especially in countries with strong export sectors. Adverse effects of recessions in large countries such as Germany, Japan, and the United States are rapidly felt by their regional trading partners, especially during globally synchronized recessions. Because recessions have many potential causes, it is a challenge to predict them. The behavioural patterns of numerous economic variables including credit volume, asset prices, and the unemployment rate around recessions have been documented, but although they might be the use of recessions, they could also be the result of recessions or in economic parlance, endogenous to recessions *(*Krugman, 2009).

Even though economists use a large set of variables to forecast the future behaviour of economic activity, none has proven a reliable predictor of whether a recession is going to take place. Changes in some variables such as asset prices, the unemployment rate, certain interest rates, and consumer confidence appear to be useful in predicting recessions, but economists still fall short of accurately forecasting a significant fraction of recessions, let alone predicting their severity in terms of duration and amplitude.

According to Gregory (2010), economic recessions are caused by a loss of business and/or consumer confidence. As confidence recedes, so does demand. This is the tipping point in the business cycle where the peak, often accompanied by irrational exuberance, moves into contraction. This loss of confidence makes businesses and/or consumers stop buying and move into defensive mode. Once a critical mass moves toward the exit sign, panic sets in and creates a destructive downward spiral. In short order, you get mass layoffs and rising unemployment, which create a slowdown in retail sales. Manufacturers cut back in reaction to falling orders, further increasing layoffs. To restore confidence, the Federal government, and the central bank must usually step in. A decline in GDP growth is a sign that a recession may be underway, but it is rarely a cause. That's because GDP is only reported on after the quarter is over. By the time GDP has turned negative, the recession may already be underway.

*Theories of Entrepreneurship*

According to Drucker (1985) an entrepreneur, as described by the Small Business Association, puts together a business and accepts the associated risk to make a profit. While this definition serves as a simple but accurate description of entrepreneurs, it fails to explain the phenomena of entrepreneurship itself. A number of theories exist, but all of them fall into one of five main theories.

*Economic Theories*

Economic entrepreneurship theory was propounded by Richard Cantillon (1700) who introduced the idea of entrepreneurs as risk takers. The classic, neoclassical and Austrian Market process schools of thoughts all pose explanations for entrepreneurship that focus for the most part, on economic conditions and the opportunities they create. Economic theories of entrepreneurship tend to receive significant criticism for failing to recognize the dynamic and open nature of market systems, ignoring the unique nature of entrepreneurial activity and downplaying the diverse contexts in which entrepreneurship occurs.

*Resource-Based Theories*

Resource-based theories focus on the way individuals leverage different types of resources to get entrepreneurial efforts off the ground. Access to capital improves the chances of getting a new venture off the ground, but entrepreneurs often start ventures with little ready capital. Other types of resources entrepreneurs might leverage include social networks and the information they provide, as well as human resources, such as education. In some cases, the intangible elements of leadership the entrepreneur adds to the mix operate as resource that a business cannot replace.

*Psychological Theories*

Psychological theories of entrepreneurship focus on the individual and the mental or emotional elements that drive entrepreneurial individuals. A theory put forward by psychologist David McClelland (1961), a Harvard emeritus professor, offers that entrepreneurs possess a need for achievement that drives their activity. Julian Rotter, professor emeritus at the University of Connecticut, put forward a locus of control theory. Rotter's theory holds that people with a strong internal locus of control believe their actions can influence the external world and research suggests most entrepreneurs possess trait. A final approach, though unsupported by research, suggests personality traits ranging from creativity and resilience to optimism drive entrepreneurial behavior.

*Sociological/Anthropological Theories*

The sociological theory centers its explanation for entrepreneurship on the various social contexts that enable the opportunities entrepreneurs leverage. Paul D. Reynolds, a George Washington University research professor, singles out four such contexts: social networks, a desire for a meaningful life, ethnic identification and social-political environment factors. The anthropological model approaches the question of entrepreneurship by placing it within the context of culture and examining how cultural forces, such as social attitudes, shape both the perception of entrepreneurship and the behaviors of entrepreneurs.

*Opportunity-Based Theory*

Prolific business management author, professor and corporate consultant, Drucker (1985) put forward an opportunity-based theory. Drucker contends that entrepreneurs excel at seeing and taking advantage of possibilities created by social, technological and cultural changes. For example, where a business that caters to senior citizens might view a sudden influx of younger residents to a neighbourhood as a potential death stroke, an entrepreneur might see it as a chance to open a new club.

**3. Methodology**

The research design is both a descriptive survey research and experimental in nature as it explains existing phenomena rather than the interpretation of judgements. It involves the use of both quantitative and qualitative data to measure the extent of the relationships among the variables while the population of the study is 35, 245 employees (based on the staff nominal roll) of the fifteen selected Ministries, Departments, Agencies and Commissions (MDA's) and other stakeholders in the Federal Capital Territory. The population includes three targeted groups comprising of top management staff Directorate Cadre (GL 15 to 17), middle cadre officers (GL 07 to 14) and junior staff GL (02 to 06). A sample size of 399 target respondents was drawn using Taro Yemane sample size formula and administered questionnaires for the purpose of this study. The primary data used for this study were obtained by Questionnaires, which were administered randomly to selected cadres of respondents: top, middle and low-level public officers within the 15 selected MDAs in the Federal Capital City Abuja. The secondary data were collected from websites of some MDA's, text books, academic journals and other relevant documents were also consulted in this study which help towards the realization of the research objectives. The data were analysed using both Descriptive Statistics and Regression Analysis to analyse only the primary data this is in view of the dearth of secondary data for the purpose of this study. In order to ensure validity and reliability, the instruments used for this study was pre-tested using pilot study. The instrument was given to five senior academics with expertise in the field of entrepreneurship and management, and it was returned with minor modifications aimed at achieving the research objectives. Cronbach Alpha reliability test was used to determine the internal consistency and reliability of the instruments. All the items measured were found to meet up the minimum cut-up mark of 0.7 indicating high reliability for all the items measured.

**4. Results and Discussion**

*Response Rate*

Table 4.1 shows the response rate. From the table, we can see that of the 399 questionnaires that were distributed, 342 constituting 85.71 percent were returned and used for analysis in this study while 57 were either not retrieved or not completed.

Table 4.1: Response Rate

| Respondents | Number of Questionnaires Administered | Number of Questionnaires Retrieved | No. Not Retrieved | Valid Percent |
|---|---|---|---|---|
| Top Management Staff | 120 | 112 | 08 | 32.75 |
| Middle Cadre Officers | 92 | 84 | 08 | 24.56 |
| Junior Officers | 93 | 85 | 08 | 24.85 |
| Others (Stakeholders) | 94 | 61 | 33 | 17.84 |
| Total | 399 | 342 | 57 | 100.0 |

*Source: Survey Data, 2017*

*Demographic Characteristics of Respondents*

Table 4.1 presents the demographic characteristics of respondents. From the table, there are four different categories of respondents namely; top management (112 or 32.75%), middle cadre officers (84 or 24.56%) and junior officers (85 or 24.85%). Others include stakeholders such as SMEDAN, NDE employees and SME owners (61 or 17.84%). The highest number of respondents are males (222) whose age's ranges between 20 to 60 years while the least number of respondents are females (120).

Table 4.1: Demographic Characteristics of Respondents

| Respondents Category | Age | Sex (Males) | Sex (Females) | Frequency | Percentage |
|---|---|---|---|---|---|
| Top Management Staff | 50 to 60 years | 62 | 50 | 112 | 32.75% |
| Middle Cadre Officers | 25 to 55 | 54 | 30 | 84 | 24.56% |
| Junior Officers | 20 to 55 | 60 | 25 | 85 | 24.85% |
| Others (Stakeholders) | 25-60 | 46 | 15 | 61 | 17.84% |
| Total | | 222 | 120 | 342 | 100% |

*Source: Survey Data, 2017*

From the table, top managers constituted the largest percentage of respondents (32.75%) while junior officers and middle-level officers are close with 24.85 and 24.56, respectively. The implication of this findings to the study is that there are more male public service officers involved in the adoption of entrepreneurship culture and commercial orientation in MDA's than the female officers whose age category are productive enough to contribute meaningfully to the discourse.

*Descriptive Statistics on the impact of entrepreneurship culture and commercial orientation on the dwindling resources in the Nigeria's Public Service*

As part of the analysis, a descriptive statistics on the impact of entrepreneurship culture and commercial orientation on the dwindling resources in the Nigeria's Public Service were conducted. This is presented in Table 4.3 to 4.5:

Table 4.3: How does entrepreneurship culture and commercial orientation impact on the Nigeria's Public Service?

| Variable Under Study | N | Minimum | Maximum | Mean | Std. Deviation | Decision |
|---|---|---|---|---|---|---|
| The adoption of entrepreneurship and commercial orientation will to a greater extent address the dwindling resources for governance in the Nigeria Public Service. | 342 | 4.00 | 5.00 | 4.6771 | 0.4701 | Agreed |

*Source: Generated using SPSS Output*

Table 4.3 shows a descriptive statistics for the study construct. The variable under study has Likert-scale of 1 to 5 ranging from strongly agreed to strongly disagree. From the Table, the minimum and maximum value on how does entrepreneurship culture and commercial orientation impact on the Nigeria's Public Service address the dwindling resources for governance is 4 to 5, respectively and the Mean and Standard Deviation is 4.7 and 0.47, respectively. The result shows that there was no variety of opinion on that variable and the low standard deviation (0.47) signify that most respondents express close opinion agreeing that the adoption of entrepreneurship and commercial orientation will to a greater extent address the dwindling resources for governance in the Nigeria Public Service.

Table 4.4: To what extent does dwindling resources occasioned by economic recession impact on the adoption of entrepreneurship culture in the Nigeria's Public Service?

| Variable Under Study | N | Minimum | Maximum | Mean | Std. Deviation | Decision |
|---|---|---|---|---|---|---|
| Dwindling resources occasioned by economic recession undermines efficiency and productivity of employees in the Nigeria's public service. | 342 | 1.00 | 5.00 | 4.0935 | 0.9847 | Agreed |

*Source: Generated using SPSS Output*

Table 4.4 shows Descriptive Statistics on the extent to which dwindling resources occasioned by economic recession impact on the adoption of entrepreneurship culture in the Nigeria Public Service. The minimum and maximum as shown in the table, range from 1 to 5 with Mean of 4.1 and the Standard Deviation of 0.98, respectively. The result shows that there was a variety of opinion on that variable and the high standard deviation (0.98) signifies that the opinions are widespread implying that dwindling resources occasioned by economic recession undermines efficiency and productivity of employees in the Nigeria's public service. The study found the application of entrepreneurship culture and commercial orientation in the public service to be very important as it will help in addressing wasteful spending in government thereby curbing the protracted problems of dwindling resources

Table 4.5: To what extent does entrepreneurship culture and commercial orientation in the Nigeria's Public Service impact on the dwindling resources occasioned by economic recession in Nigeria?

| Variable Under Study | N | Minimum | Maximum | Mean | Std. Deviation | Decision |
|---|---|---|---|---|---|---|
| It will help government organs particularly MDA's in becoming self-reliance through venturing into innovative entrepreneurial activities which will augment sources of government's funding towards reducing the over dependency on annual government subventions for the effective functioning and overall growth of the organisations for meaningful economic development. | 342 | 3.00 | 5.00 | 4.3020 | 0.5641 | Agreed |

*Source: Generated using SPSS Output*

Table 4.5 shows descriptive Statistics on the extent to which entrepreneurship culture and commercial orientation in the Nigeria's Public Service impact on the dwindling resources occasioned by economic recession in Nigeria. From the table, the minimum and maximum ranges from 3 to 5 and the mean and standard deviation is 4.3 and 0.56, respectively. The result shows that there was variety of opinion on that variable and the moderate standard deviation (0.56) signifies that there was close opinion agreeing that entrepreneurship culture and commercial orientation in the Nigeria's Public Service help government organs particularly MDA's in becoming self-reliance through venturing into innovative entrepreneurial activities which will augment sources of government's funding towards reducing the over dependency on annual government subventions for the effective functioning and overall growth of the organisations for meaningful economic development.

*Test of Hypotheses*

In a bid to achieve the objectives of the study, the following hypotheses 1-3 are hereby tested below:

***Ho₁*:** Entrepreneurship culture and commercial orientation has no significant impact on the Nigeria's Public Service.

Table 4.6: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .768[a] | .590 | -.110 | 34.818 |

*Predictors: (Constant), Nigeria's Public Service (NPS); Source: Computed by the Authors*

Table 4.7: Coefficient

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 309.994 | 112.503 | | 2.755 | .070 |
| | ECO | -.543 | .592 | -.768 | -.918 | .026 |

*Dependent Variable: Nigeria's Public Service (NPS); b. Predictors: (Constant), Entrepreneurship culture and commercial orientation (ECO). Source: Computed by the Authors*

Drawing from Tables 4.6 and 4.7, the test of hypothesis one show that the significance value of 0.026 is less than the critical value of 0.05, hence we reject the null hypothesis and accept the alternative hypothesis which state that entrepreneurship culture and commercial orientation has significant impact on the Nigeria's Public Service, particularly in the area of performance of the Nigeria's Public service. The study found out that Nigeria Public sector has felt the need to transfer the advantages of an owner-managed organization to public sector units, with a view to cutting-down cost of running government, promoting transparency and accountability, as well as complimenting the anti-corruption drive of the government, which is in line with the changed agenda of President Muhammad Buhari administration. Also looking at Table 4.6 (Model Summary), the correlation between ECO and NPS is somehow high (0.768) and to further buttress this point the coefficient of determination $R^2$ is 0.590 meaning that the number of ECO account for 59% of the variation in the NPS. The above is consistent with the findings of Frank et al. (2004) and Heinonen (1999) who conducted studies at different times and found out that entrepreneurship culture and commercial orientation has significant impact on the Public Service as it attract people with a public service ethos who wish to give something to the wider public or community through their work.

***Ho₂*:** *Dwindling resources occasioned by economic recession has no significant impact on the adoption of entrepreneurship culture in the Nigeria's Public Service.*

Table 4.8: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .950[a] | .902 | .870 | 4757.281 |

*a. Predictors: (Constant), entrepreneurship culture in the Nigeria's Public Service (ECNPS). Source: Computed by the Authors*

Table 4.9: Coefficients

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 164361.401 | 15371.486 | | 10.693 | .002 |
| | DR | -426.210 | 80.890 | -.950 | -5.269 | .013 |

*Dependent Variable: entrepreneurship culture in the Nigeria's Public Service (ECNPS); Predictors: (Constant), Dwindling Resources (DR). Source: Computed by the Authors*

From the test of hypothesis in Tables 4.8 and 4.9, the significance value of 0.013 is less than the critical value of 0.05, hence we reject the null hypothesis and accept the alternative which state that dwindling resources occasioned by economic recession has significant impact on the adoption of entrepreneurship culture in the Nigeria's Public Service. Also looking at the model summary in Table 4.8, the correlation between the effects of DR and ECNPS is very strong (0.950) and to further buttress this point the coefficient of determination $R^2$ is 0.902 meaning that DR accounts for 90.2% of the variation in the ECNPS. This study is also in line with the finding of Gregory (2010) and Krugman (2009) who found that dwindling resources occasioned by economic recession has significant impact on the adoption of entrepreneurship culture in the Public Service as according to their findings economic recessions are caused by a loss of business and/or consumer confidence.

***$Ho_3$*:** *Entrepreneurship culture and commercial orientation in the Nigeria's Public Service has no significant impact on dwindling resources occasioned by economic recession.*

Table 4.10: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.855[a] | 0.812 | 0.783 | 4281.5529 |

*a. Predictors: (Constant), Dwindling resources (DR); Source: Computed by the Authors*

Table 4.11: Coefficients

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 147925.261 | 13834.3374 | 0 | 9.6237 | 0.0018 |
| | EG | -383.589 | 72.801 | -0.855 | -4.7421 | 0.012 |

*Dependent Variable: Dwindling resources (DR); Predictors: (Constant), entrepreneurship culture in the Nigeria's Public Service (ECNPS) Source: Computed by the Authors*

From the test of hypothesis in Tables 4.10 and 4.11, the significance value of 0.012 is less than the critical value of 0.05, hence we reject the null hypothesis and accept the alternative one which states that entrepreneurship culture and commercial orientation in the Nigeria's Public Service has significant impact on dwindling resources occasioned by economic recession. Also, looking at the model summary in Table 4.10, the correlation between ECNPS and DR is very strong (0.855) and to further buttress this point the coefficient of determination $R^2$ is 0.783 meaning that ECNPS accounts for 0.783% of the variation in DR. This study is in line with the finding of Gregory (2010) who found out that entrepreneurship culture and commercial orientation in the Nigeria's Public Service has significant impact on dwindling resources occasioned by economic recession as according to him, it result to decline in a country's real (inflation adjusted) gross domestic product (GDP) - the value of all goods and services a country produces.

*Major Findings*

As part of the major findings, the study found out that entrepreneurship culture and commercial orientation in the Nigeria's Public Service has significant impact on the dwindling resources occasioned by economic recession as the study revealed that its adoption will to a greater extent help in addressing the dwindling resources for governance and improved performance of the Nigeria's Public service thereby cutting-down cost of running government, promoting transparency and accountability, as well as complimenting the anti-corruption drive of the President Muhammadu Buhari administration. The study also found out the dwindling resources occasioned by the economic recession to undermine the efficiency and productivity of employees in the Nigeria's public service and this could only be addresses by inculcating entrepreneurship culture and commercial orientation among public servants which will help in curtailing wasteful spending in government agencies thereby curbing the protracted problems of dwindling resources facing various MDA's. Finally, the study revealed that entrepreneurship culture and commercial orientation in the Nigeria's Public Service will help government organs particularly, MDA's in becoming self-reliance by venturing into innovative entrepreneurial activities which will augment sources of government's funding towards reducing the over dependency on annual government subventions for the effective functioning and overall growth of the organisations for meaningful economic development.

### 5. Conclusion and Recommendations

*Conclusion*

The study concludes that adoption of entrepreneurship culture and commercial orientation in the Nigeria's public service is a veritable tool which should be embraced in all facets of public life by recognising key potential business entities, units and divisions in MDA's for its proper application to help in meeting the current and future performance expectations needs of the agencies of government so as to reposition them for effective and efficient performance.

*Recommendations*

In view of the above major findings and main conclusions, we make the following recommendations:

- Federal Government should adopt entrepreneurship culture and commercial orientation as an alternative to addressing the protracted problems of dwindling resources facing the Nigeria's public service so as to serve as an antidote to inefficiency and ineffectiveness which characterised the service.
- Office of the Head of Civil Service of the Federation should ensure the adoption of entrepreneurship culture and commercial orientation in all facets of the public sector life through the adoption of the 4R-Model for the application of entrepreneurship culture and commercial orientation to promote transparency and accountability in the Nigeria's public sector.

- The Nigeria public servants should be trained and reoriented on modern business philosophies and techniques in line with entrepreneurship culture and commercial orientation unique to the Nigerian environment.
- Federal Government should develop a peer review mechanism aimed at evaluating the performance and application of entrepreneurship culture and commercial orientation in line with global best practices. A quarterly evaluation mechanism of the MDA's to ensure the promotion of efficiency and effectiveness should be put in place.
- The management of public sector organisations should be restructured to ensure effective service delivery for exploitation of maximum profitable opportunities.

*Contributions to Knowledge*

The study had made significant contributions to knowledge that are both literature and analytical based. Firstly, the key contribution this study makes, relates to the earlier observation that there are limited research studies on entrepreneurship culture and commercial orientation in the Nigeria's public service which this study has added to the body of knowledge and secondly, the study identified those entrepreneurship cultures needed to help in reviving the dwindling resource inadequacies facing the nation for self-reliance and improved work performance.

*Suggestions for Further Studies*

As part of the suggestions for further studies, this same research can be carried out by other researchers to investigate the impact of entrepreneurship orientations in other sectors of the Nigerian economy or a similar comparative study within states and among local governments areas or across African sub-region can be conducted. These are clearly another interesting areas for future research.

**References**

Anderfuhren-Biget, S., Varone, F., and Giauque, D. (2014). Policy Environment and Public Service Motivation. *Public Administration*, 92(4), 807.

Bygrave, William D. (1989). *The Entrepreneurship Paradigm (I): A Philosophical Look at Its Research Methodologies*. Entrepreneurship Theory and Practice, 7-26, Fall.

Cunningham, J. Barton – Lischeron, Joe (1991). Defining Entrepreneurship. *Journal of Small Business Management*, Vol. 29, No. 1, 45-61

Damanpour F., Schneider M. (2009). Characteristics of innovation and innovation adoption in public organizations: Assessing the role of managers. *Journal of Public Administration Research and Theory*, 19, 495-522.

David McCLelland (1961). *Harvard University* Department of Psychology

Drucker, Peter (1985). *Innovation and Entrepreneurship: Practice and Principles*, New York: Harper and Row.

Frank, Sue A.; Lewis, Gregory B. (2004). "Government Employees Working Hard or Hardly Working? *HYPERLINK "http://arp.sagepub.com/content/34/1/36" HYPERLINK "http://arp.sagepub.com/content/34/1/36" HYPERLINK "http://arp.sagepub.com/content/34/1/36""* *The American Review of Public Administration.* ***34*** *(1): 36–51.*

Gregory White (14 April 2010). "Presentation by Richard Koo HYPERLINK "http://www.businessinsider.com/richard-koo-recession-2010-4"– HYPERLINK "http://www.businessinsider.com/richard-koo-recession-2010-4" The Age of Balance Sheet Recessions".

*Businessinsider.com*. Retrieved 29 January 2011.

Guth, William, Ginsberg D. Ari (1990) Guest Editors´ Introduction: Corporate Entrepreneurship. *Strategic Management Journal*, Vol. 11, Summer Special Issue, 5-15

Gibb, Allan (1999) The Future of Work and the Role of Entrepreneurship and Enterprise Education in Schools and Further Education. *Keynote to 3rd Finnish SME Forum*, February 3rd.

Heinonen, Jarna (1999) Towards Customer Orientation and Competitiveness. The Potential of Intrapreneurship in the Change Process of a Municipal Service Unit). *Publication of the Turku School of Economics and Business Administration Series* A- 5.

International Monetary Fund (2008). *World Economic Outlook, October 2008 - Financial Stress, Downturns, and Recoveries*. Available at: http://www.imf.org/pdf.

Krugman, Paul (2009). *The Return of Depression Economics and the Crisis of 2008.* W.W. Norton Company.

Landström, Hans (1998). The Roots of Entrepreneurship Research. *Paper presented at the RENT XI Conference*, November 26-27.

Mintzberg H (2017), Rebalancing Society: Radical Renewal Beyond Left, Right, and Center. *A Publication of Management Studies*, Department of the Desautels Faculty of Management at the University of McGill

Office of the Head of the Civil Service of the Federation Strategic Plan 2017 -2020 (2017). *A Publication of the Public Service* Printing Press

Pacheco D.F, York J.G, Dean T.J, Sarasvathy S.D. (2010). The coevolution of institutional entrepreneurship: a tale of two theories. *Journal of Management* 36(4): 974–1010.

Pearce, John A. – Robertson Kramer, Tracy – Robbins, D. Keith (1997) Effects of Managers´ Entrepreneurial Behavior on Subordinates, *Journal of Business Venturing*, Vol. 12, No. 2, 147-160.

Pinchot, Gifford III (1985). *Intrapreneuring: Why You Don´t Have to Leave the Corporation to Become an Entrepreneur*. Harper & Row Publishers, Inc.: New York

Schnurer, E. (2013). *Government should run like a Business—But not in the way you think.* The Atlantic's politics and policy daily, a roundup of ideas and events in American politics

Shane, Scott and Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, Vol. 25, No. 1, 217.226.

SMEDAN, (2010). Survey Report on Micro, Small and Medium Enterprises (MSMEs) In Nigeria: *National MSME collaborative Survey* Retrieved from: http://smedan.gov.ng

Stevenson, Howard, Jarillo, H., Carlos, J. (1990). A Paradigm of Entrepreneurship: Entrepreneurial Management. *Strategic Management Journal,* Vol 11, Summer Special Issue, 17-27.

Van de Ven, Andrew H. (1993). The Development of an Infrastructure for Entrepreneurship. *Journal of Business Venturing,* Vol. 8, No. 3, 211- 230.

Walsh, Kieron (1995) *Public Services and Market Mechanisms. Competition, Contracting and the New Public Management*. MacMillan Press Ltd.: London.

Williamson, Oliver E. (1975). *Markets and Hierarchies: Analysis and Antitrust Implications: A Study in the Economics of Internal Organization*. The Free Press: London.

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

# The Prospect of Introducing Islamic Insurance (Takaful) Products and Services in Secular Economies like Nigeria

Gambo Babandi Gumel[1], Mukhtar Danladi Galadima[2]

[1&2]*Department of Economics & Development Studies, Federal University Dutse, Jigawa State, Nigeria*

**Abstract**

*Generally, the area of Islamic Insurance is new especially in economies like Nigeria where, to the best of the authors' knowledge this paper is one of the few, if any, that investigates the acceptance and performance of Islamic Insurance (Takaful) in Nigeria. However, Islamic Insurance (Takaful) Products and Services are facing some challenges in Nigeria in terms of awareness and acceptability based on the some controversies of scholars of the past on its permissibility while based on some data generated, the percentages of the customers choosing Takaful products in the country are increasing over the time and therefore, a call to find out if the introduction of Takaful products and services prosper in Secular Economies like Nigeria. The paper used both descriptive approach which comprised the use of frequencies and percentages and inferential analysis which involved the use of Chi-square test, and Logit Model. The results revealed that Islamic Insurance (Takaful) can operate and perform in a Secular Economies like Nigeria while the challenges militating against the development of Islamic Insurance (Takaful) in Nigeria include the legal and regulatory guidelines of the National Insurance Commission (NAICOM), institutional and administrative factors, religious, culture, and unawareness. The practical implication of the results is that*

*Takaful can operate and performed in a secular economy like Nigeria but some challenges such as the legal and regulatory guidelines of the NAICOM, institutional and administrative factors, religious, culture, and unawareness are still holding it back.*

**Keywords:** Takaful, Takaful Products and Services, Secular Economies, Nigeria
**JEL Codes**: C12, G12, Z12

## 1. Introduction

Man has needs that he seeks to fulfill in different ways. Risks and uncertainties appear with each of these ways. Is there certainty that pirates will not hijack the goods shipped from Africa before it gets to Europe, its destination? Will the ship carrying the goods of the Arab businessman sink before it gets to Indonesia; and what happens to the merchant if it did? Handling risk and uncertainty became an increasingly prominent aspect of economic life even for ordinary men and women. Early ways and means of handling risks and uncertainty took simple forms of cooperation between the near and the dear. Pooling, sharing, diversification all occurred within the framework of trust, reciprocity and mutuality. That eventually led to the concept of insurance. The term ''insurance'', in its real sense, refers to community pooling, to alleviate the burden of the individual, which might be ruinous to him. The simplest and most general conception of insurance is ‘‘provision made by a group of persons, each singly in danger of some loss, the incidence of which cannot be foreseen, such that when such a loss shall occur to any of them shall be distributed over the whole group’’(Encyclopedia Britannica). Over the years human beings have realized that pooling the resources by the members in the society to compensate the few unfortunate ones is not only important but a necessity in order to allow firms and individuals to stay in business and this is in line with Islamic teachings based on the Qur’anic verses and prophetic traditions, Nigeria as a Muslim majority country; is facing some challenges on the awareness and acceptability of Takaful products based on the some controversies of scholars of the past on its permissibility, this paper will try to find out the influence of awareness on the acceptance of Takaful products in some selected Northern states of Nigeria.

The Federal Government of Nigeria in the year 2000 developed a 20 year economic plan entitle ‘‘Vision 2020:20’’. Accordingly, the Federal Government in 2012 launched its Financial Inclusion Strategy (FIS) for the country to complement vision 2020:20. The target for insurance sub-sector is to increase insurance penetration to cover at least 40% of the country’s adult population. A report prepared by EFINA in 2012 indicate that only 1.5 – 2% of the total population in Nigeria has some form of insurance and insurance penetration remains less than 1%; a figure lower than most of the emerging markets even in Africa. For example, South Africa recorded 15% and Kenya 3.5% both in 2012. The situation in the Northern part of the country is more alarming as compared to its Southern counterpart. In addition to the above factors, the low insurance penetration in the north can majorly be attributed to the fact that the inhabitants of Northern Nigeria are predominantly Muslims, majority of whom stay out of insurance for religious consideration because the conventional insurance involves various elements of ‘Gharar’ (Uncertainty), ‘Maysir’ (Gambling) and Riba (interest base investments) which are not permissible in Islam. Some Muslims compromise on their religious beliefs in cases where it became extremely necessary to take insurance policies (for example compulsory insurances such as motor third party, building under constructions etc. In Nigeria, many did not believe in insurance; lack of full-flight Takaful company though there are Takaful windows facing difficulties to convince scholars and general public on the permissibility of Takaful products different from the conventional insurance with some selected insurance companies (Halal Takaful company; a division of Cornerstone Insurance, Niger Insurance company and African Alliance Assurance), low awareness of specifically on Takaful products and features i.e. understanding and uses of the Takaful principles such as al-Mudarabah model, Tabarru model, Wakalah model etc. for participation.

However, generally the area of Islamic Insurance is new especially in economies like Nigeria where to the best of the authors’ knowledge this paper is one of the few, if any, that investigates the acceptance and performance of Islamic Insurance (Takaful) in Nigeria.

Thus, this paper seeks to determine the acceptability of Islamic Insurance (Takaful) in Nigeria, and to identify the performance and operations of Islamic Insurance (Takaful) products and services in Secular Economies like Nigeria.

Furthermore, the paper tests the hypothesis that Islamic Insurance (Takaful) cannot operate and perform in secular economies like Nigeria.

The rest of the study is organized as follows. Section 2 deals with the review of the related literature, while the methodology is presented in section 3. Section 4 discusses the results, and section 5 concludes the study.

## 2. Literature Review

*Concept and Development of Insurance*

The ancient Chinese can be traced as the history of insurance were at then; various investors were used to be invited by the owners of Cargo ships before setting sail to the new colonies across the Atlantic ocean. These investors consider the risk of insuring the ship as it is vulnerable to lose of sinking or piracy, thus they paid a premium. The oldest form of insurance is marine insurance where the early merchants in China use a diversification to diversify their goods into a different number of vessels to minimize the potential losses, (Redja 2008). Traders in ancient Babylon who borrowed in order to trade in export are charged interest plus what is called bottomry, this bottomry is charged as 20% as a security against the loss of cargo as a result of misfortune. Based on this, traders are able to carry out their activities as they are fully protected in the event the ship is lost at sea. In certain years the bottomry was reduced to 12%. Towards 11th to 12th century, guilds were formed in order to indemnify against sea losses. *Santclara* is the oldest marine insurance policy which was issued on April 24, 1834, covering four bales of textiles on a journey from Pisa to Savoa. Lastly, the emergence of Lloyds of London association in 17th century a marine insurance was first developed, (Redja 2008).

*Concept of Islamic Insurance (Takaful)*

Takaful is Arabic word that means "guaranteeing each other". Literary, the word *Kafala* [k.f.l.] from where the word Takaful is derived, has different meanings. *Kafil* means double or a share. This is the meaning of the word as stated in the verse: *"whosoever intercedes for a good cause will have the reward thereof becomes a partner therein and whosoever intercedes for an evil cause will have a share in its burden"*. (Q.4 [al-Nisa]:85). Another meaning of *Kafil* is the sponsor or the guarantor. The Qur'an uses the word in this sense in the verse: *"You were not with them when they drew lots with arrows and to which of them should be charged with care of Maryam". (Q.3 [al-Imran]:44)*. Also, this meaning is in the words of the Prophet (S.A.W) that, "I and the sponsor (or guarantor or supporter) of the orphan will be like this in the Paradise (and he held up one finger close to the forefinger to indicate this) [Anaa wa kaafilu yateem kahaataen fil Jannah).

The word *al-Kafala* is derived from *al-Kafil*, which means junction or addition. In the Shari'ah, it signifies the junction of one person to another in relation to a claim. The *Kafala* implies the adding by one person of his responsibility to that of another in respect of a demand.

*Islamic Insurance (Takaful) As Alternative*

The term *'Takaful'* is commonly referred to as *'Islamic Insurance'*; but its more appropriate meaning of Takaful is social solidarity! Takaful is based on the concept of trusteeship *(Mudaraba)* and co-operation inspired by the Muslims beliefs regarding the conduct of day to day affairs in the community.

Allah says: *"Help you one another in Al-Birr and At- Taqwa (virtue, righteousness and piety); but do not help one another in sin and transgression. And fear Allah. Verily, Allah is severe in punishment," (Q5 [al-Maaidah]:2).* Further, the prophet (S.A.W) that: *"Believers are to other believers like parts of a structure that tighten and reinforce each other". (Al-Bukhari); and also he said: "The believers , in their affection, mercy and sympathy to each other, are like the body; if one of its organs suffers and complains, the entire body responds with insomnia and fever" (Muslim)*.

*Models for Undertaking Takaful*

Takaful model include; *Wakalah (agency), Mudarabah, Waqf, Ju'ala wadi'ah yad dhamanah or combination of the above*. An operator may run the business on behalf of the participants and no separate entity manages the business as it is practice in Sudanese Takaful model (Staib, 2011). According to Daniel Staib (2011), that there is differences between Islamic insurance and Takaful, he is of opinion that while Islamic insurance refers to all concepts of Islamic insurance, Takaful refers only to the models that segregate funds of policyholders from the funds of the shareholders of the operating company. In other Islamic countries, the legal framework does not allow this arrangement and Takaful companies as separate entities on the basis of *Mudarabah* (as it is practice in Malaysia) and *Wakalah* (as it is practice in Middle-East). Therefore, *Mudarabah* and *Wakalah models* are considered the best Takaful models practice and has being used all over the world.

- In *Mudarabah Model*, the operator holds the role of *Mudarib* (Entreneurial partner) and the participants are the *Rabbul-mal* (owner of equity/capital), the *Mudarabah* principles will be applied. The participants receive any available profit on their part of the funds only. *Mudarabah* contract will define the profit of Takaful business and the ratio to be shared between participants and operator (Yusof, 2011 & Sulaiman Z.D, 2011).
- In *Wakalah Model*, all relations between TO and TP are based on contract of agency: the operator holds the role of the *Wakil* (the agent) acting on behalf of the participants in return for *wakalah fee* which are contractually specified either as an absolute amount or as a percentage of the turnover (i.e. the volume of contribution or of investment funds) but not as a percentage of the profit of the undertaking (ISFB, 2008). Takaful operator charge the *Wakalah fee* for managing the fund from the contributions (*Tabarru fund*) and this covers most of the expenses of the business.

*Takaful Undertakings*

*Family Takaful Plans* are designed to serve the requirement of both individual and corporate sectors. The contribution paid by the participants is credited into two separate accounts namely the Participant's Risk Fund (PRF) and Participants' Fund (PF). The portion in PRF is based on the principle of *Tabarru* (donation). The amount is determined based on the age of the participants and cover period, the older participant, the higher will be the proportion of *Tabarru*, and the longer the period of coverage, the higher is the *Tabarru*. The portion in PA is meant for savings and investment only (Alhabshi, 2012).

*General Takaful Scheme* are basically contracts of joint guarantee, on a short term basis (normally one year), providing mutual compensation in the event of a specified type of loss. The Takaful contribution paid is pooled into Participant Takaful Fund (PTF) under the principle of *Tabarru* to match the risk elements of the business that are inherent in its underwriting activities (IFSB, 2011).

*History and Development of Takaful*

The first charter of Madina (622 AD), the following which shows the signs of insurance can be found; Ezamshah, 2015:

- Provision for social insurance affecting the Ummah including the Jews, Ansar and Christians. Article 13 of the constitution states that "immigrants" among the *Quraish* shall be responsible for their word pay their blood money in mutual collaboration.
- Provision for *Fidya* (ransom) whereby payment is made to rescue the life of a prisoner and the relatives could cooperate to free him.

The legal maxim that said, *"Everything is permissible unless expressly prohibited"* is applied to Muamalat while in Ibadat the opposite is the case, the Takaful fall under Muamalat, its legal source includes; Qur'an, Sunnah, Ijma and Qiyas. This is in line with an Islamic teachings based on the following Hadith, the Prophet (PBUH) said *"whosoever removes a worldly hardship from a believer, Allah (SWT) will remove from him one of the hardships of the day of Judgment, whoever alleviate from one Allah (SWT) will alleviate his lot in this world and hereafter" Sahih-Bukhari.* Like the idea behind the insurance, *Takaful* relief the suffering and provide the fund for assistance to those who faced misfortune. This will make the life of those who are left behind comfortable.

*Development of Takaful in Nigeria*

Nigeria is considered to be the largest country in Africa with estimated Population of 168 million people. Looking at the country's abundant human and natural recourses, Nigeria is becoming the economic and financial hub of Africa and this can only be realized if the government of Nigeria can adapt its development strategy for different sectors of the economy in a synchronized manner. African Alliance Insurance, the country's oldest specialist life assurance company, first introduced Takaful to Nigeria in 2005. It offered family Takaful, a product similar to whole life insurance in that it contains both a protection and a savings component. Niger Insurance came into the Takaful market soon thereafter, developing and introducing Niger Mutual Halal Plus, a product containing a Shariah compliant complaint saving and investment plan. Cornerstone insurance, a traditional insurer, then came into the market, establishing Halal Takaful Nigeria, its Takaful window. By 2013, Cornerstone was the first licensed composite operator in Nigeria, offering traditional as well as family and general Takaful products, deriving 3% of its total gross premium income from Takaful, and experiencing an increase in contributions of increased 83% from the previous year. It was in the year 2013 that National Insurance Commission (NAICOM) issued "Operational guidelines for Takaful insurance operation", the first national guidelines for Nigeria's Takaful market. The guidelines outline and clarify Takaful operator duties and responsibilities and set minimum operation and disclosure standards and requirements.

*Legal Regulatory Frameworks of Takaful in Nigeria*

In the late 2007, Nigeria insurance commission approved Takaful products to 3 Insurance companies (Niger Insurance, Cornerstone Insurance and African Alliance Insurance), (Darazo 2009), with the operation of Takaful window (NAICOM Takaful guidance, 2013). The commission issued a robust guideline in 2013 to facilitate full-fledge Takaful operation and also to provide a level playing field for all operators in Nigeria. In order to ensure Shariah compliance in Takaful operation in Nigeria, the commission set up its own Takaful advisory council as a requirement of the guidelines to advise the management on all matters relating to Shariah compliance of product and services offered by Takaful operators (NAICOM Takaful guideline, 2013). The first full-fledge Takaful operator in Nigeria is Noor Takaful plc, which recently got license from NAICOM to carry out Takaful business base on the NAICOM Takaful guideline, having fulfilled all the requirement laid down in the Takaful guideline 2013. Noor Takaful plc recently held their second advisory council of experts (ACE) meeting on 19 October 2016 and nor Takaful plc will start their operation accordingly.

*Meaning of Takaful to NAICOM*

Takaful insurance is a Shari'ah compliant alternative to conventional insurance which combines the principles of *'Ta'awun'* (mutual assistance), *'Tabarru'* (voluntary contribution) and risk sharing to provide the benefit of insurance to Muslims and other interested persons. Takaful industry is relatively a new industry compared to its conventional counterpart as it represents just 1% of the global insurance market. The first Takaful Company was set up in the early 80's shortly after setting up of the first Islamic bank. Today there are over 150 Takaful companies operating in over 40 countries around the globe, and Takaful operators have emerged to be important financial players globally. However, the operational guidelines of Takaful by NAICOM:

- Takaful Advisory Council (TAC) - TAC resides with the regulator (NAICOM) and consists of experts knowledgeable in Islamic jurisprudence, finance and insurance. The commission will forward to the Takaful advisory council (TAC) activities such as approval of products, operational models, conflicts of interest disclosed by members of Advisory Council of Experts (ACE), resignations from a Takaful-insurance operators ACE etc.
- Shari'ah/Advisory Council of Experts (ACE) – The guidelines requires all Takaful operators before commencing business to set-up Shari'ah advisory

council of expert reporting to BOD of the company and responsible for approving and certifying all Shari'ah related issues e.g. products, operational models, surplus distribution etc.

- Fiduciary Duties Imposed on Takaful Operators – funds segregation, surplus distribution, financial reporting, expenses, minimum disclosures and auditor's report.
- Corporate Governance – Takaful Operators (TO), are required to comply with normal corporate governance requirements obtainable in conventional insurance regulations. These include requirements for appointment of board of directors, CEO/Key persons (Fit & Proper), auditors, appointed actuary, etc.

Nonetheless, the prospects and potentials of Takaful guidelines 2013 set up main elements of Takaful for Takaful operators in Nigeria include:

- The large Muslim population coupled with the country's consistent growth rate (averagely 7% annually for the past 8 years) and low insurance penetration means huge potential for Takaful insurance.
- NAICOM's on-going developmental regulatory approach – the commission recently admitted as a full member of IFSB and is also collaborating with regulators and institution in other jurisdictions to ensure successful Takaful industry in the country.
- Takaful insurance is expected to enjoy automatic customer patronage amongst the Muslim Faithfull's driven by the growing desire for Shariah complaint products.

## 3. Methodology

The methodology adopted in this paper involved both descriptive and inferential methods of analysis. The descriptive method involved the use of frequencies and percentages while the inferential analysis employed include Chi-square test and logit model.

*Sample Size*

A sample size of 100 respondents was constituted from the population among the customers and regulators of Takaful in Nigeria. 20 questionnaires were administered to the staff of NAICOM and 80 to their customers/general public. Also magazines, publications, journals articles and international publications were consulted.

*Data Collection*

The data used is a primary data collected through the following sources:

- Customers: Those who had a protective relationship with the insurance companies, in particular conventional customers.
- Local Communities: Those who do not have any direct relationship with the insurance companies or institutions i.e. they are operators or participants of the institutions.
- Employees: All employees at various organizational positions and levels of the insurance companies (conventional & Islamic insurance) excluding branch managers.
- Regulators: They are the policy formulators and facilitators in shaping the activities of participating with the insurance companies and institutions in Nigeria.

*Model Specification*

*Dependable Variable*

- Islamic insurance: This is measured as a dichotomous variable taking the value of **1** if a customer operates with the bank and **0** otherwise.

*Independent Variables*

- Legal framework: This is a strong pillar that guides the operations of the insurance industry.
- Competition: Measured in terms of the type of products and services patronized by the customers.
- Educational Attainment and Awareness: The Teaching of Islamic finance at the Secondary Schools and Tertiary Institutions.

- Religion: Measured as a dummy variable, i.e. Islam (Muslim) was code as **1** and **0** for others.

However, the Chi-square ($X^2$) formula expressed as:

$$\chi^2 = \frac{\sum(f_0 - f_e)^2}{f_e}$$

where: $f_o$ = Observation frequency, $f_e$ = Expected frequency

**4. Result and Analysis**

*Descriptive Approach*

The data were analyzed using the Descriptive Approach. The results are as follows:

Table 1: Limits of Legal and Regulatory Guidelines on Takaful Operations

| Alternatives | Frequency | Percentage |
|---|---|---|
| Legal and Regulatory Guideline of Islamic Insurance Limits to NAICOM only. | | |
| Yes | 28 | 71.8 |
| No | 11 | 28.2 |
| Extent of Limitations | | |
| Very high | 9 | 23.1 |
| High | 15 | 38.5 |
| Moderate | 6 | 15.4 |
| Low | 5 | 12.8 |
| Very low | 4 | 10.3 |

*Source: Fieldwork, 2016.*

Institutional and Administrative Challenges Posed to Islamic Insurance in Nigeria

| Hindrance to Conventional Insurance Products and Services (Alternative) | Frequency | Percentage |
|---|---|---|
| Strongly-Agree | 10 | 10.3 |
| Agree | 38 | 39.2 |
| Undecided | 15 | 15.5 |
| Disagree | 33 | 34.0 |
| Strongly-Disagree | 1 | 1.0 |
| **Total** | **97** | **100** |

*Source: Fieldwork, 2016.*

The table shows that 71.8% of the respondents feel that, the legal and regulatory guidelines of the NAICOM of Nigeria limits the framework of Takaful, while 49.5% agree that Institutional and Administrative factors militate against Islamic insurance in Nigeria. Thus, it can be deduced that the legal and regulatory guidelines of NAICOM are potential obstacles to the operations of Takaful in Nigeria as well the administrative and institutional challenges. This finding shows both regulatory frameworks give more credence to Conventional insurance in Nigeria.

*Likely challenges of Islamic Insurance (Takaful) in Nigeria*

Religion as a challenges of Takaful in Nigeria

| Religion | Frequency | Percentages |
|---|---|---|
| Strongly-agree | 7 | 17.5 |
| Agree | 6 | 25.8 |
| Undecided | 3 | 8.2 |
| Disagree | 11 | 47.2 |
| Strongly-disagree | 0 | 1.0 |
| Total | 27 | 27.8 |

*Source: Fieldwork, 2016.*

A total of 43.3% responded that religious impediments are some of the challenges of Islamic insurance in Nigeria, while 56.4% do not agree or are skeptical. Therefore, religious believe lag the operations of Takaful.

Cultures as challenges to Takaful in Nigeria

| Culture | Frequency | Percentage |
|---|---|---|
| Strongly – agree | 5 | 15.6 |
| Agree | 9 | 28.1 |
| Undecided | 3 | 9.4 |
| Disagree | 14 | 43.8 |
| Strongly – disagree | 1 | 3.1 |
| Total | 32 | 32.9 |

*Source: Fieldwork, 2016.*

The table above indicates that 32 of the respondents signifies that 32.9% 0f the population of the view that culture has hindered the performance of Takaful products in Nigeria.

Inadequate Awareness of Takaful Products and Services in Nigeria

| Awareness | Frequency | Percentages |
|---|---|---|
| Strongly – agree | 5 | 13.6 |
| Agree | 10 | 26.3 |
| Undecided | 2 | 5.3 |
| Disagree | 21 | 55.3 |
| Strongly – disagree | 0 | 0 |
| Total | 38 | 39.2 |

*Source: Fieldwork, 2016.*

The table above shows that, out of the 38 respondent to awareness as a challenge to Takaful Products and Services, 39.9% of the respondents believe that there is low or no awareness as to Takaful products and services in Nigeria.

*Inferencial Approach*

First, the chi-square statistic was used to test the hypothesis that Introduction of Islamic Insurance can Operates and Perform in Secular Economies like Nigeria, have no significant constraint on the Operations of Islamic Insurance (Takaful). Second, the logit model was used test the second hypothesis that Islamic Insurance Products and services cannot be acceptable in Secular Economies like Nigeria.

Chi-Square Result

| Variables | Co-efficient | Assumption sig |
|---|---|---|
| Islamic Insurance (Takaful) Operation and Performance in Nigeria as a Secular Economies. | 8.5174 | 0.072 |

*Source: Authors computation using SPSP*

The result above reveals that, the chi-square coefficients of operation and performance of Takaful products and services are significant based on their asymptotic probability values. Thus, we reject the null hypotheses that Takaful products and services are significant impediments to the operations of Takaful in Secular Economies. Therefore, their positive signs suggest that these variables are Potential threats to the Performance and Operations of Takaful in Nigeria.

Summary of the Logit Regression Result of the Constraint of Takaful

| Independent variables | Coefficients | Probability |
|---|---|---|
| Islamic insurance can or cannot operates and perform in Nigeria. | 0.5242593 | 0.021 |
| No. of observation | 97 | |
| Significant 25% | | |

*Source: Authors computation using SPSP*

The table above presents a summary result of the Logit Regression Model. The coefficient that Islamic Insurance (Takaful) can Operates and Perform in a Secular Economies like Nigeria (0.52) is positive and significant. However, we need to be prudent with this result because there is evidence that many financially literate Muslims do not patronize this venture in Nigeria.

**5. Conclusions and Recommendations**

Takaful was introduced in Nigeria as an alternative to conventional insurance and financial intermediation with its mode of operation strictly in line with the principles of Shari'ah. Nigeria as a multi-religious country including Muslims as partly the majority; some challenges have been facing on the awareness and acceptability of Takaful products based on the some controversies of scholars of the past on its permissibility while based on some data generated, the percentages of the customers choosing Takaful products in Nigeria are increasing over the time and therefore, a call to find out if the introduction of Takaful products and services prosper in Secular Economies like Nigeria Hence, this paper examine the Prospects of Introducing Islamic Insurance (Takaful) Products and Services in Secular Economies like Nigeria using both descriptive approach which comprises the use of frequencies and percentages and inferential analysis which involved the use of Chi-square test, and Logit Model. The results revealed that Islamic Insurance (Takaful) can operates and perform in a Secular Economies like Nigeria while the challenges militating against the development of Islamic Insurance (Takaful) in Nigeria include the legal and regulatory guidelines of the NAICOM, institutional and administrative factors, religious, culture, and unawareness. The practical implication of the results is that Islamic Insurance (Takaful) can operate and performed in a secular economies like Nigeria but some challenges such as the legal and regulatory guidelines of the NAICOM, institutional and administrative factors, religious, culture, and unawareness are still holding it back. However, based on the findings of this *paper* the following recommendations were made:

- Takaful industry need the support from the community and the Nigerian community having such element of solidarity, the government and the Takaful industry must create adequate awareness of Takaful and its conceptual framework. The sensitization should be made through Public lectures, Conferences, Symposia, Seminars and Publication of books, Journals, Magazines and Pamphlets. These should be carried out in the local languages.
- There should be intensive manpower training and development in the area of Islamic insurance through Educational Institutions such as Universities, Colleges of Education and Polytechnics should introduce Islamic Economics, Islamic Insurance, Islamic Banking and Finance, Islamic Business-Accounting in their curriculum. This will go a long way in solving the level manpower gaps in Islamic insurance in Nigeria.
- There is the need for special laws that would address the peculiarities of Islamic insurance System in Nigeria. Likewise, the three (3) arms of government should address the issue of establishing and operation of Islamic Banking and insurance at all levels of government.
- Finally, Nigerians should not be bias

about this institution on the basis of their culture and religious differences but consider the benefit and its potentials as witnessed in other countries that practice Islamic insurance (Takaful).

**References**

Ahmad, S.S. (2014). Contemporary issues in Takaful. *Asian Social Science Journal*, 10(22): 34-36.

Ayuba, H. (2014). Non-Economic Factors Influencing The Islamic Insurance (Takaful) Services Consumption In Kano Metropolis, Nigeria, A Dissertation Submitted To School Of Post-Graduate Studies Bayero University, Kano. Nigeria.

Bakar, M.D. (2000). *The Problem of Risk and Insurable Interest in Takaful: A Jurisprudential Analysis*", in Munawar I. (Editor), Islamic Economics Institution and the Elimination of Poverty, Leicester, U.K: The Islamic Foundation.

Ma'asumbillah, (2015). Development and Application of Islamic Insurance (Takaful): Online Retrieved On 6/04/2015 put website GECD Printing Sdn**.,** Bhd**.,** Malaysia

Naicom (2013). Takaful Operational Guidelines Naicom, Abuja and Nigeria

Obaidullah, M. (2005). Islamic Financial Services, Islamic Economics Research Centre, King Abdulaziz University, Jeddah.

Olalekan, T.Y. (2012). Prospects of Takaful Contributions to the Nigerian Economy. *Journal of Finance and Investment Analysis*, 1(3), 217-230.

Olajide, F.O. (2014). Takaful (Islamic Insurance) Practices: Challenges and Prospects in Nigeria. *Journal of Insurance Law & Practice*, 4(2), 12.

Saad, N.M. (2012). An Analysis of the Efficiency Of Takaful And Insurance Companies In Malaysia: A Non-Parametric Approach. Society of Interdisciplinary Business Research, Malaysia, Review of Integrated Business & Economic Research, 1(1).

Sulaiman, D.Z. (2014). Takaful Insurance Implementation: A Drive towards an Inclusive Insurance Sector in Nigeria. Retrieved from: http://www.takaful.coop/images/stories/NAICOM_Journal_Article.pdf

Siddiqi, M.N. (2003). Partnership and Profit Sharing In Islamic Law, the Islamic Foundation, Leicester.

IFSB-11 (2010). *Standard Solvency requirements for Takaful (Islamic insurance) undertakings*. Malaysia: Kuala lumpur.

Sobia Maqbool's opening speech. (2008). Rating Agencies Methodologies for Takaful and Re-Takaful Firms, *JCR-VIS Credit Rating Company Limited*, 2-4.

Yon, B. and Wan, A. (2004). Takaful – An Option To Conventional Insurance : A Malaysian Model. Retrieved from: http://www.takaful.coop/doc-store/takaful - an option to conventional insurance.

Zainal, A. and Mohd, K. (2007), *Islamic insurance: Trends, opportunities and the future of Takaful*, edited by Sohail Jaffer, London: Euromoney books, 45-49.

www.islamic-banking.com/prohibition_of_gharar_masir_riba.aspx/31/5/2015

www.Delhttp://Www.Investopedia.Com/Terms/T/Takaful.Asp#Axzz1vb9jdcldoitte.Com

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

# Economic Analysis of Orange Fruit Marketing in Nsukka Agricultural Zone of Enugu State

E.V Uloh[1], A. A. Igwe[2]

[1&2]*Department of Agricultural Education, Ebonyi State College of Education, Ikwo, Ebonyi State, Nigeria*

**Abstract**

*The study economically analyzed marketing of orange fruit in Nsukka Agricultural Zone of Enugu State Nigeria. A combination of purpose and multistage random sampling techniques were used to select 96 respondents for the study. Structured questionnaire was used to collect data. Statistical tools such as mean frequency, tables, percentages, marketing margin and efficiency were used to analyze the data. Findings showed a marketing margin of N40,759.40 (25%) and marketing efficiency of 1.34 for 1000kg of sweet oranges marketed by week, revealing a wide gap in prize between wholesalers and retailers. Producer-wholesaler-retailer-consumer channel was predominately used in marketing. Also high transport cost and poor storage facilities were the constraints in the study area. It was recommended that government should employ efforts in providing storage facilities and good roads for efficient marketing among others.*

**Keywords:** Economic, Marketing, Efficiency, Constraints
**JEL Codes**: M31

## 1. Introduction

Sweet orange (citrus sinensis) belongs to the citrus specie, which constitute the most significant specie of the rutaceae family. The fruit is said to have originated in Southeast Asia around 4000 BC. Sweet orange is one of the most important fruit crops grown all over the world. The fruit is rich in vitamin C (ascorbic acid), folic acid, Vitamin B6 (Pyridoxine), phosphorus, magnesium and copper. The fruit is cholesterol, sodium and fat free and it is a good source of fiber.

Most citrus production is accounted for by sweet oranges, but significant quantities of grape fruits (citrus paradisi), Tangarina (citrus reticula), limes (citrus aurantifolia) and lemon (citrus limon) are also grown. Currently, the annual worldwide citrus production is estimated at over 105 million tons, with more than half of these being sweet orange, (FAO, 2008). In Nigeria about 3, 900,000 tonnes of citrus fruits are produced annually from an estimated hectarage of 800,000 hectares of land in 2012 (FAO, 2014). In the submission of Olife, Ibeagha and Onwuala (2015) citrus production is still at its infancy, since most of the existing plantings are in mixed cropping system with cocoa, kola, coffee, rubber etc. Only a few large plantations are in existence. In the same vein NIHORT (2000) asserted that out of the currently produced citrus in the country 45% are consumed fresh, 30% are wasted in course of harvest, storage and transportation, while 25% are processed. In the submission of Adeyemi (2005) commercial cultivation of fruits, citrus inclusive has not really started in Nigeria.

Olife, Ibeagha, and Onwutalu (2015) opined that the total production and consumption of citrus fruits has grown rapidly since the

1980s. The rise in citrus production is mainly due to the increase in cultivation areas, improvements in transportation, packaging , rising incomes and consumer preference for healthy foods (UNCTAD, 2007). In Nigeria citrus production is carried out mostly in the rainforest, and guinea savannah. Major citrus producing states in Nigeria include: Benue, Nassarawa, Kogi, Ogun, Oyo, Osun, Ebonyi, Kaduna, Taraba, Ekiti, Imo, Kwara, Edo and Delta.

In the submission of Olife et- al (2015) citrus leaves, have many medicinal values. The leaves, Flowers, peels, fruits and dried bark of citrus have important medicinal values. It is greatly used in the pharmaceutical, cosmetic and soap industries. The dried bark of citrus is used to stimulate appetite, treat ringworm infection, relief stomach upset and insomia. Other areas of medicinal application of citrus fruits are in contraceptives, laxatives, purgative, sedatives and treatment of wide ailments such as diarrhea, vomiting, cancer therapy drugs etc.

Agricultural marketing can be defined as all the business activities associated with the flow of goods and services from its production to its consumption. In the words of Nwaru, Nwosu and Agommuo (2011) Agricultural marketing encompasses all processes and services involved in moving food and farm products from the farm, where they are produced, to consumers located in urban and rural areas. Production is useless if what is produced is not efficiently and effectively marketed. Without efficient marketing in place all production effort goes into the drains of post harvest losses. According to Olife et al (2015) over 50% of the fruits (sweet orange inclusive) produced in Nigeria are lost in transit between farms and major urban and rural markets. Kohls and Uhls (1985) observed that the perishable nature of agricultural products resulted in urgency in the marketing of these products thereby reducing their marketing margins and efficiency. Thus, the study analyzed the marketing efficiency and channels of sweet orange in the study area. Specifically, the study sought to:

- Examine the socio-economic characteristics of sweet orange marketers in the study area;
- analyze the marketing margin and efficiency of the respondents;
- examine the marketing channel and conduct of sweet orange marketing in the study area; and
- identify major constraints to the marketing of sweet oranges.

**2. Methodology**

This study was conducted in Enugu North Agricultural Zone of Enugu State. The area is made up of seven Local Government Areas Viz: Nsukka, Igbo-Etiti, Igbo-Eze North, Igbo –Eze South, Udenu, Isi-Uzo and Uzo-Uwani. The area has estimated land mass of 4,566km$^2$ and population of 1,377,001people (NPC 2006). The authors adopted a combination of purposive and multistage random sampling techniques in selecting the respondents used for the study. In stage one, four (4) Local Government areas were selected from the seven (7) Local government areas that make up the zone. The selection of the four local governments for the study was prompted by much marketing activities or orange fruit in the area. The selected LGAs include: Nsukka, Igbo-Etiti, Igbo-Eze South and Udenu LGAs. In stage two, two markets highly involved in the marketing of sweet oranges were purposively selected from all the four (4) selected LGAs in the study area, thus bringing the total number of markets used for the study to eight (8). In stage three, twelve (12) sweet orange marketers were randomly selected from the eight (8) purposively selected markets, thus, giving a total of ninety-six (96) sweet orange marketers used for the study. A well structured questionnaire was used to collect data for the work. Descriptive statistics, marketing margin and efficiency analysis were used in analyzing the data. Descriptive statistics such as mean, frequency tables and percentage were used in analyzing objectives (i), (iii), and (iv), while objective (ii) was realized by the use of marketing margin and efficiency analysis.

Marketing margin was calculated as follows:

MM = TR – TMC

Where;
MM = marketing margin;
TR = Total Revenue;
TMC = Total marketing Cost.

Marketing efficiency was calculated thus;

ME = TR / TMC

Where:
ME = marketing efficiency
TR = Total Revenue
TMC = Total marketing Cost

## 3. Results And Discussion

*Socio-economic characteristics of the Respondents*

The analyzed socio-economic characteristics include the following: age, gender, marital status, household size, educational qualification, annual income, marketing experience and source of capital. Table 1 indicates a mean age of 37years which is an indication that majority of the sweet orange marketers were in their active economic productive age. This agrees with Nwibo and Okorie (2013) who opined that farmers within this age category have been proven to have the strength to carry out tasking activities such as packaging, grading, transportation, storage and other activities that are involved in commodity marketing. About 83.3% of the respondents were females, while the remaining 16.7% were males. This indicates that sweet orange marketing is a female dominated enterprise. Similar finding was reported by Okungbowa, Oghorodi and Omofonmwan (2013) that palm oil marketing in Ethiope East LGA of Delta State were dominated by females. The result equally shows that majority (64.6%) of the respondents were married. Thus is an indication that most of the respondents were responsible people. Again, that 25% of the respondents were not married is a clear indication that young people are either showing interest in sweet orange marketing or helping their parents in the financial up keep of the family. The analysis of household size indicates a mean household size of 7 persons. This findings is similar to that of Nwibo and Alimba (2013) who reported a mean household size of seven (7) persons among the agribusiness entrepreneurs in Southeast Nigeria. The educational level of the respondents indicated that majority (49%) attended primary school, followed by 17.6% who had completed secondary school, and a few (9.4%) that had obtained OND/NCE certificates. This shows that majority of sweet orange marketers had acquired formal education. This implied that the marketers could easily adapt to new technologies. On the source of capital, it could be observed that most of the respondents (58.3%) source of capital was from their personal savings, while (22%) source their finances from friends and relations.

This corresponds with the finding of Oladejo and Sanusi (2008) and Nwibo and Okorie (2013) that the financing of plantain and banana by Women in Ondo state and agribusiness entrepreneurs in South East Nigeria respectively were mostly from their personal savings. Findings on years of marketing experience showed that 38.5% and 29.2% of the respondents have been involved in the marketing business of sweet orange for 6 – 10 years and 1 – 5 years respectively. The mean number of years of experience for the marketers in the study area was 11years. Since years of experience in agricultural marketing form a strong basis of inferring how profitable and viable a particular agribusiness enterprise can be, sweet orange marketing can be said to be a very lucrative occupation and a pathway out of poverty. However, the result of annual income distribution of the marketers shows a mean annual income of ₦287,125. This implies that sweet orange marketing is a profitable venture in the area.

*Marketing Margin And Marketing Efficiency Of The Marketers*

Marketing margin refers to the difference between producer and consumer prices of an equivalent quantity and quality of a commodity. Marketing efficiency on the other hand refers to the degree of market performance. The marketing margin and efficiency as shown in table 2 gave a marketing margin of ₦40,759.40 (25%) and marketing efficiency of 1.34 for 1000kg of sweet oranges marketed per week. The marketing margin of 25% obtained from the study implies a wide gap in prices between wholesalers and retailers. Furthermore, Scarborough and Kydd (1992) opined that five percent or ten percent marketing margins are acceptable for storable and perishable goods respectively. This implies that the margins received by the marketers are acceptable and can accrue more margins *ceteris paribus.* The marketing efficiency value of 1.34 is greater than one. This indicates that the marketing system adapted by sweet orange marketers can be improved and can accrue more margins.

*Marketing Channel and Conduct Of Sweet Oranges*

Marketing channel is defined as the route taken by goods as it moves from the producers to the consumers in the distribution process. According to Sarode (2009) marketing channel is the chain of intermediaries through whom the products pass from producers to consumers. Market conduct is however defined as the behaviour that firms adapt in the process of marketing to effectively dispose their products. From figure 1, it is observed that in the study area four different channels were identified.

These are:

| | | |
|---|---|---|
| Channel 1: | Farmers | (56%) |
| | Wholesalers | |
| | Retailers | |
| | Consumers | |
| Channel 2: | Farmers | (25%) |
| | Marketing agents | |
| | Wholesalers | |
| | Retailers | |
| | Consumers | |
| Channel 3: | Farmers | (12%) |
| | Marketing agents | |
| | Retailers | |
| | Consumers | |
| Channel 4: | Farmers | (5%) |
| | Retailers | |
| | consumers | |

Each of the percentage shows the percentage flow of sweet orange that passes through each of the marketing channel from the farmer to the ultimate consumers.

The channel of producers wholesaler Retailers consumers was the highest with 56%. This agrees with Opata (2011) where the channel of farmers-wholesalers-retailers-consumers had the highest percentage of 60% in the marketing of cocoyam in South East Nigeria. There is no efficient storage system of orange in the study area. Sweet orange is stored in cool, dry, and airy place. Transportation of orange is crude. Sacks are used to pack oranges and mostly Mercedes 911 Lorries or pick – up vans were used to transport the fruit from the areas of production to the study area. Market information was usually sourced and from colleagues. The wholesalers (36.5%) do practice record keeping than the retailers. Marketers claimed that there is non-existence of market union in the business of sweet orange marketing in the study area. However, there existed a skeletal association of wholesalers (42.2%). Fixing of prices was the most (68%) appropriate techniques adopted by the respondents.

*Constraints to Sweet Orange Marketing*

The study identified the constraints encountered by sweet orange marketers in the study area. Table 3 showed that out of 10 marketing constraints studied high transport cost (84%) poor storage facilities (80%) and post harvest rotting (70%) ranked 1$^{st}$, 2$^{nd}$ and 3$^{rd}$ respectively. This is in consonance with Fakayode, Omotesho, Babatunde, and Momoh (2010) who asserted that the marketing constraints of sweet orange as ranked by respondents include poor and inadequate storage facilities, poor road network and marketers inability to access credit. The constraint that posed the lowest challenge included Taxes/market charges and lack of standard measurement in the marketing of sweet orange.

**4, Conclusion and Recommendation**

*Conclusion*

Women dominate sweet orange marketing in the study area as a rewarding venture. The marketing margins received by marketers are acceptable and can obtain more margins *ceteris paribus.* The marketing of sweet orange in the study area is said to be efficient. The efficiency can also increase if there is efficient storage facility, reduction in the transport cost and post harvest rotting.

*Recommendation*

The following recommendations are based on the findings of the study.

- The government should help in the establishment of cold storage facilities across the nation. This will greatly help in reducing post harvest rotting and enhance distribution.
- Cost of transportation was a major constraint, government indispensable role in providing good roads and repairing worn out ones will greatly help the situation.
- Banks and other financial institutions should be mandated to extend their credit facilities to fruit marketers (especially sweet orange marketers). This will help to expand the scope of their operation.
- Extension education programme for market intermediaries should be introduced. This will help to improve their skill and technical system to be responsive to consumer's demand.
- There should be access to improved market information for effective arbitraging in the Local Government Area.

**References**

Ada-Okungbowa C. I, Oghorodi O, and Omofowowan, E, l. (2013). Profitability of palm oil marketing in Ethiope East Local Government Area of Delta State, Nigerian Journal of Applied Science and Agriculture, 8(4). PP 342-325.

Adeyemi, E.O (2005). Investment Opportunities in fresh fruit production processing and marketing. National Workshop on production, processing and Export Potentials of citrus and mango in Nigeria.

Fakayode, S.B, Omotesho. O.A, Babatunde, R.O and Momoh, A.A (2010). The sweet orange market in Nigeria, How viable?. Research Journal of Agriculture and Biological Sciences 6(4). Insinet Publication.

FAO (2008). The world Banana Economy, food and Agriculture organization, Rome.

FAO (2012). Major Fruits and Vegetable producing countries in the World (2010 and 2011).

Kohls, R. L and Uhl, J. N (1985). Marketing of Agricultural Products. United States of America: Macmillion Publishing Company.

National Population Commission (NPC) (2006). Official Population Report of Enugu North Zone of Enugu State, Nigeria.

NIHORT (2000). 25 years of Research into Horticultural Crops Development in Nigeria. (1975 – 2000). O. A, Denton, K. O Alasiri and M. A Adejoro(Eds)

Nwaru, J.C, Nwosu, A. C, and Agommuo, V. C (2011). Economic Determinants of Profit in Wholesale and Retail Banana Marketing in Umuahia Agricultural Zone of Abia State, Nigeria. Journal of sustainable Development in Africa 13(1). Clarion University of Pennsylvania, Clarion, Pennsylvania.

Nwibo, S. U, and Alimba, J. O (2010). Determinants of Investment Decision among Agribusiness Investors in south East Nigeria. Journal of Business Management 8(6): Pp. 60 – 67. Available online at http//www.iosrjournal.org.

Nwibo, S.U, and Okorie, A (2013). Determinants of Entrepreneurship among agribusiness Investors in South East, Nigeria. European Journal of

Business and Management vol 5(10) P. 115 – 123.

Oladejo, J. A and Sanusi, W. A (2008). Marketing Analysis of plantain in Owo and Ose Local government Areas of Ondo State, Nigeria. International Journal of Agricultural Economics and Rural Development 1(2). Pp.93-101 93 101. Available on line at http://www.ijaerd.lautechaee. edu.com.

Olife, I C. Ibeagha, O. A and Onwualu, A. P. (2015). Citrus Fruit Value Chain Development in Nigeria. Journal of Biology, Agriculture and healthcare. Vol 5(4). Available on line http//www.iiste.org.

Opata, P. I. (2013). Economic Study of Cocoyam Marketing in South Eastern Nigeria. Unpublished Ph.D thesis submitted to the Dept. of Agricultural Economics, University of Nigeria Nsukka.

Sarode S. C (2009). Economics of banana marketing in Jalgon district: An analysis across alternative channels. African Journal of marketing management. Vol 1 (5). PP 128 -132. http//www.academic Journals. Org/ajmm

Scarborough, V and Kydd, J (1992). Economic Analysis of Agricultural Markets: A Manual, Marketing Series. Natural Resources Institute. University of Greenwich Chathan, U. K. 166.

UNCTAD (2007). Market Information in the Commodities Area: Citrus fruit.

Table 1: Socio-economic characteristics of respondents

| Socio-economic characteristics | Frequency | Percentage | Mean |
|---|---|---|---|
| Age | | | |
| 11-20 | 16 | 16.7 | |
| 21-30 | 25 | 26 | 37 |
| 31-40 | 42 | 43.8 | |
| 41-50 | 10 | 10.4 | |
| 51 &above | 3 | 3.1 | |
| Gender | | | |
| Female | 80 | 83.3 | |
| Male | 16 | 16.7 | |
| Marital Status | | | |
| Single | 24 | 25 | |
| Married | 62 | 64.6 | |
| Widowed | 10 | 10.4 | |
| Household Size | | | |
| 1-3 | 7 | 7.3 | |
| 4-6 | 54 | 56.2 | 7 |
| 7-9 | 24 | 25 | |
| 10 and above | 11 | 11.5 | |
| Level of Education | | | |
| No formal education | 23 | 24.0 | |
| Primary | 47 | 49 | |
| Secondary | 17 | 17.6 | |
| OND/NCE | 9 | 9.4 | |
| Source of Capital | | | |
| Personal Savings | 56 | 58.3 | |
| Friends and relatives | 21 | 22 | |
| Cooperative loan | 8 | 8.2 | |
| Isusu | 11 | 11.5 | |
| Marketing experience | | | |
| 1-5 | 28 | 29.2 | |
| 6-10 | 37 | 38.5 | |
| 11-15 | 15 | 15.6 | 11 |

| Socio-economic characteristics | Frequency | Percentage | Mean |
|---|---|---|---|
| 16-20 | 10 | 10.4 | |
| 21 and above | 6 | 6.3 | |
| Annual income | | | |
| 70,000-140,000 | 8 | 10 | |
| 140,001-210,000 | 20 | 25 | 287,125 |
| 210,001-280,000 | 33 | 42.3 | |
| 280,001-350,000 | 11 | 13.7 | |
| 350,001 and above | 8 | 10 | |

*Source: field survey, 2018*

Table 2: Average Marketing Cost

| Cost | Weekly value (₦) |
|---|---|
| Quantity of sweet oranges marketed weekly | 1000kg |
| Average total marketing cost (ATMC) | 121,455.85 |
| Average total revenue (ATR) | 162,215.25 |
| Marketing margin (ATR-ATMC) | 40,759.40 |
| Marketing margin (%) | 25% |
| Marketing efficiency (ATR/ATMC) | 1.34 |

*Source: field survey, 2018*

Table 3: Constraints encountered by sweet orange marketers in the study area

| Constraints | Percentage | Ranking |
|---|---|---|
| Poor storage facilities | 80 | 2nd |
| Taxes/market charges | 21 | 9th |
| Illiteracy | 22 | 8th |
| Lack of standard measure | 20 | 10th |
| Bulkiness of the product | 62 | 5th |
| Poor access to credit | 60 | 6th |
| Price fluctuation | 65 | 4th |
| Poor quality of fruit | 41 | 7th |
| High transport cost | 84 | 1st |
| Poor harvest rotting | 70 | 3rd |

*Source: Field survey, 2018*

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

**Socio-Economic Determinants of Consumer Preference for Traditional and Orthodox Health Services in Ilorin Metropolis, Kwara State, Nigeria**

Jemeel Adedotun Sanni

*Department of Economics, University of Ilorin Nigeria*

**Abstract**

*Given that patient's preference for alternative care is not determined solely on the treatment courses, certain socioeconomic importance are also attached to ones preference for a particular type of cure. The study examined the determinants of consumer preferences for orthodox and traditional health care services in Ilorin metropolis. The study therefore employ revealed preference theory in order to see consumers' choice from different health care services. Multinomial probit model was used for the regression analysis and the result shows that occupation, academic qualifications, gender, marital status, marriage type and individual's income are responsible for health care choice. Based on the findings, this study recommends that government should find a way to harmonize the different health care services in such a way that, consumers can easily access any of them. Due recognition should be given to all, since consumers are sometimes indifferent as to which type of service to go for and also because some diseases cannot find cure in the orthodox health system, they can easily be treated using the traditional or spiritual means. Upgrading the traditional health care system is highly important because, as consumers get more educated, they tend to abandon the traditional health care for the orthodox.*

**Keywords:** Health Service, Consumer Preference, Complementary, Alternative Care
**JEL Codes**: JI1

## 1. Introduction

All human societies desire good health for their members. It is therefore an ideal state couched on the realization that only the healthy can perform his obligation towards the survival and development of the society. Yet every human being has the tendency to fall ill, thereby unable to perform as expected by the society and this would require one form of treatment or the other (Adefolaju, 2011).

With numerous alternatives to the orthodox methods of treatment, patients are sometimes faced with the dilemma of choosing a particular source of treatment. In Nigeria, South of the Sahara, two distinct types of medicines are known and extensively used, namely, herbal and orthodox medicines. The former is a form of traditional medicine or complementary and alternative medicine (CAM).

The assumption that patients call at just one point of care does not necessarily hold where prescriptions specify treatment courses and initial medication does not cure existing symptoms, patients would seek alternative care elsewhere (Sato, 2012). Patient's preference for alternative care is not determined solely on the treatment courses. However, certain socioeconomic importance are also attached to ones preference for a particular type of treatment.

The reason for looking into this area is as a result of the fact that most studies except a few such as Bello (2005) have only focused on the use and efficacy of both traditional and orthodox medicine but have neglected what socioeconomic importance attached to patient's preference for either or both.

An individual's preference for orthodox treatment over traditional method may be as a result of its scientific rationalism while another person's preference over orthodox method might be as a result of an individual's choice ahead of scientific rationalism. As kroeger (1983) terms multiple treatment seeking as 'healer shopping' where people use multiple healers for one episode of illness, the choice of individuals often represent highly rational responses to the constraints and opportunities faced (Bello, 2005). Understanding the attractiveness of complementary and alternative medicine (CAM) is therefore crucial for providing better service in primary health care (Wapf and Busato, 2007). The reasons of choice of an individual for complementary medicine are based on both rational and emotional factors (Bensoussan 1999; Schar and Messerli-Rohrbach 1999), others in contrast, do not express such disappointment, but rather view CAM as supplementary measures in order to achieve the best possible results for their health (Schar et. al., 1994).

In Nigeria as elsewhere in Africa, public expenditure on health care delivery has been directed to the development and coverage of orthodox medicine at the expense of traditional method of health care, yet many still prefers traditional method to orthodox (Bello, 2005). In view of the above, this study presumes the available factors that may be responsible for consumer's choice even when traditional sector is not developed.

**2. Literature Review**

Although the medical establishment has been reluctant to recognize alternative therapies, patients have been flocking to alternative practitioners in droves. The percentage of United States adults believing in positive effects of complementary and alternative medicine in 2017 was 70% and that is in line with the surveys conducted by Eisenberg et.al. (1998) which revealed that the use of CAM (complementary and alternative medicine) increased from 33.8% to 42.1% in the United States between the years 1990 and 1997. The total number of visits to CAM practitioners between those two years increased from 427 million to 629 million, far exceeding the total number of visits to primary care physicians. And if money is a good yardstick of success, alternative health is thriving: people in the US spent an estimated $12.2 billion of their own money for alternative medicine practitioners and $27.0 billion for alternative therapies in 1997.

However, the caution, or sometimes outright disagreement, that many physicians harbour towards alternative health practitioners has not been lost on patients. The same studies which found a rise in CAM use also noted that less than 40% of these individuals have shared this information with their own medical doctors. This is a good example of the importance of bridging, at the very least, the communication gap in order to assure safety for individuals who combine the two types of medical approaches for themselves (Hart, 2013).

There is no doubt that CAM has been given wide coverage in so many countries and especially, the developed ones. One of the first UK studies on CAM was conducted over two decades ago, though with a small sample (Reilly, 1983). It was found that over 80% viewed acupuncture as useful, and 50% considered homeopathy and osteopathy useful. It revealed a positive attitude towards CAM that is mirrored in larger more recent studies in the UK and elsewhere (Yeats 2009). One such study by Van Wersch et al., (2003) found a positive attitude towards CAM in the Northeast of England.

Jomboet. al (2010) conducted a study on the choice of drugs for self-treatment of malaria among adult women in a Nigerian city. The study was cross-sectional in nature involving adult women who were selected from households and using systematic sampling methods. The result revealed that the method adopted for the treatment of malaria by adult female in the state includes, visits to hospital\clinic 46.8% (n=721), drugs from medicine stores 34.7% (n=721), witchdoctors 8.3% (n=172), herbs 21.1% (n=438), and seek spiritual healing 4.0% (n=83), while 18.2% (n=378) usually did nothing.

Malat and Van Ryn (2005) examined the preferred healthcare provider race among African-American adults and assessed the extent to which perceptions of racial discrimination are associated with these preferences. Statistical representative telephone survey was designed and bivariate significance was determined using chi-square tests. The result of their examination revealed that approximately one in five African Americans states a preference for a same-race healthcare provider.

Ogunkunle and Ashiru (2011) conducted a survey on experience and perception of residents on the safety and efficacy of herbal medicines in Ogbomoso land. The study was conducted in five local government areas and in each of the local governments; fifty questionnaires were administered making a total of 250 questionnaires. And of the 250 questionnaires retrieved, only 207 were analysed. They realized that about 78% of the 207 respondents were regular users of herbal medicines and 53% of them being users for more than 10 years.

Despite a lack of theorization in this area, surveys consistently highlight several issues which act as barriers to a more extensive integration of CAM: lack of information about the effectiveness of therapies, lack of health professional knowledge about CAM, lack of statutory regulation, and concerns about the possible harmful effects of treatment (BMA, 1993; Botting and Cook, 2000). It has been suggested that the spread of CAM within conventional medicine reflects public need/demand rather than evidence based practice (Botting and Cook, 2000). Personal endorsement by patients appears to be a key factor in predicting positive attitudes of health professionals (Easthope et al., 2000; Yeats, 2009).

Ologeet. al. (2008) conducted a survey on herbal use among pregnant mothers in Ilorin. Structured pre-tested questionnaires were used to conduct the survey. The study demonstrated a high use of herbal drugs and use of kolanut by pregnant mothers. The main reason for the use of herbal drugs was for the treatment of fever and prevention of fever during pregnancy.

Osemeneet. al. (2011) conducted a study on Comparative Assessment of Herbal and Orthodox Medicines in Nigeria. Structured questionnaires and interview were used to elicit information from 300 herbal and modern medicine consumers selected from six geo-political zones in Nigeria through purposive and convenient sampling method. They analysed their data by employing descriptive and inferential statistics. Their results showed that the respondents rated herbal medicines higher than orthodox medicines in terms of safety and the degree of advertisement. Other parameters were rated higher for orthodox medicines. Also only 41% of the respondents took herbal medicines as their first drug of choice.

In a study carried out in Ethiopia on ethnomedical survey of Berta ethnic group Assosa zone. Flatie et al. (2009) examined the extent and factors determining the use of Traditional medicine and medicinal plants by Berta community. One thousand, two hundred households (HHs) and fourteen healers were interviewed using a semi-structured questionnaires and six focused group discussions (FDGs). They found that although modern medicine is the preferred first choice, should medication prove ineffective individuals would turn to traditional healers.

The demand for a particular health service as measured by a number of visits to a health facility was hypothesised to depend on price of that service, prices of alternative services, household income and tastes. Time costs associated with using the services and demographic characteristics of patient, such as age, and education, have also shown to be important determinants of health care utilization (Bello, 2005).

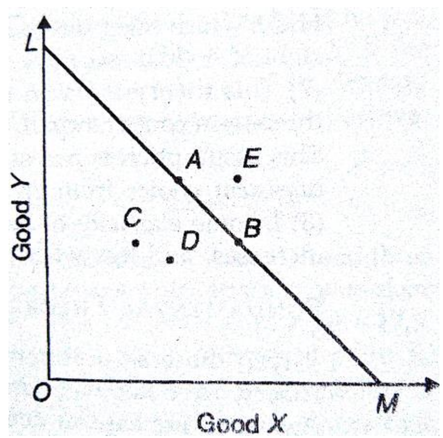
Grossman (1972), in his model presumes the consumer to be a utility maximiser, who is constrained by income levels, price of health input, consumption activities and the opportunities for transforming health input into health. Invariably, the individual is expected to want to attain the highest consumption possibility level subject to the conditions that he operates on his budget constraints and his product function (Ayorinde, 2001 and Bello, 2005).

Bello (2005) found that most of the variables affecting the demand for orthodox health care seem to be affecting traditional health care services. His findings however show that, household size, severity of illness, religion, attendance by doctor, education and location are found to be more important in the decision to seek traditional health.

On the effectiveness and preference for herbal mixture, Oguntola (in Subair 2013) gave an insight based on the choice of an individual. He asserted that, there are areas of medication in which only traditional medicine is good and some for the western orthodox medicine (Subair 2013).This study therefore focus on the socioeconomic determinants of consumer preference for seeking traditional and orthodox health services

*Theoretical Framework*

Several demand theories have been propounded by scholars such as Hicks Allen Indifference Curve Techniques (1934) and The Marshallian Marginal Utility Theory (1890) and are also closely related to the topic, but the study however adopted Samuelson’s (1948) theory of Revealed Preference because it is based on actually observed consumer’s behavior (Dewett, 2005). Accordingly, consumer theory depends on the existence of preferences which materialize into utility functions. These utility functions are maximized by consumers subject to budget constraint. The theory analyses consumer's preference for a combination of goods on the basis of observed consumer behavior in the market. Samuelson's theory of demand is based on the revealed preference axiom or hypothesis which states that choice reveals preference. Keeping this fact into view, a consumer buys a combination of two goods either because he likes this combination in relation to others or this is cheaper than others. Suppose the consumer buys combination A rather than combination B, C, or D as the figure below depicts. It means that he reveals his preference for combination A. He can do this for two reasons. First, combination A may be cheaper than the other combinations B, C, D. Second, combination A may be dearer than others and even then he likes it more than other combinations. In such a situation, it can be said that A is revealed preferred to B, C, D or B, C, D are revealed inferior to A (Jhingan, 1977).




**3. Materials and Methods**

*The Study Area*

Ilorin, the capital city of Kwara state is located in the north central region of Nigeria. It occupies 35,705 square kilometers and it is bounded in the north by Niger state, in the east by Kogi state, the west by Benin republic and the south by Oyo, Osun, and Ekiti states. Kwara state lies along the Lagos – Kaduna highway, 306 km from Lagos, 600 kilometers from Kaduna and about 500 kilometers from Abuja (Akogun and Ojo 2013). The 2006 population census figure revealed that there are 2,371,089 people in Kwara State (NPC, 1991, 2006; Odeniyi, 2007) andwith a growth rate of 6.2%, the population is projected to be 4,595,333 by the year 2017. The Ilorin metropolis is made up of three local government areas namely Ilorin west, Ilorin south, and Ilorin east and it is located on latitude $8^0$ 3'N and longitude $4^0$ 35'E (Ahmed, 2009). The population figure of Ilorin metropolis according to 2006 census is 777,667 (NBS, 2009) and it is projected to be 1,507,174 by the year 2017.

*Nature and Source of Data*

The study which focuses on the socio-economic determinants of consumer preference for traditional and orthodox health services employed primary data, which was used to know the choice of the respondents in seeking either or both methods of treatment. The survey instrument was a structured questionnaire with both open and closed ended questions from which data on variables relevant to the study was extracted from respondents and fitted into the model for estimation. The questionnaire was administered in Ilorin metropolis which is comprised of three local governments. The survey required each respondent to fill the questionnaire.

*Method of Data Collection*

This study adopts the field survey approach to understand the socio-economic determinants of consumer preference for traditional and orthodox health services in Ilorin metropolis. The primary data of a sample of 300 individuals was collected from the three local governments that form the metropolis. This approach involves the administration of a structured questionnaire within Ilorin metropolis. Both the open and close ended questionnaires was designed to provide both quantitative and qualitative information.

*Sampling Technique*

A stratified random sampling method was used in the selection of the respondents. To obtain an unbiased selection of sample, survey was conducted in different parts of the three local governments that form the metropolis. One hundred questionnaires was administered in each of the local governments making a total of 300 respondents. The sample units consist of 3 areas from each of the local governments and they are Oja Oba, Pakata, Taiwo, Tanke, Fate, Basin, Olorunsogo, Idiape and Sango.

*Method of Analysis*

Descriptive statistics method (with table and percentage) and probit model was adopted to ascertain the effects of socio-economic determinants of consumer's choice of health care.

The study made use of Stata 12 package to run both the descriptive statistics and the regression analysis.

The analysis was carried out using:

- The multinomial probit model
- The marginal effect

*Multinomial Probit Regression*

The multinomial probit model is often used to analyze the discrete choices made by individuals recorded in survey data. Examples where the multinomial probit model may be useful include the analysis of product choice by consumers in market research and the analysis of candidate or party choice by voters in electoral studies.

The multinomial probit models have a dependent variable that is a categorical, unordered variable. The choices/categories are called alternatives (coded as 1, 2, 3…) and only one alternative can be selected. This is the reason why this study adopted it given that the dependent variable is unordered and has more than two alternatives.

*The Marginal Effect*

The marginal effect of an independent variable measures the impact of change in an independent variable (e.g., $X_i$ ) on the expected change in the dependent variable (e.g., Y) in a regression model, especially when the change in the independent variable is infinitely small or merely marginal.

Descriptive Statistics of the Choice of Respondents

| Choice of Respondents | Count | Percentage |
|---|---|---|
| Traditional | 60 | 23.81 |
| Orthodox | 168 | 66.67 |
| Spiritual | 24 | 9.52 |

The table above shows that the orthodox health services is the preferred choice with approximately 67 percent of consumers preferring it to the other methods of treatment. The traditional method having approximately 24 percent and the spiritual method with approximately 10 percent.

Presentation of Multinomial Probit Regression Analysis Results

| | Traditional | | Spiritual | |
|---|---|---|---|---|
| Variable | Coefficient | P-Value | Coefficient | P-Value |
| Ag | 0.005 | 0.748 | -0.006 | 0.778 |
| Occ | -0.225 | 0.074 | -0.013 | 0.939 |
| Aq | -1.275 | 0.096 | -0.004 | 0.974 |
| Gen | 0.701 | 0.031 | 0.019 | 0.966 |
| MS | -1.117 | 0.074 | -1.27 | 0.086 |
| MT | 1.227 | 0.001 | 0.274 | 0.603 |
| IN | 7.4 | 0.664 | 3.72 | 0.024 |

*Log likelihood = -114.099, No of observations = 162, Wald* $chi^2$ *= 32.99, Prob>*$chi^2$ *= 0.0029*

This is a multinomial probit regression where the number of observations are 162 and the probability value of the chi-square at 0.0029 shows that the model is plausible.

From the result generated, the orthodox method of treatment is chosen as the base outcome, which means that the other two methods, traditional and spiritual are analyzed relative to the base outcome (orthodox method).

The following variables occupation, academic qualifications, gender, marital status, marriage type, and income of individuals have proven to be important in the determination of choice of healthcare by consumers. However, the interpretation of their coefficients was separated into two. The first interpretation was on traditional health choice relative to the orthodox method and the other was interpreted on spiritual relative to the orthodox. The reason being that the orthodox method is the base outcome of the analysis.

First: Traditional Relative to Orthodox

This is a multinomial probit regression estimate which shows that being employed, an individual would not prefer the traditional method over the orthodox method given the negative coefficient of occupation being (-0.225). Also, given the negative coefficient of academic qualification shows that as an individual attains a higher level of education, he or she would not make a preference for the traditional method over the orthodox method. What this implies is that, an individual with a higher level of education relative to someone with a lower level of education is likely to go for orthodox method of treatment rather than the traditional method. Equally, male, being the base outcome of gender, the result indicates that females relative to male will most likely prefer the traditional method of treatment relative to orthodox. Marital status has a negative coefficient which signifies that a married person relative to a single will likely have a preference for the orthodox method relative to the traditional method. Marriage type also have a positive coefficient which indicates the likelihood that polygamist relative to a monogamist will most likely prefers the traditional method of treatment relative to the orthodox method.

But on the analysis of interpreting the spiritual method relative to the orthodox method, marital status and income of individuals are the only two significant variables. The result of marital status shows the likelihood that a married person relative to a single will not prefer the spiritual method of treatment over the orthodox method. And lastly, individual's income shows the likelihood that as income of an individual increases, he/she becomes more likely to prefer the spiritual method of treatment relative to the orthodox method given its positive coefficient.

The Marginal Effect

| Variables | Traditional Method | Orthodox Method | Spiritual Method |
|---|---|---|---|
| Ag | 0.001 (0.679) | -0.001 (0.871) | -0.001 (0.705) |
| Occ(employed) | -0.515 (0.066)*** | 0.455 (0.127) | 0.006 (0.711) |
| Aq | -0.293 (0.087)*** | 0.026 (0.167) | 0.004 (0.723) |
| Gen (male) | 0.161 (0.025)** | -0.140 (0.067)*** | -0.211 (0.612) |
| MS (married) | -0.216 (0.114) | 0.305 (0.043)** | -0.089 (0.194) |
| MT (polygamy) | 0.274 (0.001)* | -0.261 (0.003)** | -0.013 (0.790) |
| IN | 4.89 (0.897) | -3.93 (0.315) | 3.43 (0.033)** |

*Source: Author's computation*

The marginal effect of the multinomial probit regression shows that all the variables exceptage are significant in at least one of the methods of treatment. Occupation variable is only significant in traditional method and given the negative coefficient of (-0.515) indicates that an individual who is employed will not prefer the traditional method by 51.5 percent.

The marginal effect also shows that as an individual's level of education increases, his preference for the traditional method decreases by 29 percent given the coefficient of academic qualifications as (-0.293). This outcome can be justified by the fact that people tend to abandon the traditional method of treatment as their level of education increases.

Given the significance level of gender for both traditional and orthodox method of treatments. The outcome of the marginal effect shows that if the individual is male, he is more likely to prefer the traditional method of treatment by 16.1 percent as compared to being a female and with regard to the orthodox method, he is less likely to prefer the orthodox method by 14 percent as compared to being a female.

The result of the marginal effect also shows that a married person as compared to a single will have a preference for the orthodox method of treatment by 30.5 percent given the significance level of marital status. The reason being the nature of care in the orthodox healthcare centers.

Marriage type is also a strong determinant of choice of healthcare and this can be shown by being significant in both traditional and orthodox methods of treatment. By being a polygamist as compared to a monogamist, an individual is more likely to have a preference for traditional method by 27.4 percent and less likely to have a preference for the orthodox method by 26.1 percent.

The outcome of the marginal effect also shows that income of an individual also determines the choice of his healthcare and given its significance level on the spiritual method, an individual is more likely to have a preference for the spiritual method as his income increases.

**5. Conclusion and Recommendations**

The research work examined the variables thought to be influencing the choice of health care services by consumers in Ilorin Metropolis. The Orthodox and Traditional methods of healthcare co-exist. Some of the variables affecting the choice for Orthodox health care seem to be affecting the choice for both Traditional and Spiritual health.

The descriptive statistics shows that the orthodox health services is the preferred choice and the other two are there to complement it given the choice of most respondents to be orthodox.

The findings however shows that occupation, academic qualifications, gender, marital status, marriage type, andincome are all important in determining the choice of health care by consumers.

The study hereby recommends that;

Government should find a way to harmonize the different health care services in such a way that, consumers can easily access any of them. Clinics should be made available in the rural settlements and for traditional health care practitioners, adequate assistance should be provided in order for them to be operative in the urban centers.

Due recognition should be given to all, since consumers are sometimes indifferent as to which type of cure to go for and also because some diseases cannot find cure in the orthodox health care system and can easily be treated using the traditional method or through praying to God.

Upgrading the traditional health care system is highly important because, as consumers gets education, they tend to abandon the traditional health care for the orthodox due to inadequacy of facilities and purported lack of qualified personnel.

**References**

Adefolaju, T. (2011). The dynamics and changing structure of traditional healing system in Nigeria. *International journal of health research*, 99-106

Ahmed, Y. A. (2009). Settlements pattern and functional distribution in an emerging community: A case study of a local government area of kwara state, Nigeria. *Medwell J. the Social Sciences 4*(3): 256-263.

Ayorinde, F. O. (2001). User Changes, Quality of Services and Utilization of Modern Health Facilities in Oyo-State Nigeria. University of Ibadan. Ph.D*Thesis Unpublished*

Bello, R. A. (2005). Determinants of Demand for Traditional Method of Health Care services in Osun State, Nigeria. *Indian Journal of Social Development. Vol. 5*(2), 203-217.

Bensoussan, A. (1999). Complementary medicine – where lies its appeal? *Medical Journal of Australia. 170*, 247-248

Botting, D. A., Cook, R. (2000). Complementary medicine: Knowledge, use and attitudes of doctors. *Complement TherNurs Midwifery*, 6, 41—7.

British Medical Association (1993). Complementary Medicine: New Approaches to Good Practice. Oxford University Press.

Dewett, K. K. (2005). *Modern economic theory*. New Delhi: Shyam Lal Charitable Trust. 44

Easthope, G., Tranter, B., & Gill, G. (2000). General practitioners' attitudes towards complementary therapies. *SocSci Med*, 51, 1555—61.

Econometrics Academy. (2015). Retrieved 05 30, 2015, from Econometrics Academy: https://sites.google.com/site/econometricsacademy/econometrics-models/multinomial-probit-and-logit-models

Eisenberg. D. M., Davis. R. B., Ettner. S. L., Appel. S., Wilkey, S., Van Rompay, M., & Kessler, R. C. (1998). Trends in Alternative Medicine Uses in the United States, 1990-1997: Results of a Follow-Up National Survey. JAMA, 280(18), 1596-75

Flatie, T., Gedif, T., Asres, K., Gebre-Mariam, T. (2009). Ethnomedical survey of Berta ethnic group Assosa Zone, Benishangul-Gumuz regional state, mid-west Ethiopia. *Journal of Ethnobiology and Ethnomedicine*5, 14.

Grossman, M. (1972). The demand for health: A theoretical and empirical investigation. New York, Colombian University Press for National Bureau of Economic Research.

Hart, J. (2013). Alternative vs. Traditional Medicine. *Lahey Hospital & Medical Center*. Retrieved June 14, 2014, from https://lahey.org/Departments_and_Locations/Departments/Nephrology/Ebsco_Content/Amyloidosis.aspx?chunkiid=13500

Jhingan, M. L. (1977). *Micro Economic Theory* (7thed.) Delhi. Vrinda Publications Ltd.

Jombo, G. T. A., Mbaawuaga. E. M., Denen. A. P., Alao. O. O., Peters, E. J., Dauda, M. A., …Okwori, E. E. (2010). Choices of Drugs for Self-Treatment of Malaria Among Adult Women in a Nigerian City: Implications For The Success Of The Ongoing 'Roll Back' Malaria Programme. *Journal of Microbiology and Antimicrobials* 2(6), 57-63.

Kosuke Imai, David A. van Dyk. (2005). MNP: R Package for Fitting the MUltinomialProbit Model. *Journal of Statistical Software, 14*(3). Retrieved May 25, 2015, from http://imai.princeton.edu/research/files/MNPjss.pdf

Kroeger, A. (1983). Anthropological and socio-medical health care research in developing countries. *Social Science & Medicine*, 17, 147-61.

Malat. J., & van Ryn M. (2005). African-American Preference for Same-Race Healthcare Providers: The Role of Healthcare Discrimination. *Ethnicity & Disease,* 15, 740-747.

National Bureau of Statistics (NBS), Federal Republic of Nigeria, 2006 Population Census, http://www.nigerianstat.gov.ng/Connections/Pop2006.pdf. Retrieved 1st August 2009.

NPC (1991). Provisional Census Figures; Lagos.

NPC (2006). Provisional Census Figures; Abuja.

Odeniyi, P. (2007, January 10). Census 2006: North is 75m, South 64m. *The Nation Newspapers*, 1(0164).

Ogunkunle, A. T. J. & and Ashiru, S. B. (2011). Experience and perceptions of the residents of Ogbomoso land Nigeria on the safety and efficacy of herbal medicine. *Journal of Herbal Practice and Technology*, 1, 22–28.

Ologe. M. O., Aboyeji. A. P., Ijaiya M. A. &Adesina K. T. (2008). Herbal use among pregnant 47 mothers in Ilorin, Kwara state, Nigeria. *Journal of Obsterics and Gynaecology*, 28(7), 720-721.

Osemene. K. P., Elujoba. A. A. &Ilori. M. O. (2011). A Comparative Assesent of Herbal and Orthodox Medicines in Nigeria. *Research Journal of Medical Sciences*, 5 (5), 280-285.

Reilly, D. T. (1983). Young doctors' views on alternative medicine *British Medical Journal*, 287 pp. 337–339

Sas.com. (2005). *Usage Note 22604: Marginal effect estimation for predictors in logistic &probit models*. Retrieved May 30, 2015, from sas.com: http;//support.sas.com/kb/22/604.html

Sato, A. (2012). Reveling the popularity of traditional medicine in light of multiple recourses and outcome measurements from a user's perspective in Ghana. *Health Policy and Planning*, 1-13.

Schar, A., &Messerli-Rohrbach, V. (1994). Motivation for the choice of complementary and mainstream medicine: Patients' behavior in a pluralistic medical system. *ForschKomplementarmed*, 6 (1), 10-13.

Subair, M. (2013). Traditional vs. Orthodox Medicine: Which is your choice? Retrived May 10, 2014. From http://www.mydailynewswatchng.com/traditional-vs-orthodox-medicine-choice/

Van Wersch, A., Forshaw, M. & Cartwright, T. (2003). *Complementary and Health Psychology*. Berkshire: Open University Press

Wapf, V. &Busato, A. (2007). *Patients' motives for choosing a physician: comparison between conventional and complementary medicine in Swiss primary care*. Retrieved June 6, 2015, from Biomed Central: http://www.biomedcentral.com/1472-6882/7/41

Yeats. W. B. (2009). Complementary medicine in context. Retrieved June 18, 2014, from http://www.mcgraw-hill.co.uk/openup/chapters/9780335220113.pdf

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

# Informal Sector and Poverty Alleviation in Nigeria: A Study of Commercial Motorcycle Riders in Dutse Metropolis

Muhammad Muazu Yusuf[1], Abubakar Hassan[2], Abdullahi Ibrahim Haruna[3]

[1&2]*Department of Economics, Federal University Birnin-Kebbi, Kebbi State, Nigeria*
[3]*Department of Economics and Development Studies, Federal University Dutse. Jigawa State, Nigeria*

**Abstract**

*This Study investigates the role of the informal sector in poverty alleviation among commercial motorcycle riders in Dutse Metropolis of jigawa state Nigeria. The research uses primary data collected from 379 respondents randomly selected from a population of 7273 registered operators in Dutse Metropolis. Descriptive statistics and regression analysis were used tin analyzing the data. Employing OLS technique, three econometric models were estimated and tested using income, Consumption expenditure and wealth accumulation as dependent variables while experience, age, level of education, marital status, number of dependents, mode of operation, number of hours worked per day and daily turnover of the respondents as explanatory variables. The study revealed that 93% of the operators earn above the international poverty line of one dollor a day which. Furthermore, experience, mode of operation, number of hours worked and turnover are the major determinant of poverty alleviation of the commercial motorcycle riders in Dutse Metropolitan area. The Implication of these findings point to the need for serious attention to the sector through rigorous regulation and funding so that it will help in solving unemployment and poverty problems in Dutse metropolis, Jigawa state and the country at large.*

**Keywords:** Poverty Line, Poverty Alleviation, Informal Sector, Unemployment
**JEL Codes**: JI1

## 1. Introduction

A significant proportion of the poor in most low income countries like Nigeria are engaged in the informal sectors where productivity and income are low. One of the services rendered in this sector is informal transportation services, particularly intra-urban commercial motorcycle transport services. Presently, commercial motorcycle business operation has taken advantage of the inefficient and deteriorating state of Nigeria's transport system to create an economic niche.

Although the use of motorcycles by private individuals had existed for a long time in Nigeria, a few made use of it to transport farm produce and to hawk their goods like bread, medicines, newspapers (Olubomehin, 2012). The commercial use of motorcycles began in Calabar, the capital of Cross River State of Nigeria in the early 1970s. Its use for commercial services grew after the nationwide retrenchment of civil servants in 1975/76 (Adesanya, 1998). Apart from Calabar, documentary evidence also shows that motorcycles were first introducedfor public transport in the northern Nigerian town of Yola in 1970 (Ogunsanya and Galtima, 1993). By the 1980s, the use of motorcycles for public transportation had gradually spread to other parts of Nigeria.

While many research works have been conducted on the employment generation potentials of the informal sector in Nigeria (Ogunrinola, 1991; Folawewo, 2006); not much research works have been carried out on the income and employment generation as well as the poverty reduction implications of commercial motorcycle business operation in Nigeria.

Infact, there is no well known research work on the Impact of commercial motorcycle riding business on poverty alleviation in Dutse Metropolis in particular. This research, therefore, intends to examine the impact of informal self employment on poverty alleviation with specific reference to the commercial motor cycle business operation in Dutse Metropolis of Jigawa State, Nigeria. The research look at the magnitude of the relationship between income (INC), Consumption Expenditure (CEX) and Wealth accumulation(WAC) as proxies for Poverty alleviation and other socio-economic factor that are expected to hider the growth of this variable hence affecting poverty alleviation. The rest of the paper is structured in four sections; section two deals with literature review, section three covers the methodology, section four discusses the empirical results and section five concludes the study and gives policy recommendations.

*Hypothesis of the study*

Three null hypotheses are formulated and tested in the study as follows.

- There is no significant relationship between Socio-economic characteristics and income of the self-employed commercial Motorcycle riders in Dutse metropolis.
- There is no significance relationship between Socio-economic characteristics and consumption expenditure of the self-employed commercial Motorcycle riders in Dutse metropolis.
- There is no significance relationship between Socio-economic characteristics and Wealth accumulation of the self-employed commercial Motor cycle riders in Dutse metropolis.

## 2. Literature Review

A few empirical studies have been carried out on the use of commercial motorcycles as a means of public transportation in Nigeria. For example, In a study on the use of motorcycle as means of public passenger traffic in Yola town, Adamawa State by Ogunsanya . and Galtima, (1993), economic depression and inadequate transport facilities were identified as some of the factors that gave rise to the use of motorcycles as means of public transportation in Nigeria. Fasakin (2001) also conducted a study on the factors affecting the daily profits of commercial motorcycle operators in Akure, the capital of Ondo State, South West Nigeria Further more, in an Inaugural Public Lecture on the subject of public transportation and among other issues in Nigeria, Oyesiku (2002) looked at the rise in the use of Okada for public transportation in Nigeria pointing out that the decrease in the supply of new vehicles of all types since the 1970s contributed to the emergence of motorcycles for commercial transportation.Again, Agossou (2004) asserted that commercial motocycle business is one of the chief modes of transport in Nigeria and, by far, the most common form of informal transport system in the country.

Ogunrinola (2010) studying the role of informal self-employment and poverty Alleviation: Empirical Evidence from motorcycle taxi Riders in Nigeria, explained that, in urban informal transport sub-sector, the motorcycle taxis (popularly called "Okada", is generally the large source of provision of self-employment and income generating opportunities for many of the urban unemployed in south west Nigeria.

Muhammad (2014) conducted a study on the role of informal self-employment and poverty Reduction in Sokoto metropolis of

Nigeria: A case study of commercial tricycle and motorcycle taxi Business. The study used multiple regression analysis to investigate the relationship between the socio-economic characteristics of the riders and his income generation, consumption expenditure and wealth accumulation as proxy for poverty reduction. The result shows that experience, age, number of dependents and number of hours in business are the major determinants of poverty reduction of the riders in the metropolis.

## 3. Research Methodology

This section discusses the methodology of the study. Issues discussed include sampling and sampling technique, technique of data analysis and model estimation

*Description of the Study Area*

Dutse is a city located in north Western Nigeria. It is the capital city of Jigawa state. Dutse has an estimated population of 153,000 as at 200. Dutse is currently the largest city in Jigawa state, followed by Hadeja (111, 000), Gumel (43,000) and Birnin Kudu (27,000). It is also located in Jigawa central. The economy of Dutse is characterized by a large area of fertile land for both the raining and dry farming. The informal sector activities is a major source of livelihood of the inhabitants of Dutse.

*Population Size*

The population of the registered commercial motorcycle riders in Dutse metropolis stood at 7273. as at December, 2015 according to Amalgamate Commercial Motor-cycle Owners and Riders Association of Nigeria, Jigawa state chapter.

*Sampling and Sampling Technique*

Sampling is a process used in analysis where a predetermined number of observations will be taken from a larger population for a general analysis. Random sampling is a method of selection where all items in the population have an equal chance of being selected. The target occupation is Commercial Motorcycle Riders (Kabu-Kabu, Okada or Achaba as locally known).

A sample of 379 commercial motorcyclist riders was randomly selected for the research out of the 7273 registered association members of the occupational group. The sample figure was obtained using the formular by Yamani's (1968) as used in Hussaini and Malami (2012), Usman (2012) and Yusuf (2013), as shown below

$$= \frac{N}{1 + N(e)^2}$$

Where: n = Sample size, N = Population and e = Standard error at 5% level of significance

*The Empirical Model*

To test the role of informal sector self-employment activities on poverty alleviation, Three functional models were estimated. The models were adapted from the work of Ogunrinola (2011) as follows:

Model one uses income of the respondents as proxy for poverty alleviation, model two used consumption expenditure while model three used wealth accumulation and all the three variables as the dependent variables while other socio-economic characteristics of the rider that is expected to affect his economic activities are the independent variables. The models were adapted from the work of Muhammad 2014 as follows

POV = f (EXP, AGE MOP, MST, NOD, HOP, TOV) (1)

Then, the econometric model created three equation thus was derived as follows:

$INC = \alpha + \beta_1 EXP + \beta_2 AGE + \beta_3 MOP + \beta_4 MST + \beta_5 NOD + \beta_6 HOP + \beta_7 TOV + e$ (2)

$CEX = \alpha + \beta_1 EXP + \beta_2 AGE + \beta_3 MOP + \beta_4 MST + \beta_5 NOD + \beta_6 HOP + \beta_7 TOV + e$ (3)

$WAC = \alpha + \beta_1 EXP + \beta_2 AGE + \beta_3 MOP + \beta_4 MST + \beta_5 NOD + \beta_6 HOP + \beta_7 TOV + e$ (4)

Where; INC = Average Daily income, CEX= Average Consumption Expenditure, WAC= Wealth Accumulation EXP = Experience, AGE = Age, MOP = Mode of Operation, MST = Marital Status, NOD = Number of Dependents, HOP= Hours of Operation, TOV=Turnover, e = Error term, α = Constant term, and $\beta_1$ to $\beta_7$ are parameters of the model. The three Models are to test the relationship between poverty level and other social economic factor. Income, consumption expenditure and wealth accumulation are proxy for poverty level

**4. Empirical Results**

Three hundred and seventy nine questionnaires were disctributed but three hundred and forty were retrived and used for the analysi. The result is divided into two: the descriptive statistic result which provides a summary of the respondents' personal characteristics and the profile of his business activities and the regression result that answer some of the research questions and test the research hypothesis.

*Result of the Descriptive Statistics*

The descriptive statistic result is in two categories; the summary of the respondents' personal characteristics and the profile of his business activities

*The Personal Profile of the Respondents*

Table 4.1: Showing personal profile of the respondents. (n=340)

| Responds | Frequency | Percentage |
|---|---|---|
| *Age ( year)* | | |
| 10---20 | 24 | 10.00 |
| 21—30 | 212 | 64.04 |
| 31---40 | 88 | 1.08 |
| 41—50 | 6 | 19.25 |
| Total | 340 | 100 |
| Mean | 27 | |
| *Religion* | | |
| Islam | 326 | 97.3 |
| Christianity | 9 | 2.3 |
| Total | 335 | 100 |
| *Marital status* | | |
| Single | 151 | 44.4 |
| Married | 158 | 46.5 |
| Divorce | 31 | 9.1 |
| Total | 340 | 100 |
| *Number of Dependents* | | |
| 0—5 | 282 | 70.35 |
| 6—10 | 45 | 23.23 |
| 11—15 | 13 | 3.10 |
| Total | 340 | 100 |
| Mean | 3 | |
| *Educational qualification* | | |
| Islamic/Arabic | 110 | 32.4 |
| Vocational | 26 | 7.6 |
| Primary | 57 | 16.8 |
| Secondary | 98 | 28.8 |
| Tertiary | 49 | 14.4 |
| Total | 340 | 100 |

*Source: Field Survey, 2016*

Age, Religion, marital status, and education of the respondents portraying their personal characteristics were evaluated and presented in Table 4.1 above. The result shows that a large number of the respondents in the study area were youth with the average age of about 27 years. Similarly, more than 97% of the respondents were Muslims. On the marital status 47% of the respondents are married while the other remaining respondents are not married. This is not surprising considering that the average age of the respondents being 27 years. Note that under normal circumstances, youth in most part of the rural and semi urban areas of developing countries like Dutse of Jigawa state in Nigeria got married before their 30th birthdays. The average number of children in this study is also not astonishing considering the average age of the respondents.

The level of educational achievement of the respondents shows that 32.4% attended Islamic schools and they are on the vocational trainings which is not unexpected since about 15% of the okada riders at least attain one tertiary education or another. These are categories of graduates that did not get job and revolve to join the business of riding motorcycles to earn a living

*The Profile of the Business activities of the Respondents*

The profile of the operator's business activities is presented in the table below

Table 4.2: Showing Profile of Operators Business Activities. (n=340)

| Responds | Frequency | Percentage |
|---|---|---|
| *Experience ( year)* | | |
| 1 to 5 | 188 | 55.3 |
| 6 to 10 | 116 | 34.1 |
| 11 to 15 | 30 | 8.8 |
| 16 to 20 | 6 | 1.8 |
| Total | 340 | 100.0 |
| Mean | 5.73 | |
| *Mode of Operation* | | |
| Hired operator | 70 | 20.6 |
| Hire purchase | 32 | 9.4 |
| Owners operator | 238 | 70.0 |
| Total | 340 | 100.0 |
| *Hours worked per Day* | | |
| 1 to 5 | 30 | 8.8 |
| 6 to 10 | 209 | 61.5 |
| 11 to 15 | 101 | 29.7 |
| Total | 340 | 100.0 |
| Mean | 9.44 | |
| *Daily Turnover* | | |
| 500 to 1000 | 54 | 15.9 |
| 1100 to 1500 | 109 | 32.1 |
| 1600 to 2000 | 104 | 30.6 |
| 2100 to 2500 | 37 | 10.9 |
| above 2500 | 36 | 10.6 |
| Total | 340 | 100.0 |
| Mean | 1804.41 | |
| *Daily Profit* | | |
| 100 to 1000 | 24 | 7.1 |
| 600 to 1000 | 161 | 47.4 |
| 1100 to 1500 | 105 | 30.9 |
| 1600 to 2000 | 36 | 10.6 |
| above 2000 | 14 | 4.1 |
| Total | 340 | 100.0 |

| Responds | Frequency | Percentage |
|---|---|---|
| Mean | 1179.71 | |
| *Wealth Accumulated* | | |
| 10000 to 50000 | 95 | 27.9 |
| 51000 to 90000 | 97 | 28.5 |
| 91000 to 140000 | 33 | 9.7 |
| 141000 to 180000 | 57 | 16.8 |
| above 180000 | 58 | 17.1 |
| Total | 340 | 100.0 |
| Mean | 101,000 | |
| *Aver. Daily Expenditure* | | |
| 100 to 500 | 157 | 46.2 |
| 600 to 1000 | 174 | 51.2 |
| 1100 to 1500 | 7 | 2.1 |
| 1600 to 2000 | 2 | .6 |
| Total | 340 | 100.0 |
| Mean | 615.29 | |

*Source: Field Survey, 2016.*

*Multiple Regression Result*

Three Models are tested using regression analysis the result is presented below

*Factors Determining Poverty of Motorcycle Riders-Using Income level*

The result of Multiple Regression analysis on the factors determining poverty level of the Self-employed motorcycle riders using income as proxy for poverty is presented in Table 4.3. The constant variable in the model representing other variables not mentioned in the model is statistically significant at 1%. The $R^2 = 0.737$ and the F= 116.090. From the model, coefficients of independent variables are as follows; Experience of the rider (β= 0.690), Age of the rider (β= - 0.132), Level of Education of the rider (β= 0.012), Mode of Operation (β= 0.072), Marital Status (β= -0.021), Number of Dependents (β= -0.033), Number of Hours Worked (β= -0.085) and Turnover (β= 0.831).

Table-4.3 Multiple Regression Result on Income

Dependent variable: Income of the Respondents

| Variables | Coefficient | Std. Error | T | Sig. |
|---|---|---|---|---|
| (Constant) | | .172 | 6.031 | .000* |
| EXP | .690 | .044 | 1.970 | .050*** |
| AGE | -.132 | .050 | -3.841 | .000* |
| EDU | .012 | .018 | .397 | .691 |
| MOP | -.072 | .033 | -2.470 | .014** |
| MST | .021 | .048 | .622 | .535 |
| NOD | -.033 | .061 | -1.016 | .310 |
| HOP | .085 | .055 | 2.457 | .015** |
| TOV | .831 | .026 | 24.471 | .000* |
| $R^2 = 0.737$ | | | | |

Level of Significance at 1% (*); 5% (**); 10% (***).; **Source:** Authors' Computations.

The coefficient of experience of the rider (EXP) has a positive sign and statistically significant at 5% level. This shows that experience is a major determinant of the income of the self-employed motor cycle riders in Dutse Metropolis. Similarly, The coefficient of age of the rider (AGE) is (β= -0.132). It carried a negative sign and is statistically significant at 1% with probability of 0.000. This is in line with our *apriori* expectation., it implies that, the higher the age of the rider the lower the income he can generate in the business. This may be due to the fact that, young riders may have more strength to take longer hours doing the business than the older ones.

Moreover, the coefficient of Education (EDU) of the rider is 0.012. It has positive sign but is not statistically significant at any level. The interpretation is that, education is not a major determinant of the income of the self-employed motor cycle riders in the Metropolis.

In line with *apriori* expectation, the coefficient of Mode of operation (MOP) is β=-0.072, it carries a negative sign and statistically significant at 5%. This implies that owners' operator riders generate more income in the motor cycle business than hired operators and hire purchase riders. the coefficient of Marital status (MST) is β=0.021. It is positive but statistically not significant at any level. This implies that marital status is not a major factor that determines the income level of the riders. Number of dependents is another independent variable that was studied. The coefficient is β= -0.311. It is negative and statistically not significant. This implies that number of dependents just like the marital status is not a major determinant of the income level of the motor cycle riders. The coefficient of Number of Hours of operation (HOP) is β=0.085. It is positive and statistically significant at 5%. This implies that Hours of operation is a major factor that influences the income capacity of the motor cycle riding business in Dutse metropolis. In other word the higher the hours worked the higher the income in the business Lastly, the coefficient of Turnover (TOV) is β=0.831. It is positive and statistically significant at 1%. The magnititude of the regressor of turnover place it as a major factor that influences the income level of the Business. The coefficient of determination $R^2$ for income stood at 0.733, whereas F-statistics coefficient was found to be 116.090. This implies that all the variables were approximately jointly significant. The model was found to be adequate in explaining the relationship among the variables. This implies that there is a significant relationship between riders socio-economic characteristics and their ability to generate income in the business which make us to reject null hypothesis one and accept the alternative hypothesis Consequently, it is clear that only experience (EXP) , age (AGE), mode of operation (MOP), hours worked (HOP) and turnover (TOV) are the major determinant of Income of the motor cycle riding business in Dutse Metropolis of Jigawa state, Nigeria

*Factors Determining Poverty of Riders Using Consumption Expenditure*

The Result of Multiple Regression Analysis on the factors determining poverty level of the Self-employed Motorcycle Riders using Average Daily Expenditure as proxy for povertyis presented in Table 4.4 below:

Table-4.4 Multiple Regression Result on Daily Consumption Expenditure

| Dependent variable: Average Consumption Expenditure of the Respondents | | | | |
|---|---|---|---|---|
| Variables | Coefficient | Std. Error | T | Sig. |
| (Constant) | | .184 | 3.589 | .000* |
| EXP | .240 | .048 | 3.922 | .000* |
| AGE | .055 | .054 | .922 | .357 |
| EDU | .037 | .019 | .737 | .462 |
| MOP | .090 | .036 | 1.759 | .079*** |
| MST | -.090 | .052 | -1.540 | .125 |
| NOD | .134 | .065 | 2.373 | .018** |
| HOP | .096 | .059 | 1.580 | .115 |
| TOV | .327 | .028 | 5.536 | .000* |
| $R^2$ = 0.204 | | | | |

*Level of Significance at 1% (*); 5% (**); 10% (***); Source: Authors' Computations.*

The result of multiple regression analysis using Average Daily ConsuptionExpenditure as proxy for poverty level is presented in Table 4.3. The $R^2$ = 0.204. and the F= 10.582. Meaning that more than 20% of the variation in the average expenditure of the respondents is accounted for by independent variables are as follows; Experience of the rider (β= 0.240), Age of the rider (β= -0.055), Level of Education of the rider (β= 0.037), Mode of Operation (β= 0.090), Marital Status (β= -0.090), Number of Dependents (β= -0.134), Number of Hours Worked (β= -0.096) and Turnover (β= 0.327).

The coefficient of experience of the riders (EXP) has a positive sign and statistically significant at 1% level. The result confirms the earlier result presented using income as proxy for level of poverty. It indicated that experience is a major determinant of the daily expenditure of the self-employed motor cycle riders in Dutse Metropolis. However, The coefficient of age of the rider (AGE) carries a negative sign but is not statistically significant. This is contrary to the result presented earlier. It implies that, age is not a determinant of the daily expenditure of the riders in the study.

The coefficient of Education (EDU) of the rider is 0.037 and also positive but is not statistically significant at any level. This show that is education is not a major determinant of the daily expenditure of the self-employer motor cycle riders in the Metropolis of the study.

In line with *apriori* expectation, the coefficient of Mode of operation (MOP) is β=0.090, it carries a positive sign and statistically significant at 10%. This implies that owners' operator riders spend more than hired operators and hire purchase riders. The result is similar to the ealier result presented.

The coefficient of Marital status (MST) is β=-0.090. It carries a negative sign but statistically not significant at any level. This implies that marital status is not a determinant of the daily expenditure of the riders in the study. The coefficient of the Number of dependents is positive and statistically significant at 5%. This confirms our *apriori* expectation implies that number of dependents is a major determinant of the income level of the motor cycle riders. The positive relationship indicate that the higher the number of your dependent the higher your expenditure. The coefficient of Number of Hours of operation (HOP) is β=0.085. It is positive but statistically not significant at any level this implies that Hours of operation is not a major factor that influences the daily expenditure of the motor cycle riders in metropolis.

The coefficient of Turnover (TOV) is β=0.327. It is positive and statistically significant at 1%. The result is similar to the result presented in the income model it implies that turnover is a major determinant of both income and expenditure of the motor cycle commercial riders in Dutse metropolis. The coefficient of determination $R^2$ for employment stood at 0.204, whereas F-statistics coefficient was found to be 10.582. This implies that all the variables were approximately jointly significant. The model was found to be adequate in explaining the relationship between dependent variable and the independent variables. This implies that there is a significant relationship between riders' socio-economic characteristics and their daily expenditure. Therefore we reject null hypothesis two and accept the alternative hypothesis. It shows that the only determinants of the daily expenditure of the motor cycle riding businesss in Dutse Metropolis of Jigawa state of Nigeria are experience (EXP), mode of operation(MOP), number of dependents (NOD) and turnover (TOV).

*Factors Determining Poverty of Riders-Wealth Accumulation*

The Result of Multiple Regression analysis on the factors determining poverty level of the Self-employed motorcycle riders using wealth accumulation as proxy for povertyis presented in Table 4.5. The constant variable in the model representing other variables not mentioned in the model is statistically not significant at any level. The $R^2 = 0.156$ and the F= 7.627. From the model, coefficients of independent variables are as follows; Experience of the rider (β= 0.015), Age of the rider (β= - 0.064), Level of Education of the rider (β= 0.168), Mode of Operation (β= 0.288), Marital Status (β= -0.063), Number of Dependents (β= -0.023), Number of Hours Worked (β= -0.173) and Turnover (β= -0.173).

From the result, the coefficient of experience of the rider (EXP) has a positive sign and statistically significant at 5% level. This is in line with our *apriori* expectation. This shows that experienced riders accumulate more wealth than the less experienced riders in the self-employed commercial motor cycle riding in Dutse Metropolis. Similarly, The coefficient of age of the rider (AGE) is (β= -0.064). and it carries a negative sign but is statistically not significant. This is in line with our *apriori* expectation. It implies that, age is not a determinant of wealth accumulation in the commercial motor cycle riding business in the metropolis.

Moreover, the coefficient of Education (EDU) of the rider is 0.168. It has positive sign and statistically significant at 1% level. The interpretation is that, education is a major determinant of the wealth accumulation of the self-employer motor cycle riders in the Metropolis. In other word educated rider accumulate for asset from their income in the business than the less educated rider

Table-4.5: Multiple Regression Result on wealth accumulation

| Dependent variable: Wealth Accumulation of the Respondents | | | | |
|---|---|---|---|---|
| Variables | Coefficient | Std. Error | T | Sig. |
| (Constant) | | .490 | 1.076 | .283 |
| EXP | .150 | .127 | 2.383 | .018** |
| AGE | -.064 | .144 | -1.041 | .299 |
| EDU | .168 | .051 | 3.236 | .001* |
| MOP | .288 | .094 | 5.484 | .000* |
| MST | -.063 | .138 | -1.050 | .294 |
| NOD | .023 | .173 | .398 | .691 |
| HOP | .173 | .156 | 2.783 | .006*** |
| TOV | .173 | .076 | 2.843 | .005** |
| $R^2 = 0.156$ | | | | |

*Level of Significance at 1% (*); 5% (**); 10% (***);* ***Source:*** *Authors' Computations.*

In line with *apriori* expectation, the coefficient of Mode of operation (MOP) is β=-0.288, it carries a negative sign and statistically significant at 1%. This implies that owners' operator riders accumulate more wealth than the hired operators and hire purchase riders. This may be because the previous result shows that owner operators get more income in the motor cycle business than hired operators and hire purchase rides so they may accumulate more assets.

The coefficient of Marital status (MST) is β=-0.063 and is negative but statistically not significant at any level. This implies that marital status is not a major factor that determines the wealth accumulation level of the riders. Number of dependents is another independent variable that was studied. The coefficient is β=0.023. It is positive but statistically not significant. This implies that number of dependents just like the marital status is not a major determinant of the wealth accumulation of the motor cycle riders. The coefficient of Number of Hours of operation (HOP) is $\beta$=0.173. It is positive and statistically significant at 10%. This implies that Hours of operation is a major factor that influences the capacity of the motor cycle riding business in metropolis to accumulate wealth. In other word the high the hours worked the higher the wealth accumulation. Lastly, the coefficient of Turnover (TOV) is $\beta$=0.1731. It is positive and statistically significant at 5%. This shows that turnover is the major factor that influences the wealth accumulation of the rider. The coefficient of determination $R^2$ for employment stood at 0.156, whereas F-statistics coefficient was found to be 7.627. This implies that all the variables were approximately jointly significant. Even though the $R^2$ is low but the value of the F-statistics in the model was found to be adequate in explaining the relationship among the variables. This implies that there is a significant relationship between rider's socio-economic characteristics and his ability to accumulate wealth. Therefore, the null hypothesis three is rejected and the alternative hypothesis is accepted. Consequently, it is clear that only experience (EXP) and Education (EDU), mode of operation (MOP), hours worked (HOP) and turnover are the determinant of wealth accumulation of the motor cycle riding business in Dutse Metropolis of Jigawa state of Nigeria.

**5. Conclusion and Recommendations**

One of the major finding of the study revealed that commercial motorcycle riding business in Dutse Metropolis is very important tool in poverty alleviation in the state that the average daily income of the motocycle riders is above the national poverty line of 2 dollars a day. . The study further revealed that experience (EXP) , age (AGE), mode of operation (MOP), hours worked (HOP) and turnover (TOV) are the main determinant of poverty alleviation for the commercial motorcycle riders in Dutse Metropolis of Jigawa state, Nigeria The study utilized income, consumption and asset accumulation of the riders as the yardstick for measurimg the level poverty for the respondents

Also, the study revealed that commercial motorcycle business operation in study area serve majority of the market participants' means of livelihood. Accordingly, it generates employment opportunity, most especially for the youth in and around the Dutse Metropolitan area of Jigawa state. Overall, on the basis of the aforementioned findings of the study, the following policy recommendations are put forward:

- The time has come for the government at all levels to take a holistic approach at the commercial motorcycle business operation with a view to strengthening the overall strategy of regulating the conduct of the operators.
- Consideration should be made to bring on board public private partnerships in managing the motorcycle industry in a manner that is economically viable and sustainable.
- Government should regulate the sector properly and promote safety net of the riders and the pedestrian. Federal road safety commission and other related agencies should be instructed to conduct training of the riders to minimise road accident and other related traffic problems associated with the business
- Finanlly, further research should be undertaken to investigate the effect of having saving schemes for the motorcycle operators on their livelihoods

**References**

Adeleye, A. C. (2011). Commercial motorcycles stage a violent protest Nigerian (pp.5-7). Chronicle.

Adesanya, A. (1998). The use of Motorcycles for Public Transportation in Nigeria: The situation in Ibadan, NISER Monograph Series, No. 6.

Agossou N., (2004). The Stages of Economic Growth: A Non-communist Manifesto. London, Cambridge University Press.

Akpan, P. U. (2012). Commercial motorcycles ban not the solution to crime. Christian Bulletin, 19(5), 41-43

Chioma, P. (2010). Okada ban: Different strokes for Lagos residents. September 9, 2010 Compass, 31-32.

Chukwu, C. C., Okey, A., Boco, E. E., &Oko, N. I. (2008). Commercial motorcycles in a democracy: A sociological post mortem of the calabar Riot. International Researcher, 1(3), 12-22.

Fasakin, J. O. (2001).Some factors affecting daily profits of Commercial Motorcycles in Akure, Nigeria" Transport Policy, Vol. 8, No. 1: 63-69.

Folawewo, A.O. (2006). Determinants of Informal Sector Labour Demand: An Application of Alternative Methodological Approaches to South Western States of Nigeria. Applied Econometrics and International Development, Vol. 6, No.2; pp. 147-162.

Gbadamosi, K. T. (2002). Traffic regulation and traffic accidents in Nigeria: A spatial analysis. An unpublished Ph.D thesis presented to the Department of Geography University of Ibadan, Nigeria.

Gbadamosi, K. T. (2006). The emergence of motorcycle in urban transportation in Nigeria and its implication for European transport and contributors, Retrieved from http://www.doccs/google.com.

Muhammad A. A. (2014), An assessment of the role of informal self-employment on poverty reduction in sokoto metropolis, Nigeria. An Unpublished Msc. Dissertation Submitted to the Postgraduate School Usmanu Danfodiyo University, sokoto. Nigeria

Nnadozie, E. (2009). The security implication of commercial motorcycles (Okada) in our society (p.8). Sunday Vanguard.

Nwaorgu, F. (2012). Nigeria: The proposed ban on commercial motorcyclists. Retrieved from http://www.africanoutlookonline.com/index.php?

Ogunrinola, I.O. (2011). Employment and Earnings in the Urban Informal Sector of Ibadan. An unpublished Ph.D Thesis submitted to the Department of Economics ObafemiAwolowo University.

Ogunsanya A. A. and Galtima, M. 1993. "Motorcycle in Public Transport Service in Nigeria: Case Study of Yola Town", in J.S. Ikya (ed.), Urban Passenger Transportation in Nigeria. Ibadan: Heinemann: 191-207

Olubomehin, O. O. (2012). The Development and Impact of Motorcycles as Means of Commercial Transportation in Nigeria, *2*(6), 63–69.

Olubomehin, O.O. (2012). Road Transportation as Lifeline of The Economy in Western Nigeria, 1920 to 1952. African Journal of History and Culture, 4(3), 37-45.

Osez-Langley, P. (2005, June 8). The hypocrisy of our leaders. Daily Independent Newspaper, 32-33

Oyesiku K.O., 2001, City poverty and Emerging Mobility Crisis: The Use of Motorbike as Public Transport in Nigerian Cities, communication at the 9th World Conference of Transport Research, Seoul, 22-27 juillet, 16 p.

Oyesiku, O. O. 2002. "From Womb to Tomb" 24th Inaugural Lecture, OlabisiOnabanjo University. Ago Iwoye: OOU Press.

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

# Corruption as an Obstacle to Sustainable Development in Nigeria

Mohammed Ndejiko Mohammed

*Department of Political Science, Federal University Birnin Kebbi, Kebbi State, Nigeria*

**Abstract**

*At the time of independence many people where hopeful that Nigeria will soon develop to catch up with the develop nations of the world, because of abundant human and natural resources. After January 1966 however all our aspirations and desires or quests for development stated to wane overnight although many factors are counted for this but the more notable obstacle to sustainable development efforts in Nigeria is corruption which is the antithesis of progress and development as it creates political stability, social unrest and crime infected environment and breads in efficiency and incompetence. The study attempts to explain the effects of corruption on Nigerian's development and the anti corruption measures and strategies that should be put in place if meaningful development is to trickle down the grass root communities.*

**Keywords:** Corruption, Development and Sustainable

**JEL Codes**: M39

## 1. Introduction

Corruption is canker worm dieses that have eating deep into the fabric of our nation so much so that it is as presents one of the greatest obstacles to national development. To that extent Mobolaji and Atoyebi 2006 (Pg 195) argue that "despite abundance of natural resources the country has little impact if any on the standard of living of the citizens" Nigeria ranks among the twenty five poorest Nations in the world. Wild spread corruption is a symptom of a poorly functioning state and its is capable of retarding economic growth and development. Corruption is a threat to democratic governances, political stability and sustainable development. Corruption is so entrenched in Nigeria that no day will pass without the people talking about the phenomenon of corruption. Indeed it is so rampant and so endemic

> "*that we talk about it on daily basis in our work place, our homes and in our institutions of learning as a matter of fact we see corruption on the way and read about it on the daily news papers and magazines or is there anyone here who does not know **wetin you carry** or **Egunje connotes** (Justice Mustapha Akanbi 2003:64)"*

Because of its pervasiveness in Nigeria it has earned different names with which the phenomenon is called i.e settlement, Egunje and others. Corruption is so wide spread and so common that no Nigerian can deny or argue that there is no corruption. Indeed it has become an accepted way of life in Nigeria. Arnold (1977: 145). Indeed corruption has weakened the civil institution we inherited from our colonial masters. Hence it has deterred our progress, development and caused political instability, political decay and general poverty. Lamenting the bad effects of corruption on invested society Arnold argues that

> *"But when corruption reaches and passes certain level in the life of a society it takes a heavy toll from the credibility of the leadership of faith in the possibility of improving the society of any desire to work according to honest practices, in such an atmosphere it becomes difficult and sometimes impossible to persuade the young has they come into public scene for the first time as these are standard of morality to which they should and here indeed it becomes increasingly hard to crate ethical norm of behavior acceptable to society as a whole" (Arnold 1977: 144)*

The endemic and pervasiveness of corruption in our society had led military adventurers to justify their illegal takeover of government on corrupt practices by the government in power. Kirk Greene as cited in Ogbonna contends that

> *"Major Nzeoogwu who led the first coup of January 15th 1966 in Nigeria underscored the significance of corruption and the aims of the coup plotters to establish a strong united and progressive nation free from corruption and internal strife. He further warned that embezzlement, bribery and corruption, obstruction of the revolution are all offenses punishable by death sentence (Ogbonna 2004: 176)"*

In a similar vein, corruption was one of the principal reasons used by the coup plotters to over throw General Gowon administration in a bloodless palace coup in 1975. Other coups in Nigeria and other parts of the world are usually justified using corruption as the key point. At this juncture, it is important to say with emphasis that corruption is neither limited to Nigeria nor to poor nor developing countries of the world. It is rather a worldwide phenomenon; corruption has taken its toll among the developed nations of the world too. Its intensity and severity however, varies from one country to another. Justifying the scourge of corruption on some developed nations of the world Yaqub observes that

> *The canker worm has been found to afflict parliamentary as well as presidential system of governments. It has equally been associated with civilian and military (autocratic) regimes. In short governments have fallen from power as a result of the corruption and debasement of the system /office. For instance, president Nixon of the (USA) left office 19979 because of the water gate (electoral competition) scandal in the year 2001, the Philippine and Indonesian presidents were impeached having been investigated and established that they corruptly enrich themselves in office. Also some past Japanese prime minister left office on proven corrupt charge. The highly unstable Italian politics has been made so on account of high corruption politics Yaqub (2003: 188)".*

Recently too, the president of South Africa Jacob Zuma resigned his appointment because of the vote of no confidence passed on him by his party African National Congress (ANC) because of corrupt practices and money laundering. Michael Johnson as cited in Maduagwu (1996: 20) points out that "prior to 19th century, the use of public office for private gains was so common in Europe that it was not considered an abuse". Furthermore he maintains that "even today in Europe and America as indeed most countries all over the world are still battling to stem corruption in public life". The objective of this paper is a contribution to the discourse on the menace of corruption and its effects on sustainable development in Nigeria the paper is organized into seven parts. The first part is the introduction; the second part is conceptual clarification of corruption and sustainable development. The third section of the paper addresses the causes of corruption; the fourth section of the paper examines or deals with the effects of corruption on National development. The fifth section deals with measure of combating corruption an overview by past governments, then the sixth part deal with the measures and strategies to curb corruption and the seventh part is the conclusion.

**2. Conceptual Clarifcations**

The literature is replete with varied and many definitions of corruption and development, like other concepts in social science corruption and development are difficult to define because of the various form, which it takes. Moreover their interpretations and applications sometimes vary from one culture to the other. Hence corruption and development mean different things to different people Higims as cited in Nnadozie defines corruption to mean

> *"Stealing public funds, receiving bribes, unjustly seeking gifts, moneys, or advantages other than the law salary for advantage calculated to public duties" Nnadozie (2003:264)*

Likewise, Justice Akanbi the chairman of corrupt practices and other related offences commission Act 2000 defines corruption as

> *Including bribery, fraud and other released offences. The definition of gratification under the Act though, not elegantly couched is more elaborate. From a jurisprudential angle, however corruption has been defined as the misuse of entrusted power for private benefit" Both the intentional Monetary Fund (IMF) and the world Bank proffered a working definition of corruption as "abuse of public office (Akanbi 2003: 68)"*

Similarly, corruption is a deviation from the formal duties of a public role because of private- regarding, (personal close family private clique) precumery exercise of certain times of private regarding influence. This includes such behavior as bribery (use reward to pervert the judgment of a person in position of trust) Nepotism (appointment by reason of ascriptive relationship rather than merit and misappropriation (A leader appropriation of public resources for private regarding uses. Nye (1967: 419)

> *"Likewise Odekunle argues that in popular understanding any of the following is called corruption: asking; giving or taking a fee, or favour in exchange for the performance of a legitimate task for the perversion or the obstruction of the performance of such s task or the performance of an illegitimate task holding collusive price fixing, smuggling, transferring / pricing, inflation of prices, election rigging, illegal arrest for harassment or intimidation purposes, abuse/misuse/non use of office position or power dumping of obsolete machinery or outdated drugs, illegal foreign exchange transactions, legal but unobviously unfair and unjust acquisition of wealth, gilded crimes, certificate forgery, false accounting and claims, diversion of public cooperate or other persons money or property to direct or indirect personal use etcetera. (Odekunle 1986:31)"*

Heidenheimer as cited in Olopoenia (1998:17-18) argued that there are three basic definitions of corruption in the extant social sciences literature: the public office centered, the market centered and the public interest centered. Furthermore, he argues that each of this on its own has limited analytical usefulness. Therefore he refers to the definition of Khan which he says is all encompassing. To Khan

> *"Corruption is an act which deviates from the formal rules of conduct governing the action of someone in a position or public authority because of private regarding motives such as wealth, power or status" Khan (1996)*

Corruption can be defined as anti-social behavior conferring improper benefits contrary to legal and moral norms, and which undermines the authorities' capacity to secure the welfare of all Nigerians. (Osoba 1996:371). With us we view corruption to mean taking advantage of one's office or position either in the public or private organization to get extra benefits or favours which are not due to one under normal due process.

The concept of development is also examined by various scholars such as Dudley Seers, Trodaro and others, Dudley Seers as cited by Sapru (1994:4) argues that development involves the realization of the potential of human personality and went on to suggest that this was achieved through the reduction of poverty, unemployment and inequality. If one or two of these central problems have been growing worse especially if all three have, it would have been strange to call the result development even if per capital income doubled. Asked to review his meaning of development he felt it necessary to include self reliance and increase cultural independence. Similarly, Trodaro describes development as a multidimensional process involving changes in structures attitudes and institutions as well as the acceleration of economic growth, the eradication of in equality and the eradication of absolute poverty (Trodaro 1977:96).

Development is also defined as a process by which a continuous increase in a systems efficiency produces the condition which results in the general upliftment. Such upliftment could be material and quantitative while it could also be physiological and hence qualitative. This physical and physiological elements of development mutually reinforce each other to bring about the desired general upliftment which is measured by the general improvement in the well being of all the citizens of a country which is usually measured by the unhindered access to and availability of all the conveniences of life for the greatest number in a nation state. For example, citizens in the developed economy must have access to qualitative health facilities, good tarred roads, regular pipe borne water, affordable accessible schools, full employment and uninterrupted power supply. Imam Bello I.B. (2004:277)

Sustainable; BBC English dictionary defines sustainable as something that can be continued at the same level of activity or Pace without harming its efficiency and the people affected by it.

*Causes of Corruption*

Literature is replete on the causes of corruption in Nigeria. Scholars however vary on their approach and the factors they emphasize as being responsible for its cause.

Greed for materials wealth has been identified as one of the causes of corruption Musharaf Hussein (op cit: 17) argues that the alleged desire to seek for material wealth which is beyond one's capacity by all means in order to become rich over night and live a comfortable life can push one to embark on corrupt practice. It is our view that the greed for materials wealth is a root cause of corruption. The recognition and regard given to those who had made either by hook or crook means by the society also account of the pervasiveness of the problem. Nigerians will never care to ask what the sources and ways by which he has acquired the money over night. He would be regarded as having made it. Arnold 1977 cit: 147) has warned that " where social values are too obviously related to wealth corruption tends to have a field day".

Closely related to the above cause of corruption is the issue of misplaced priority and wrong value conception, which our society attaches to wealth. It is also another cause of corruption because seeing those crooks that get on, others are misguided into making accumulation of wealth their goal so that they can now have power, money and power sake is an example of misplaced priority and wrong value concept. This is why corruption and crimes keep on growing on a daily basis in our society.

Another factor which causes corruption in our society is the argument which says that our society aids and abet corruption by giving total recognition to those who become rich through bribery and corruptive means. Arguing along the same line, Maduagwu observed that corruption is largely a function of political culture. He argues that

*"Corruption thrives in Nigeria becomes the society sanction it. No Nigerian official will be ashamed let alone condemned by his*

*people; because he or she is accused of being corrupt the same applies to outright stealing of government or public money or property. On the contrary the official is hailed as being smart. He will be adored as having made it. He is a successful man and any government official or politician who is in opposition to enrich him corruptly but failed to do so will in fact be ostracized by his people upon leaving office. He would be regarded as a fool or selfish or the both" Maduagwu (1999: 18)*

Another cause of corruption according to Yaqub (2003 :190) is poverty that is accompanied by multifarious wants, forces people to indulge in one form of corrupt practice or another. Just as materials wealth for a different reason, can lead one into corrupt practice. Related to above argument is the uneven distribution of wealth among the various classes of the people in the society. The gap between rich and poor is getting wider on daily basis; this has resulted into social conflict and the roots of other antisocial behavior in our society.

Poor pay to public servants is often cited as one of the major causes of corruption in Nigeria. The take home pay of most public servants at the end of the month is nothing to write home about. Indeed the take home of most public servants is so meager that it could not take them home. Under this situation public servants might be tempted to engage in corrupt practices to make the two ends meet.

Inadequate enforcement of law and decrees is another cause of corruption. More often than not the laws of the country appear to be made more not the broken then to be kept because for no apparent reason most offenders thrive corruption without being brought to the book. Our laws are not being sufficiently enforced.

Musharcf Hussain (1983:17) attributed the cause of corruption to economic disparity and exploitation of the poor masses by those in position of power. He argues that those who hold key positions in our national affairs do not care about the masses at most of the time hence most die of hunger. That the artificial creation of economic disparity is indirectly responsible for adoption of corruption by the less privileged class due to jealously over the wealth of the upper class, the extended family system has been identified as another cause of corruption. Arnold Contends that"

> *"Where a man does well is instantly expected to take on all sorts of burdens connected with his relatives who besiege him for money or jobs or both. The great pressures upon any moderately well off Nigeria by his many relatives who besiege him for money or jobs or both. The great pressure upon any moderate well of Nigeria by his many relatives put him in the position where e demands upon his total income exceed the income. At that point he faces temptation to corruption. (Arnold 1977:47)*

Another cause of corruption is the issue of political power and position and lack of accountability. Before now many people struggle to get themselves appointed to high position to enable them use their position and power to achieve their aims immorally. Absolute power people say corrupts absolutely. Many public office holders act irrationally without recourse to due process. Some of them behave as if they are not accountable to superior officers.

Certain pattern of cultural practice in Nigeria has been identified by Yaqub (2003:190) as one of the causes of corruption. He argues that the existence of a system of patron client relationship where a reciprocity of gift exchanges is encouraged and accepted and widely practiced to the extent that seizing public property to give away as a gift may not be considered to be an offence. Arguing against this view Maduagwu contended that

> *"it is mere trivialization of the serious issue of corruption in the modern society for any one to suggest that corruption in the modern society for any one t suggest that corruption or embezzlement of public fund or extortion of money (Bribes) from people looking from jobs or contract or*

*other benefit from government could be equated to the customary requirement of bringing presents to the village Chief for permission to cultivate a land and such things" Madiagwu (1996 : 19)*

Stone, C.N Whielan R. H and Murin, W.J (1979: 366) argue that the oldest theory of corruption is the rotten apple theory. The argument of these scholars is that

"Most people act *responsibility, only a few weak characters succumb to the inevitable temptation of the world; any barrel of the apple is bound to have a few rotten ones in it and so, too it is in any occupation"*

Furthermore they argue that the police officials always explain police corruption this way they have also identified Extensive regulation and wide discretion in enforcement. These scholars argue that

*" the united states is a heavy regulated society we have a long and largely unsuccessful history of trying to legislate morality and control conduct. Abundant regulations combined with latitude in enforcement make a situation ripe for corruption" Stone, C.N Whielan R. H and Murin, W.J (1979: 366)*

In Nigeria, laws and decree are vaguely and not clearly stated there is the temptation on the part of the public officials who are charged with the implication of such rules, laws or decrees to use their value judgment to implement the laws to satisfy their personal desire and for their own advantage. Furthermore they have also identified loose guidance for and lax absence of strict rules on such matters as letting contracts or the absence of regular and detailed auditing procedure is invitations to corruption.

Finally we submit that lack of fear of God is another cause of corruption. The fear of God makes strong believe never to tell lie and always honest when it come to dealing or interacting with others. A religious minded citizen will make it a duty to help others and considered the life and properties of other fellow citizens equally valuable as his own. In a similar vein, a religious minded God fearing Judge will not twist judgment or pervert the course of justice for the sake of bribe no matter whatever amount they offered. It is the lack of the fear of God that make all categories of people to commit sine such as taking and demanding for bribe. If always have it and it is to him that we shall return to and would account for all deeds in earth including the money we have, this would restrain us from indulging in antisocial and ungodly behaviours such as corruption. Another cause of corruption is the shorter the time horizon for a leader in office the greater the incentive to plunder the economy and uncertainties about the length of tenure possibility of a counter cup detat could have accounted for massive plunder of public treasury under the different military regimes. Similarly apprehension of elected politicians about whether or not (and how soon) a military takeover of government would truncate their mandate could explain rapid embezzlement, it could be inferred that long tenure stability of democratic governance will be expected to diminished the intensity of official corruption in the public sector this is consistence with parfitts 1993 contention that democratic reform and necessary to effect long term reduction in the incidence of corruption (Akano 2005 :66)

*Effects of Corruption on National's Development*

Osoba (1996 :371) observes that corruption is a global phenomenon which means that the menace exist in developed , developing and under developed countries of the world. Therefore it will not be an over statements to say that no society is corrupt free. It is at present one of the greatness obstacle to national development. The hydra – headed monster tagged corruption is a menace that has progressively decimated national resources and systematically impeded sustainable development in the developed and under developed nations. The prevailing low per capital income couple with high level of poverty has progressively magnified the level of corruption and resulted in huge loss of public fund required to sustain developmental efforts in critical sectors of the economy Therefore it is not a mistake when the transparency international Chairman, Peter Eigen, submitted while launching the transparency International (TI) Corruption Perception Index 2004 in London on October 20 2004, that "Corruption in large scale public projects is a daunting obstacle to sustainable development, and result in a major loss of public funds needed for education, health care and poverty alleviation, both in developed and developing countries" (TI, 2004) (Akingboye 2004 :193). Empirical evidence from a number of researches conducted across the world show that corruption constitute negatively as it affects investment and economic growth as its often leads to all the negative consequences which are antithetical to national development so if corruption discourages investment, limits economic growth and development and alters the composition of government spending it unconsciously hinders future economy growth and development Bello (2004:277). It has also been observed those productions which are needed to bring about development the problem of lack or slow development can be seen in the unending struggle among Nigerian to retain or gain advantages of a fellow Nigerians. This is the basis of a biter ethnic policies and chaulivism, it is also the basis of the separation between the elite and non elite, between the poor and reach, between the producer and the consumer etcetera. The struggle of man to gain or retain certain advantages for himself in relation to his fellow men is the basis of the problems of the society Abdullahi (1986:9).

The most frequent and obvious charged against corruption is that by directing the flow of resources away from states projects into the pockets of individuals it hinder development, this argument assumes of cause that the bureaucracy and its political masters no best what makes for development, however one defines this process, whether in terms of richer country or lesser of wealth among it subject the evidence for this proposition is not convincing. On the contrary it is clear that not all official project do in fact assist development and even when they do it is not only the case that they are the best use of resources as much methodology evidence goes to show. Among sociological argument against corruption is that it often involves the creation of patron / Client links and certainly does not make for the impersonally and universality said to accompany development. However even in the west there are sufficient examples of particularistic social arrangement such as family, firms or great standing both old and new to suggest that the requirement of the universalism may be convincing the contingent will be necessary. And the rising incidence of street begging among others, other factors such as poor economic policies and inefficiency in resource utilization can also aggravate the problem of under development and poverty in low income countries (Akano 2005 :72 – 75) Onyedika & Onuorah in the Guardian October 21st 2004 :22 as cited in Simbne Okoosi (2006 :31) states that in 2004 global Corruption Perception Index (CPI) ranked Nigerian as the third most corrupt county in the world after Haiti and Bangladash. That the T1 2004 report estimates billions of dollars are lost to bribery in public purchasing citing the oil sector in many nations as a particular example. The report also states that as corruption level persist national development as social security are compromised as poverty bites harder conscripting more and more citizens of this county into the unfortunate wretched class Simbne Okoosio (2006 :31). Furthermore he maintains that despite the fact that oil is the main stay of the economy accounting for more than 80% of the nation earnings corruption threatens the socio economic and political development process he also states that worrisome about the state of poverty was UNDP maintains that Nigeria 70% rise in poverty despite the fact that she had earned S200 Billions Dollars in Oil revenue since 1970. Nigeria has nothing to show for this except for the growth of corruption in our society (Simbine Okoosi 2006 :31).

He also agues that political corruption affects democracy in that it can do great damage to the legitimacy of government and once legitimacy is not guarantee political stability is in turn threatened. Furthermore he posit that it is important to worry about corruption since recent empirical studies demonstrate that high political corruption levels weaken democratic institutions, reduce foreign and domestic investment and slow overall economic growth (Simbine Okoosi 2006 :33). Summarizing recent findings on the effect of corruption, he cites the findings by Eiliot 1997) on the effect of corruption as follows

> *"when it is pervasive and uncontrolled corruption thwarts economic development and undermines political legitimacy as pervasive variants result in wasted resources, increased inequity in resource distributions, less political competition and greater distrust of government creating and exploiting opportunities for bribing at high levels of government, also increases the cost of government spending and may dangerously lower the quality of infrastructure even relatives petty or routine corruption control the government of revenue, Distort economic decision making and impose negative externalities on society such as dirtier air and water or unsafe buildings. Eiliot as cited in (Simbne Okoosi 2006 :30-34)*

He also states that political corruption is specifically about the miss use of authority the abuse of public office for private games it afflicts all forms of government yet it posses particularly serious dangers for democratic and democratizing ones because it is more likely to be exposed under conditions of the constitutionalism and the press freedom and maintains that because this exposure can do great damage to political legitimacy on which democracy depend for the survival much more than authoritarian regimes he maintains that Diamond's Examination of Nigeria exposes the damage that corruption does to democratic development (Simbne Okoosi 2006 :37).

On the nexus between democracy and corruption he observes that the democracy is not safe in a corruption ridden polity because a corrupt polity can never hold a free and fair election resulting in an illegitimate government and thus a good foundation for political instabilities. Also Ojo has cited in Simbne Okoosi (2006 :40) argues that democracy is not safe in a country where large majority of the population are illiterates and poor.

**3. Measures at Combating Corruption in Nigeria an Overview**

Corruptions has indeed become a permanent phenomenon that has eaten deep in to the entire fabric of our nation, it is therefore out of this abiding concern that various government in Nigeria has put concerted effort to combat the menace of corruption to bring about good governance. Hence that various the various past government in Nigeria have constituted probes, panels and tribunals and past decrees to try does involve in the corrupt practices.

General Gowon Regime 1966 – 1975 was ousted in the bloodless palace coup, because the regime was entangled in the corruption mess indeed by 1974 report of un accountable massive wealth of Gowon's Military Governors and public office holders filled the Nigeria Press. General Murtala Muhammed became the head of state after Gowon over throne July 1975 – February 1976. He introduced a number of measures to combat corruption. He promulgated decree no 38 of 1975 which lead to setting up of corrupt practice investigation bureau vested with wider powers to investigate the access of governor who served during the Gowon Regime and a lot of what have been amassed were confiscated. The result of asset investigation panel was broadcasted to the Nation according to Maduagwu (1996 :16) the following were the major decisions of the broadcast

1. All the Ex military governors and the former administrator of East central state with the exception of two

governors Johnson and Rotimi were found to grossly abused their offices and guilty of several irregular practice.

2. All the governors found guilty were dismissed from the military and were made to forfeit some of the access to their state the two clean were also retired from the military and on the whole total value of assets confiscated from the governor's was over N10 Million Naira. Furthermore he observes that Muhammed purge was not limited to the state governor rather its spread to the judiciary the police the civil service some parastatals and even the universities, several public officers were dismissed for corrupt practices or retired with or without benefit for redundancy or similar reasons at the end of the great purge at lease 10,000 workers were dismissed from civil services for corrupt practices. General Muhammed also set up the public complain commission through decree No 31 in October 1975 to keep vigilance over the commitment or public governments Ogbona (2004:177) observes that the common complaints lodged before the commission were in respect of delay in payment of retiring benefit (Pension and Gratitude) death gratitude, wrong dismissal, terminations of appointment and loss of the posted money order a parcels. Akanbi 2003:65) however observes that sadly the corrupt practice decree no 38 which general Murtala Sought to purge in country of corruption did not achieve the desire objective, the corrupt practices bureau establish under the act did not make any headway in terms of steaming the surging wave of corruption and corrupt practices, it might be true that the decree no 38 and the breau establish did not achieved the desired objectives but the fact remains that in the history of Nigeria no leader has take a bold steps to steam corruption like the late General Murtala Muhammed. After his death in an abortive Dimka's coup General Olusegun Obasanjo the second in command became the head of State and handed over power to the democratically elected Shehu Shagari in October 1979

The second republic of Shehu Shagari as the president October 1979 to 31st 1983 has been described as the most corrupt period in Nigeria. Shagari established the ethical revolution commission to intensify the fight against corruption and to reinforce the national ethic of discipline self reliance and patriotism contained in section 22 of the 1979 constitution, the regime also established code of conduct tribunals and code of conduct bureau CCP the bureau has offices in all states of the federation. Ajayi (2003 :162) however observed that beyond the establishment of offices in all states and compulsory declaration of assets by concerned officials no cases of breach of the code was add non was any of the officials tried by the tribunal. Indeed monumental financial standards were recorded during the regime at all level of governors for instance the alleged multimillion rise scandals involving Alh. Umar Diko a powerful transport minister was not investigated by either the regime or the code of conduct bureau. Maduagwu (1996: 15) however lamented that nothing of cause came out of Shagari Feeble attempt and combating corruption before the regime was ousted in a military coup in 31st December 1983. The Shagari administration not only lacked a clear assessment of the magnitude of corruption in the country but also was inept.

The regime was succeeded by General Muhammed Buhari/ Tunde Idi agbon on 31th December 1983 to August 25th 1985. Like General Murtala administration, Buhari's Administration committed itself to fighting corruption and infused discipline in the society, Buhari Set up numerous tribunals at the federal and state levels to probe ministers, Governors and some public servants of the ousted regime to facilitate the recovery of ill gotten wealth and properties from the ministers, governors and others. Decree 3 of 1984 recovery of public property was promulgated and backdated to

September 1979. Those of them found guilty were not only jailed but were made to forfeit their assets and refunded sums of money. Buhari also set up special tribunal (miscellaneous offence decree No 20 of 1984 to try varied offences including corrupt officers.) The counterfeit currency (special provision) decree No 2 was also promulgated to stem down currency related offences which was punishable by death penalty to Nigerians found guilty of Money laundry by the tribunal were publicly executed.

In order to sanitize the society war against indiscipline was introduced with some measure of success in the areas of discipline and work ethics. The government also passes the single service commission and other statutory bodies removal from office decree in 1984. (Gboyega 1998 :4) observed that the decree "empowered the government to remove from office of public servant suspected to have abuse his office, the public offices / special provision / decree 1984 precluded the courts from entertaining any suite from anybody arbitrarily remove from public service by the government". The abolition of the code of conduct bureau a derivation of 1979 constitution was not clear and a food for thought and to the sincerity of the regime anti corruption posture Ajayi (2003 :184) argued that the promulgation of the public officers protection against false acquisition decree no 4 of 1984 which curtailed the freedom of the press to criticize and expose nefarious activities of government functionaries further lend credence to the doubt over the regime seriousness combating official corruption. The regime flouted it own standing rule of through searching of imported containers during the period of change to new naira currencies by granting immunity against the search other to a northern Emir who brought to the country through Murtala Muhammed airport 53 suite cases the regime did not last long before it was ousted in the bloodless Palace coup on 25 August 1985.

General Ibrahim Babangida took over the leadership of the country and unlike the other past military leaders he addressed himself as the president. In an attempt to combat corruption, he set up a National Committee on corruption and other economic crime (NCCEC) under the chairmanship of Justice Kayode Eso, a retired supreme court Judge. The committee identified causes of corruption and made far reaching recommendations and indeed prepared a draft legislation covering.

a. Corruption and economic crime
b. Establishment of independent commission against corruption
c. Private investigation
d. Establishment of corrupt practice court

Immediately he took over, he set up judicial tribunal of inquiry which reviewed the cases of the jailed politician by Buhari Regime. Maduagwu (1996:17) contended that based on the recommendations of the tribunal Babangida "reduced the sentences of more than 50 convicted former officials and acquitted 12 completely" Also in 1986, Babangida banned 49 politicians who had been implicated in corruption from public office for life but he later unbanned those banned by him. In 1993, Babangida's government passed the forfeiture of assets (Release of certain forfeited properties etc) decree No 24 1993. Gboyega1994 :17 argued that the "decree released to their original owners assets confiscated by the Murtala Mohammed/Obasanjo regimes under legal Notice No 33 of 1996 because they were improperly acquired. Lamenting this action of Babangida Maduagwu observed that

> *"ironically in 1991, sixteen years later Babangida reverse the decision of Murtala Mohammed and promulgated decree which nor only restore the ranks of the dismissed erstwhile military governor, but also returned their seized assets" Maduagwu* (1996 :16)

Gboyege (1998:8) further observed that Babangida treated allegation of corruption of his appointees with extreme levity. Hence corruption accusations against vice admiral Augustua Aikhomu by Alhaji Mohammed Bashir in June 1986, the accusation against Navy Captain Oladode George of

Indiscriminate awards of contracts, leading to the supply of obsolete typewriter, facsimile machines and boats in 1990, the accusation against Group Captain Ernest Adeleye, the state governor of fraud in the operation of flying doctors scheme and the administration of the state budget by Dr. Dminwa Deni Fiberisiman the commissioner of health in Rivers, and the accusation of governor Navy captain Mohammed Lawal, the Governor of Ogun State of flagrant abuse of office by Dr. Olaseni, Akintola Bello, the commissioner of finance were indications that "corruption was pronounced in babangida's regime. Gboyega (1998: 9) contended that although the allegations against some of these Governors were investigated some of them were retired from service but no further punitive action like forfeiture of ill gotten wealth was impounded". Corruption thrived and continued to escalate during Babangida 'regime. Thus general babangida has succeeded in raising corruption to an unprecedented level in Nigeria.

After Babangida came General Abacha who has been described as the greatest thief that ever ruled Nigeria (Odey as cited in Edimeh 2007:32). During his tenure (1993-1998), he also made effort to combat corruption by introducing war against indiscipline and corruption (WAIC). At this juncture, it should be pointed out that the introduction of WAIC was more of a symbolism because in reality the late Sanni Abacha was accused of been corrupt. He siphoned billions of Naria to foreign banks. He also changed MAMSER to National Orientation Agency (NOA) the Obasanjo regime has been lucky because some of the stolen money had been returned to the federal government.

General Abdulsalam's stay in power was very brief just from (June 1998 - may 1999). Ogbonna (2004: 178) argued that general Abdulsalam made some declaration which re-imposed people's confidence the regime would not tolerate corruption. He said that "under his administration, all rules and regulations designed to help honesty and transparency in dealing with government will be restored and enforced" Furthermore, " he re-affirmed that there would be no sacred cow to get away with the breaching of the rule of the law or prepare action corruption and evil". He promulgated the forfeiture of assets e.t.c (certain persons) decree No 53 1999 under which properties belonging to late Abacha in Nigeria and Sierra leone – his family, close aides ministers and civilian associate were confiscated for been acquired corruptly and illegally. Despite all these Abdulsalam regime has been accused of corruption. Despite all the past efforts of the past administration examined above corruption is still on the increase. At this juncture one may be tempted to ask why corruption still persists in Nigeria.

The democratic government of Obasanjo (1999-2007) when the military relinquished power to a democratically elected government under the leadership of Chief Olusegun Obasanjo Chief Obasanjo appeared a leader who would tackle the problem of corruption in Nigeria. Chief Obasanjo set up some bodies to deal with corruption these were the Independent Corrupt Practice Commission (ICPC) and the Economic and Financial Crimes Commission (EFCC) with these bodies he investigated and punished corrupt government officials including ministers, governors and legislators. People have questioned his electivity and extraneous modes of its operation hundreds of Nigerians believed that the EFCC was used to whip politicians and government officials into line and that it is only the dissenters or scape-goats that were punished for corruption also the Obasanjo administration has shown that there was a negative connection between corruption and policy making. One of the major causes of hardship experienced by Nigerians was the frequent increase in the prices of petroleum products; one reason given by Obasanjo for the fuel hike was that it is necessary to serve as the deterrent to smugglers. (Edimeh 2007:32-34)

## 4. Measures and Strategies to Curb Corruption in Nigeria

Despite the concerted efforts to curb corruption in Nigeria by the military regimes and the civilian regimes after the military rule from 1999 to present, it appears that the degree and the level of corruption has continued to grow at alarming rate and destroyed the Nations quest for sustainable development. Indeed it has become a permanent feature of our polity probably the growth of the menace in our society might not be unconnected with in adequate knowledge about the bad consequences of corruption on our society.

1. Hence our first step towards curbing the menace is to introduce an educational enlightenment to sensitize the general public about the negative effects of corruption on the Nations development. This can be handled by the Nation Orientation Agency local (NOA) and to take the crusade to villages and town in each local government of our state
2. Public accountability is sinequanon for any regime that would cut out corruption. The leaders ranging from the president, governors, chairman, senators, legislators and counselors should desist from paying mere lip service to the issue of combating corruption. They should be seriously committed to curbing it
3. Another strategy to curb corruption is a free and fearless press is a prerequisite for any real attempt to curb corruption practices of whatever kind
4. Fundamentally Nigerians should have a change of attitude towards money which is the first prerequisite for change to curb corruption
5. Heavy penalties have to be posed on sinners of corruption probably a deaf penalty of the amount that exceed a million Naira
6. Workers in the public Sector should be adequately remunerated in wages and salaries to adequately mobilize and cater for their family needs with this they cannot become beggars, begging for money all about before they can feed their family
7. The Institution of Independent Corrupt Practices (ICPC) and Economic Financial Crimes Commission (EFCC) should be strengthened and protected against the mechanization of powerful politicians whose interest and threatened by the existence of those anti corrupt bodies. Furthermore because of the delicate nature of their jobs their lives should be properly secured under life insurance scheme
8. Apart from paying members of the judiciary, fat salaries against temptation of the money bag politicians and others, there is the need for judicial review of the whole judicial personnel especially the judges t all levels with a view to throw out judges that can be easily compromised and those selling judgment to the highest bidders. No doubt the judiciary posed a clog in a wheel to a free corrupt society in Nigeria.

## 5. **Conclusion**

Our conclusion is that our past leaders in Nigeria were not sincere about the desire to curb corruption. All feeble attempt to curb corruption were motivated not out of genuine intention to curb corruption because there were shape differences between their pronouncement and the huge amount of money they usually steal from our treasury when they even create new institutions to tackle corruption they usually end up using them as a weapon to witch-hunt and punish there opponents by engaging on selective trials. The judiciary also has worsened the situation by engaging on unnecessary technical and legal delay on spurious reasons thereby delayed the administration of justice.

## References

Abdullahi, A (1986) Corruption the greatest obstacle to Nation Development in Adekunle F (ed) Nigeria: Corruption in development Ibadan university Press

Ajayi , k (2003) Bureau tic corruption and anti corruption strategies 1976-2001 in onu(ed) corruption and sustainable development, the world perspective onitsha book point ltd.

Akano, O (2005) Official Corruption institutional Witnesses and long run Economic growth Nigeria in Akinboye, S.O and Oluronde L (ed) Democracy, Good Governance and corruption in Nigeria. Lagos Frankard Publishers

Akanbi, M M A (2003) Implications of corruption on the Nigerian polity. A proper presented at the Annual public lecture of the P.G students association in Ilorin Researcher Vol 4 Nigerian publisher

Akinboye, S. O. (2005) Combating the scourge of corruption in Nigeria's fourth republic in Akinboye S.O and Olorode L (ed) Democracy, Good governance and corruption in Nigeria, Lagos Frankard Publishers

Arnold, G (1977) Modern Nigeria chapter fourteen corruption. London Longman Group Limited

Atoyebi, G.O and Mobaleji H (2006) Corruption, Accountability and Good Governance in Saliu H, Antali, E, Fauyeye J and oriole, E(eds) Democracy and development in Nigeria Vol 3 Social issues and external Relations Lagos Concept Publishers Ltd

Edimeh, F.O (2007) corruption versus sustainable development in Nigeria any resolution in sight? In Agwuama H.O, Adamu H, Mathew A.D, Daniel B.P and Abel E.O (eds) contemporary issues and challenges of sustainable development in the new millennium in Nigerian experience Lagos printed by Sam Artrade

Hussain, M. (1983) Causes, Areas and effects of corruption and its control New Nigerian Sunday May I5: page 7.

Imam Bello, I.B(2004) Corruption and national Development in Imam Bello I.B and Obadan m I (ed), Democratic Governances and development management in Nigeria Fourth Republic 1999- 2003.Ibadan Centre for local Government and Rural development Studies.

Khan, M.H (1996) A typology of corrupt transactions in developing countries RDS Bulleting

Maduaguru, M.O(1996) Nigeria in Search of Political Culture, corruption and Democratization in Aboyega (ed) corruption and democratization in Nigeria.Ibadan Agbo Areas Publishers

Nnadocie, O (2003) Corruption and productivity in the public service of third world countries. The challenge of Good Governance in Nigeria In Owe (ed), Corruption and substainable development, the third world perspective Onitsha book print Ltd.

Nye, J.S (1969)"Corruption and political development. A Cost Benefit analysis". The American Political Science Review June 61(2): 417-27

Odekunle, F (1986) Corruption in development: Definitional Methodological and theoretical issues in Adekunle F(ed) Nigeria Corruption In Development Ibadan University Press

Osoba, S.O (1996) "Corruption in Nigeria, Historical Perspective" in Africa Rewiewal of political economy PP371-386

Ogbonna, M.I (2004) The ICPC and the fight against corruption in Saliuih. H (ed) Nigerian under democratic rule 1999-2003 Ibadan. Ibadan University press

Sapru, R. K. (1994) Development administration New Delhi Sterling Publishers Private Ltd. India

Simbine-okoosi, A (2006) Democracy and development. Two Heavy Pillars for Nigeria's Greasy Hands of Corruption in Saliu, H, Amali E, Fayeye J and Onola E (eds) In Democracy and Development in Nigeria Vol3 social Issues any External relations Lagos concept Publishers.

Stone, CN, Whelan, R.k and Murin, W.J (1979) Political and administrative corruption in urban policy and politics in a Bureucratic Age. N.j Prentice Hall Inc Fajlehood Cliffs.

Todaro, M.P (1977) Economics for a developing world London LongMan Group LTD

Gboyega, A. (1996) Corruption and Democratization in Nigeria 1983-1993 in uboyesa(ed) Corruption and Democratization in Nigeria Ibadan Agbo publishers.

Yaqub, N.O (2003) The corrupt practices and other offences Act 2000 and the quest for the sanitization of the public service in Nigeria. In exploration of its feasibility in owulu(ed) corruption any sustainable development, the third world perspectives Onisha Book Point Ltd.

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

# Impact of Government Expenditure on Private Investment in Nigeria: 1986 -2016

Theresa A. Udenwa[1], Osuoha Rophina Chionyeka[2]

[1&2]*Department of Banking and Finance, Nasarawa State University, Keffi*

**Abstract**

*This study empirically examined the impact of government expenditure on private investment in Nigeria from 1986-2016. Time series data and econometric tools were used to test for the stationarity, and co-integration, while Auto Regressive Distributed Lag Model were adopted to estimate the long-run and short run impact of government expenditure and private investment in Nigeria. From the ARDL result it was shown that government recurrent expenditure and inflation rate in Nigeria have positive impact on private investment in Nigeria. On the other hand, the ECM results revealed that all the independent variables were positively related to private investment in Nigeria and based on the probability of the results all the independent variables were statistically significant in explaining the variation in private investment in Nigeria. Therefore, the study recommends that the government should adopt expansionary policy in order to increase the level of expenditure and in turn improve the level of private sector investment in Nigeria. This is because increased expenditure will increase the effective demand which in turn will increase the production level of private investors.*

**Keywords:** Fiscal Policy, Private Investment, Capital Expenditure, Recurrent Expenditure

**JEL Codes**: JI1

## 1. Introduction

The role of the government in accelerating economic growth has come under intense controversy since the emergence of Keynes in the 1930s. On the one hand, opponents of fiscal policy argued that government spending may hinder economic growth, due to the impact of raising tax on individual and firm. Such increase in individual and firm tax reduces aggregate demand and reduces profitability as well as investment of firms. This therefore impact negatively on potential investment and long run growth (Bakare, 2011).

Opponents of fiscal policy also argued that government spending may impact negatively on private investment, if government finances it spending through borrowings from banks. Such borrowings culminates in a raise in interest rates which consequently affects the cost of capital for the private sector from banks and thereby crowd out (compete away) private investment with adverse effect on economic growth. In contrast, proponents of fiscal policy advocated that government spending crowd-in private investment (Ebimobowei, 2010).

For instance, given the low rate of national savings and gross shortage of essential facilities (such as education, electricity, roads, among other) especially in developing countries and which are prerequisite for investment climate and growth, there is the need for government to provide such investment-enhancing essentials that can spur economic growth. Relatedly, the role of government in the remarkable sustained growth achieved by the newly advanced countries (especially Japan and China) has also been cited as the importance of government in spurring economic growth. Furthermore, the rapid response of various governments especially in the form of bailout to the (2007/2008) financial crisis, have also portrayed the importance of government spending as a stimulus to enhancing private investment.

In Nigeria, government expenditure has been on the rise owing to the huge receipts from production and sales of crude oil, and the increased demand for public goods like roads, power, education, communication, and health. Moreover, there is increasing need to provide both internal and external security for the people and the nation. Unfortunately, this rising government expenditure has not translated into meaningful growth and development, as Nigeria ranks among the poorest countries in the world. The result of government role in economic activities and the achievements in economic performance have been mixed. For instance, the economy will experience growth in real output in some years and declines in others. Meanwhile, the economy is mostly dominated by the public sector.

Despite several fiscal measures introduced since 1986, and given the prominence of fiscal policy in macroeconomic management in Nigeria, the private investment has not accelerated as expected in such a way to influence the other economic indicators such employment generation, reduction in poverty, increase in per capita income. According to Amana, Aigbedion, Nmo-Oyeleke and Onyishi (2018) the level of private investment contribution to gross domestic product in Nigeria has been on the average of 8.4 percent between 2010 and 2016. Therefore, the main objective of this paper is to examine the impact of government spending on private sector investment in Nigeria. To achieve this the rest of the paper is structured into four sections which are literature review, methodology, presentation and analysis of data and the final section is the conclusion and recommendations.

## 2. Literature Review

*Conceptual Review*

Investment according to Sisay (2010) is an act of current spending for expected future return. It expands the productive capacity of a nation and plays a crucial role in the economic growth and development process. Investment has been regarded as one of the primary engines of growth (UNCTAD, 2001. Udin, Chowburry and Udin (2015) believes that investment is one of the main components of aggregate demand. It plays an important role on economic growth. Two major categories of investment; private investment and public investment. Public investment is fully conducted by the government. By public investment, the government can improve economic situation of the country. Currently, it is observed that public investment and private investment simultaneously play great roles to rapid economic growth. Both the public and private investments are required to boost up real GDP where public investment has a big share compared to private investment.

Konor (2014) sees investment as having both private and public components, but in recent years, developing countries have placed greater emphasis on the development of the private sector since it has remained the main engine of growth in all modern economies across the globe. This sector enhances competiveness of a country´s products and services in both regional and global markets. Hence, most government are taking steps that will enable the private sector lead the country's transition to upper middle-income status. Some of these steps that are usually taken include targeting to reduce its inflation rate, interest rate, ensuring currency stability, expanding access to medium and long-term finance etc.

It has been long recognized by theory and empirical studies that private investment is the main contributor in achieving economic growth (Solow, Lucas, and others). Beddies (1999) and Ghura (1997) argued that private investment has a stronger and more favourable effect on growth rather than public investment since private investment is more efficient and less closely associated with corruption. Given the potential benefits of private investment, most governments have been uneasy or impatient with policies to increase its level. To make this vision a reality some developing countries have investment Promotion Centres (GIPC) established to finance, promote and facilitate investment in various sectors of the economy.

Amana, Aigbedion, Nmo-Oyeleke and Onyishi (2018) insist that private investment refers to gross capital formation plus net changes in the level of inventories, whereas public investment includes investment by government and public enterprises on social and economic infrastructure, real estate and tangible assets (Bakare, 2011). The combination of both private and public investments is referred to as gross capital formation in order to distinguish them from their counterpart, foreign investment. When foreign investment is on tangible asset, it is referred to as direct foreign investment and called portfolio investment when it is on shares, bonds and securities. According to Adeyemi Ogundinpe (2012) there has been intense debate by economists on the issue if the government should intervene to correct short-run fluctuations in economic activity. There have been contributions from various economists such as Solow, Barro, Keynes, Wagner, e and various schools of thought such as the classical, neoclassical, Keynesian etc.

Public or government expenditure on the other hand is an important instrument for government to control the economy. (Okoro, 2013) It plays an important role in the functioning of an economy whether developed or underdeveloped. Public expenditure was born out of revenue allocation which refers to the redistribution of fiscal capacity between the various levels of government or the disposition of responsibilities between tiers of the government.

Broadly speaking, government expenditure affects aggregate resources use together with monetary and exchange rate. Specifically government expenditure refers to the value of goods and services provided through the public sector. In the Nigerian economy public expenditure can broadly be categorized into capital and recurrent expenditure. The recurrent expenditure are government expenses on administration such as wages, salaries, interest on loans, maintenance etc., whereas expenses on capital projects like roads, airports, health, education., telecommunication, electricity generation etc forms the capital expenditures. These categorization, however, were not mutually exclusive but were indeed inter-linked. For instance, while capital expenditure gave rise to recurrent expenditure in most cases through the operational and maintenance costs of completed capital projects, the amount available for investment was a function of not only the size of revenue but also the amount that goes annually into the running of government (Agbonkhese and Asekome, 2014). According to Bashir, Hamzat and Rafiat (2017) while the recurrent expenditure refers to financial outlays necessary for the day-to-day running of government businesses, the capital expenditure refers to investment outlets that increase the assets of the state.

*Empirical Review*

There are quiet number of studies on the impact of government expenditure on economic growth in many economies including Nigeria among them are the work of Erden and Holcombe (2005) performed a study by applying several pooled specifications of a standard investment model to a panel of developing economies for 1980 to 1997, this study finds that public investment complements private investment, and that, on average, a 10 percent increase in public investment is associated with a 2 percent increase in private investment. The results also indicate that private investment is constrained by the availability of bank credit in developing economies. The same empirical models are run on a panel of developed economies. In contrast to developing economies, public investment crowds out private investment in developed economies. The results show that in a number of important ways, private investment in developed economies is influenced by different factors than private investment in developing economies. While, Hüseyin Şen and Ayşe Kaya (2013) examined the effects of government spending on private investment, evaluating the existence of crowding-out/-in effects, in Turkey for the period 1975-2011 employed the modified version of Aschauer's (1989) model, which shows the effects of each component of government spending taking place in the Turkish budget system, concluded that government current transfer spending, government current spending, and government interest spending crowd out private investment, whereas government capital spending crowds-in private investment in Turkey.

Using annual time series data from 1970 to 2011 Konor (2014) in a study of determinants of private investment in Ghana employed the ARDL methodology to estimate the results. The results indicate that gross domestic product affect private investment in the long run and inflation affect it in the short run. However exchange rate affects private investment both in the long and short run periods. This results suggest the need for the government to promote growth enhancing policies likes improvement of physical and human capital to stimulate private investment. The findings and recommendations of this study will therefore provide vital information relevant for policy formulation and implementation aimed at boosting private investment

In order to assess relationship between government expenditure and private investment in a case of small open economy, Lina Sinevičienė (2015) using cross-correlations and Granger causality tests applied data of Bulgaria, Estonia, Latvia, Lithuania and Slovenia during 1996 – 2012. The research results show that impact of government expenditure increase on private investment is very weak, but negative impact of government expenditure increase on private investment dominates, except in the case of Bulgaria; whereas the impact of private investment increase on government expenditure is very different in analyzed countries**.**

In Nigeria, Okoro (2013) using time series data of 32years period (1980- 2011), investigated the impact of government spending on the Nigerian economic growth. Employing the ordinary least square multiple regression analysis to estimate the model specified. Real Gross Domestic Product (RGDP) was adopted as the dependent variable while government capital expenditure (GCEXP) and government recurrent expenditure (GREXP) represents the independent variables. With the application of Granger Causality test, Johansen Co-integration Test and Error Correction Mechanism, the result shows that there exists a long-run equilibrium relationship between government spending and economic growth in Nigeria. The short-run dynamics adjusts to the long-run equilibrium at the rate of 60% per annum.

Similarly, the work of Nwosa, Adebiyi and Adedeji (2013) examined the relationship between components of public spending and private investments in Nigeria for the period 1981 to 2010 using an error correction modeling procedure, revealed that components of public spending have different impact on private investment both in the long run and the short run. Specifically, recurrent and government final consumption expenditure had positive (crowd-in) effect on private investment while capital expenditure had negative (crowd-out) effect on private investment. Thus, recommending that greater emphasis should be placed on capital expenditure. Also Awolaja, Oluwalaiye & Lawal (2015) performed a study on the effect of sectoral public investment spending on private investment in Nigeria using a neoclassical error correction analysis, the result of their findings showed a long run and short run crowding in of private investment by the public investment spending especially in the areas of defence, health education. This further show a positive relation between government capital expenditure and private investment in Nigeria.

Finally Amana et al, (2018) empirically examines the impact of government expenditure on private investment in Nigeria from 1986-2016. Time series data and econometric tools were used to test for the stationarity, and co integration, while Auto Regressive Distributed Lag Model were adopted to estimate the long-run and short run impact of government expenditure and private investment in Nigeria. The study revealed that at the long run Government Recurrent Expenditure (GRECEXP) and Inflation Rate (INFR) were positively related to Private Investment in Nigeria while Government Capital Expenditure (GCAPEXP) and Interest Rate in Nigeria (INTR) were negatively related to Private Investment. Also, at the short run all the independent variables were positively related Private Investment in Nigeria except interest rate as lag one.

In summary, most of the empirical studies reviewed focused on the impact of government expenditure or public spending on output and economic growth in Nigeria while this study is concerned with the empirical examination of the impact of government spending on private investment in Nigeria.

*Theoretical Framework*

The theoretical framework of this study is rooted on the Keynesians expenditure model. Following the 1929-30 Great Depression, the classical economists that opposed government interventions, argued that strong trade unions prevented wage flexibility which resulted in high unemployment. The Keynesians, on the other hand, favoured government intervention to correct market failures. In 1936, John Maynard Keynes' (1883-1946) "General Theory of Employment, Interest and Money", criticized the classical economists to put too much emphasis on the long run. According to Keynes, "we are all dead in the long run". Keynes believed depression needed government intervention as a short term cure. Increasing saving will not help but spending. Government will increase public spending giving individuals, purchasing power and producers will produce more, creating more employment. This is the multiplier effect that shows causality from public expenditure to national income.

Keynes categorized public expenditure as an exogenous variable that can generate economic growth instead of an endogenous phenomenon. Hereby, Keynes believed the role of the government to be crucial as it can avoid depression by increasing aggregate demand and thus, switching on the economy again by the multiplier effect. It is a tool that bring stability in the short run but this need to be done cautiously as too much of public expenditure lead to inflationary situations while too little of it leads to unemployment. Therefore, the Keynesian model on government intervention revealed that there is functional relationship between fiscal policy and investment through increased effective demand in the market. That is increased effective demand through increase government expenditure will therefore increase the level of private investment in the economy.

## 3. Methodology

*Sources of Data and Method of Analysis*

The data in this study consist mainly of secondary time series data for the period 1986 to 2016; sourced from the Central Bank of Nigeria (CBN) Statistical Bulletins, Journals, the internet and other related publications. The analytical and interpretational tools employed comprise simple statistical as well as econometrics tools where necessary. According to Pesaran and Shin (1999), which was later expanded by Pesaran, Shin and Smith (2001) the best techniques that allows the estimation of variables that are integrated in 1(1) and 1(0) is Autoregressive Distributed Lagged (ARDL). Therefore, the study adopted the Autoregressive Distributed Lagged (ARDL) and Error Correction Model (ECM) to estimate and analysis the long and short run impact of government expenditure on private investment in Nigeria. In addition, Granger Causality test was carried out to determine the direction of causation between the variables and Autoregressive Distributed Lagged (ARDL) -Bounds test procedure was used to examine the co-integration relationship between government expenditure and private investment in Nigeria.

*Model Specification*

This study adopt the model of the work of Nwosa, Adebiyi and Adedeji (2013) they examined the relationship between components of public spending and private investments in Nigeria and model was modified for the purpose of the study. Assuming a linear relationship between government expenditure and private investment in Nigeria given government capital expenditure, government recurrent expenditure, inflation rate and interest rate in Nigeria as independent variables and Private Investment in Nigeria as dependent variable. The functional form of the model is specified as:

$PIVN_t = (GCAEXP_t, GRCEXP_t, INFR_t, INTR_t)$ (3.1)

Therefore, explicitly the model becomes:

$PIVN_t = \beta_0 + \beta_1 GCAEXP_t + \beta_2 GRCEXP_t + \beta_3 INFR_t + \beta_4 INTR_t + \mu_t$ (3.2)

Where;

$PIVN_t$ is Private Investment in Nigeria at time t, $GCAEXP_t$ is government capital expenditure at time t, GRCEXP is the government recurrent expenditure in Nigeria, INFR is the Inflation rate in Nigeria, INTR is interest rate in Nigeria at time t and $\beta_0$, $\beta_1$, $\beta_2$, $\beta_3$ and $\beta_4$ are parameters to be estimated, $\mu_t$ is white noise error term. The Autoregressive Distributed Lagged (ARDL) model that will be used in this study is specified as follows:

Equation (3.3) will be used to examine the short-run and long-run relationship between government expenditure and private investment in Nigeria. While the Error Correction Model (ECM) used in this study is specified as follows:

The model above is used to adjust the estimation until the ECM turned negative. The negative sign of coefficient of the error correction term ECM (-1) shows the statistical significance of the equation in terms of its associated t-value and probability value.

## 4. Presentation And Discussion Of Results

*Descriptive Analysis of Variables*

Table 4.1: Descriptive Analysis of Variables

| | PIVN | GCAEXP | GRCEXP | INFR | INTR |
|---|---|---|---|---|---|
| Mean | 404.7484 | 426.6445 | 1239.801 | 19.42258 | 22.91935 |
| Median | 132.4000 | 321.3800 | 579.3000 | 12.60000 | 22.42000 |
| Maximum | 1360.300 | 1152.800 | 4178.590 | 72.80000 | 36.09000 |
| Minimum | 3.100000 | 6.370000 | 7.700000 | 5.400000 | 12.00000 |
| Std. Dev. | 446.7406 | 369.1613 | 1409.992 | 17.59048 | 4.600246 |
| Skewness | 0.769135 | 0.457911 | 0.869279 | 1.681390 | 0.593921 |
| Kurtosis | 2.123221 | 1.885358 | 2.218611 | 4.730658 | 4.259456 |
| Jarque-Bera | 4.049391 | 2.688162 | 4.692819 | 18.47531 | 3.871377 |
| Probability | 0.132034 | 0.260779 | 0.095712 | 0.000097 | 0.144325 |
| Sum | 12547.20 | 13225.98 | 38433.84 | 602.1000 | 710.5000 |
| Sum Sq. Dev. | 5987315. | 4088402. | 59642351 | 9282.754 | 634.8678 |
| Observations | 31 | 31 | 31 | 31 | 31 |

***Source:*** *Output from E-views 9.0 (2018)*

Table 4.1 shows the descriptive analysis of the variables used in the study. From the table the highest value for private investment during the period of study is 1360 billion as shown in the table of data presentation. Also, peak value for government capital expenditure, government recurrent expenditure, inflation rate and interest rate in Nigeria are 1152.8 billion, 4178.6 billion, 72.8 percent and 36 percent respectively. However, the lowest value for private investment in Nigeria during the period of study is 3.1 billion. While, the lowest value for government capital expenditure, government recurrent expenditure, inflation rate and interest rate in Nigeria are 6.4 billion, 7.7 billion, 5.4 percent and 12 percent respectively. On the average the values of private investment in Nigeria is 404.7 billion. Government capital expenditure, government recurrent expenditure, inflation rate and interest rate in Nigeria are 426.6 billion, 1239.8 billion, 19.4 percent and 22.92 percent respectively as indicated by their mean values.

*Stationarity Test of Variables*

Table 4.2: Augmented Dickey-Fuller Test

| Variables | ADF Statistics | Critical Value | Stationary Status |
|---|---|---|---|
| PINV | -6.553987 | -2.967767 | I(1) |
| GCAPEXP | -6.916075 | -2.967767 | I(1) |
| GRECEXP | -4.178779 | -3.568379 | I(1) |
| INFR | -7.208415 | -3.574244 | I(0) |
| INTR | -3.845004 | -3.574244 | I(0) |

*Source: Output from E-views 9.0 (2018)*

Table 4.2 shows stationarity test of the variables used in the study and from the table Augmented Dickey-Fuller Test results revealed that private investment in Nigeria, Government capital expenditure, government recurrent expenditure in Nigeria are stationary at first difference of 5 percent level of significance. While the inflation rate and interest rate in Nigeria were stationary at level of 5 percent level of significance.

*Pairwise Granger Causality Tests*

Table 4.3: Pairwise Granger Causality Tests

| Null Hypothesis: | Obs | F-Statistic | Prob. |
|---|---|---|---|
| GRCEXP does not Granger Cause PIVN | 29 | 11.1100 | 0.0004 |
| PIVN does not Granger Cause GRCEXP | | 3.33456 | 0.0427 |
| GCAEXP does not Granger Cause GRCEXP | | 6.99623 | 0.0040 |
| INTR does not Granger Cause GCAEXP | 29 | 3.75011 | 0.0383 |
| INTR does not Granger Cause INFR | 29 | 2.61616 | 0.0438 |
| INFR does not Granger Cause INTR | | 2.13616 | 0.0400 |

*Source: Output from E-views 9.0 (2018)*

Table 4.3 above shows Pairwise Granger Causality tests. From the results, all the listed pair of variables has causal relationships among them (Government recurrent expenditure and private investment, private investment and Government recurrent expenditure, Government capital expenditure and Government recurrent expenditure, interest rate and Government capital expenditure, interest rate and inflation rate in Nigeria, inflation rate and interest rate in Nigeria). That is, there is a causal relationship among the variables given the probability values of the variables at 5 percent level of significance. Therefore, the null hypotheses which state that, there are no causal relationships among variables are rejected.

*ARDL-Bound Testing*

Table 4.4: ARDL-Bound Testing

| Null Hypothesis: No long-run relationships exist | | |
|---|---|---|
| Test Statistic | Value | K |
| F-statistic | 11.42326 | 4 |
| Critical Value Bounds | | |
| Significance | I0 Bound | I1 Bound |
| 10% | 2.45 | 3.52 |
| 5% | 2.86 | 4.01 |
| 2.5% | 3.25 | 4.49 |
| 1% | 3.74 | 5.06 |

*Source: Output from E-views 9.0 (2018)*

The Co-integration test was done using the ARDL Bound test equation in table 4.4. This became necessary to avoid a spurious regression result. Using the ARDL Bound test with critical value from Narayan (2005), the variables were co-integrated at 1per cent level of significance since the Wald F-statistics is greater than the critical lower and upper bound.

*ARDL Regression Results*

Table 4.5: ARDL Regression Results

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| GCAEXP | -0.139878 | 0.203389 | -0.687739 | 0.5073 |
| GRCEXP | 0.288079 | 0.038937 | 7.398650 | 0.0000 |
| INFR | 3.333146 | 1.174139 | 2.838801 | 0.0176 |
| INTR | -16.391440 | 6.888233 | -2.379629 | 0.0386 |
| C | 262.615912 | 154.408791 | 1.700783 | 0.1198 |

*Source: Output from E-views 9.0 (2018)*

Table 4.5 shows the long run results on the impact of government expenditure on private investment in Nigeria. From the result a unit increase in government recurrent expenditure and inflation rate in Nigeria on the average, holding other independent variables constant will lead to 0.28 and 3.33 unit increase in private investment in Nigeria respectively. While a unit increase government capital expenditure and interest rate in Nigeria on the average holding other independent variables constant will lead to 0.13 and 16.39unit decrease in private investment in Nigeria. From the result also, based on the probability value, the government recurrent expenditure, inflation rate and interest rate in Nigeria were statistically significant in explaining the variation in private investment in Nigeria.

This implies that increase in the level of interest rate in Nigeria will have negative impact on the level of private investment in Nigeria and increase government recurrent expenditure and inflation rate in Nigeria will cause positive impact on private investment in Nigeria. Finally, based on the probability value, the government capital expenditure in Nigeria was statistically insignificant in explaining the variation in private investment in Nigeria and this implies that government capital expenditure in Nigeria has no significant impact on private investment in Nigeria.

*ECM Regression Results*

From the short-run regression results obtained in Table 4.6 the following interpretation can be inferred; Since the variables were found to be cointegrated implying that they have longrun equilibrium relationship, it is necessary to test for shortrun relationship. From table 4.7, the ECM parameter is negative (-) and significant which is -0.66, this shows that 66 percent disequilibrium in the previous period is being corrected to restore equilibrium in the current period.It has been established that the variables are cointegrated and also have short run relationship established from the ECM. All the independent variables were positively related to private investment in

Nigeria. Finally, based on the probability of the results all the independent variables were statistically significant in explaining the variation in private investment in Nigeria. This implies that all the variables have positive impact on private investment in Nigeria at long run.

Table 4.6: ECM Regression Results

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| D(PIVN(-1)) | 0.544568 | 0.210982 | 2.581110 | 0.0274 |
| D(GCAEXP) | 0.588387 | 0.146912 | 4.005033 | 0.0025 |
| D(GCAEXP(-1)) | 0.471212 | 0.191834 | 2.456356 | 0.0339 |
| D(GRCEXP) | 0.448247 | 0.125613 | 3.568479 | 0.0051 |
| D(INFR) | 5.296653 | 2.305002 | 2.297895 | 0.0444 |
| D(INTR(-1)) | 18.646166 | 7.347840 | 2.537639 | 0.0295 |
| ECM(-1) | -0.664994 | 0.246530 | -6.753727 | 0.0001 |

*Source: Output from E-views 9.0 (2018)*

**5. Conclusion and Recommendations**

In conclusion, The stationarity test shows that private investment in Nigeria, Government capital expenditure, government recurrent expenditure in Nigeria are stationary at first difference of 5 percent level of significance. While the inflation rate and interest rate in Nigeria were stationary at level of 5 percent level of significance and the ARDL bound test results shows that there variables are co-integrated. From the long run result it was revealed that government recurrent expenditure and inflation rate in Nigeria have positive impact on private investment in Nigeria this agreed to work of Nwosa, Adebiyi and Adedeji (2013) that believed that government recurrent spending has positive impact on private investment.

On the other hand, the ECM results revealed that all the independent variables were positively related to private investment in Nigeria and based on the probability of the results all the independent variables were statistically significant in explaining the variation in private investment in Nigeria. Therefore, the study recommends the following policies.

- Government should adopt expansionary policy in order to increase the level of expenditure on public goods and services to improve the level of private sector investment in Nigeria. Because the increased expenditure will increase the effective demand which in turn will increase the production level of private investors.
- Government should maintain a favourable interest rate in Nigeria to encourage the private investment through financial accessibility and affordability.
- Government should increase the mechanism to check and control the allocation and implementation of public funds in Nigeria to reduce deficit budget and crowd out investment of the private investment in Nigeria.

**References**

Agu, O. C. (2015) Determinants of private investment in Nigeria: An econometric analysis *International Journal of Economics, Commerce and Management United Kingdom.* 3(4).

Ambachew M. S., (2010) Determinants of private investment in Ethiopia *a Time Series Study Ethiopian Journal of Economics,* 19(1).

Amana, S. A., Aigbedion, M. I., Mmo-Oyeleke, S. A. & Onyishi, A. I. (2018) Assessing the Impact of Government Expenditure on Private Investment in Nigeria *International Journal of Advanced Studies in Business Strategies and Management* | IJASBSM *ISSN Print: 2354-4236 | ISSN Online: 2354-4244 6(1)*

Awolaja, G., Oluwalaiye, O. B., and Lawal E., *(2015)*.The effect of sectorial public investment expenditure on private investment in Nigeria: an error correction analysis *European Journal of Business and Social Sciences, Vol. 4, No. 04, July 2015.*

Bashir J., Hamza A.Y. and Rafiat M (2017) Impact of Government Expenditure on Economic Growth in Nigeria Department of Local Government and Development Studies, Faculty of Administration Ahmadu Bello University, Zaria, Nigeria. (Unpublished work)

Ebimobowei, A. (2010). The Relationship between Fiscal Policy and Economic Growth in Nigeria (1991 – 2005). *International Journal of Economic Development Research and Investment,* 1(3)

Erden, L.and Holcombe R G (2005) The effects of public investment on private investment in developing economies *public finance review, Vol. 33 No. 5, September 2005 575-602 DOI: 10.1177/1091142105277627 © 2005 Sage Publications*

Hüseyin Ș., and Ayșe K (2013) Crowding-Out or Crowding-In?Analyzing the Effects of Government Spending on Private Investment in Turkey *Panoeconomicus, 2014, 6, pp. 631-651 recevied: 23 September 2012; accepted: 11 december 2013.*

Kollamparambil, U and Nicolaou M (2011) Nature and association of public and private investment: Public policy implications for South Africa *Journal of Economics and International Finance Vol. 3(2), pp. 98-108, February 2011*

Konor, A (2014) Determinants of private sector investment in ghana, 1970-2011.

Lina, S. (2015) Testing the Relationship between Government Expenditure and Private investment: The Case of Small Open Economies *Journal of Economics, Business and Management, 3(6).*

Mgbemena, O. O., Nwaogwugwu U. C &Kalu C.f U (2015) Determinants of Private Investment in Nigerian manufacturing sub-sector. *International Journal of Academic Research in Business and Social Sciences May 2015,* 5(5)

Nwosa P. I, Adebiyi O .O and Adadeji A O (2013) An Analysis of the Relationship between Public Spending Components and Private investments in Nigeria. *Journal of Finance & Economics. 1(2).*

Okoro S.A (2013) Government Spending and Economic Growth in Nigeria (1980-2011) Global Journal of Management and Business Research Economics and Commerce. 13(5).

Udin, M., Chowburry, M. and Udin, N. S (2015) Effect of public investment on economic growth in Bangladesh: an econometric analysis. *International Journal of Developing and Emerging Economies.* 3(2) 72-97

Udo, A. and Effiong, C. (2014) Economic Growth and Wagner's Hypothesis: The Nigerian Experience *Journal of Economics and Sustainable Development, ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online),* 5 (16).

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

**Analysis of Revealed Preferences for Raw Meat Consumption in Sokoto State**

Muhammad Muazu Yusuf[1], Mohammed Kabir Abdullahi[2]

[1]*Department of Economics, Federal University Birnin-Kebbi, Kebbi State, Nigeria*
[2]*Usmanu Danfodiyo University Model Secondary School, Sokoto, Nigeria.*

**Abstract**

*This study investigates the preference for meat among residents of Sokoto Metropolis. Six hundred (600) respondents were randomly from the population of the study out of which 496 were completed and retrieved for analysis. Multinomial logit model was used to analyse the data. The result of the study revealed that ethnicity, number of children, level of education and location of the respondents had a significant effect on ruminant meat consumption and majority of the respondents preferred beef meat as their first choice followed by mmutton as compared to other ruminant meat. In other word, most of the residents of Sokoto Metropolis eat beef and mutton meat when compared to other types of ruminant meat. It was observed that beef is the most acceptable meat type.*

**Keywords:** Ruminant, Non Ruminant, beef, mutton Reveal Preference
**JEL Codes**: JI1

## 1. Introduction

Proteins are the building blocks of human life, and one of the essential for normal growth. Protein is 90% of the dry weight of blood, 80% constituent of enzymes, hormones and antibodies (Marchuk, 1992). This Proteins encompass many important chemicals and help in forming the foundation of muscles, skin, bone, hair, heart, teeth, blood and brain and the billions of biochemical activities going on in our bodies every minute. It has been estimated that the daily minimum crude protein requirement of an adult in Nigeria varies between 65 and 85g per person. However it is recommended that 35g of this minimum requirement should be obtained from animal products (Mba, 1998, Joseph, 2002, and Omotola 2004).

In Nigeria, despite the rate at which agricultural production increses, the increase did not match the country's population growth rate and hence the demand (Damisa, 2008). As food production increases at the rate of 2.5% per annum, food demand increases at a rate of more than 3.5% (Damisa and Hassan, 2009). Therefore, Nigeria's agriculture failed to supply adequate animal protein in the diets of a large proportion of the populace. Ademosum (2002) reported that, even though we don't know the exact livestock population in Nigeria, whatever the figures may be, the average Nigerian eats less meat than the average European, and American. The demand for protein of animal origin is higher in the cities than the villages this is believed to be so for a number of factors. Oyenuga (1975) attributed this to the high cost of animal products such as meat, milk and eggs which is beyond the reach of an average rural dweller. Similarly Ikeme (1990) noted that, the wide gap between demand for animal protein by those living in the urban areas and that of the rural group is due to differences in income, level of education and availability of protein. Furthermore, over 90% livestock in Nigeria are owned and controlled by traditional livestock rearers and these traditional herds men are symbols of their owners (mostly Fulani's) some as symbols of status than as meat animals. They are called reluctant when ill – health, age of the animals or necessity, especially finance, for the owner to.

Many studies are conducted on the meat consumption preference. For example Ahmed and Krishen (2010) conducted a research in Maiduguri. The study showed that gender had no effect on ruminant meat consumption and majority of the respondents preferred beef meat as their first choice as compared to other ruminant's meat. Based on the occupation of the respondents, majority preferred beef as their first choice followed by goat meat (chevon). In terms of age, respondents above the age of 60 years displayed a low level of acceptability for the consumption of goat meat while those below the age of 20 preferred goat meat as compared to beef and mutton. Most of the residents of Maiduguri metropolis eat beef and goat meat when compared to other types of ruminant meat. It was observed that beef is the most acceptable meat type anywhere while the consumption of goat meat varies

Damisa and Hasan (2010) conducted a research on the the determinants of poultry meat consumption using the double hurdle model. The study reveals that while the price of the birds might not deter the respondents from consuming poultry meat, the wealth status was found to have a major influence on the poultry meat consumption.

*Statement of the Problem*

It is anticipated that demand for food of animal origin in developing countries will double by the year 2020, thereby creating markets for these animal products (Damisa and Hasan, 2010). Growth of meat markets will depend on the consumption patterns of consumers, among other factors. Consumer tastes and preferences will act as the determining factor for the development of the livestock sector in general and small ruminants in particular but lack of data and information on consumer meat preference will hindered the achievement of this goal. This paper aims at contributing to filling this information gap by collecting and analyzing data on consumption and/or buyer preferences of ruminant meat. In addition this study is to determine the acceptability of ruminant meat types among the population in Sokoto metropolis. The outcome of which will serve as a guide for individuals or cooperate bodies who intends to establish a ruminant livestock industry in the area with the population within the metropolis as a target. The outcome will equally assist the government in policy formulation as regards livestock development in the area under study.

## 2. Methodology of the Study

*The Study Area*

Sokoto state was created on 3rd February, 1976. The state covers an area of 25,973kmsq or 10,028sqm. Sokoto state is made up of 23 local government areas and an estimated population 3,702,676 as of 2006 population census. The GDP of the state is $4,818m with per Capital income of about $1,274 (Sokoto service portal 2015). Sokoto state is located in the extreme northwest of Nigeria. The State is in the dry Sahel surrounded by sandy terrain and isolated hills with an average annual rainfall of 550 mm starting in May-June and ending September-October. The highest temperatures of 45°C during the hot season are experienced in the months of March and April while Harmattan, a dry, cold and dusty condition is experienced between the months of November and February (Abdullahi *et al.* 2009). Livestock production is a major activity of the state. There is an estimated 15 million head of livestock that comprise of cattle, sheep, camel and goat making the state second Borno state as the largest producer of livestock in the country (Sokoto service portal 2015) .

*Sampling Procedure and Sample Size*

A cluster sampling procedure was adopted for this study. This was done to ensure proper representation of important sub-population groups, namely; location, ethnicity, Number of children, education and income level variables. These variables were known to have a significant influence on meat product consumption and may not be adequately captured by a straightforward random sampling technique. Therefore, the State was grouped into three homogenous clusters, namely; urban, peri-urban and rural areas, the two local government areas that form the Sokoto metropolis are selected as urban cluster. One town was randomly selected from each of the 3 senatorial districts of the state to form the peri-urban cluster. In addition to this, 2 villages were randomly selected from each of the senatorial districts in the state to form the rural cluster. Four hundred respondents were randomly selected from the urban cluster, one hundred respondents from the peri-urban cluster and another one hundred from the rural cluster. Thus, the total sample size for the metropolis was six hundred respondents.

*Instrument for Data Collection*

A pre-tested structured food frequency questionnaires (FFQ) was administered by the researchers and assisted by trained enumerators to elicit information from the respondents. The questionnaire provides the basic information used in this research.

*Techniques for Data Analysis*

Descriptive statistics and Multinomial logit regression model were used to analyse the data in order to achieve the research objectives.

*Model Specification*

Following Yayar (2012), the meat products were grouped into two categories, namely; ruminants meat products and non-ruminants meat products. Consequently, from the responses obtained, three dependent variables were created whereby those respondents who indicated the consumption of ruminants meat products only were assigned 1, those respondents who indicated the consumption of non-ruminants meat products only were assigned 2 and those whose preferences included both the ruminants and non-ruminants meat products were assigned 3. The values are then said to be "unordered". This is because, even though the outcomes are coded 1, 2, and 3, the numerical values are arbitrary because 1 < 2 < 3 does not imply that outcome 1 (ruminants meat products) is less than outcome 2 (non-ruminants meat products) is less than outcome 3 (both ruminants and non-ruminants meat products). Gujurati (2004) as well as Glynn *et al.* (2012) observed that in a situation where the regressand is unordered, the techniques of multinomial logit models can be employed to study such nominal categories. Following Green (2012) the model is hereby specified as follows:

$$Prob\ (\gamma_i = j) = \frac{e^{\beta'}, \chi_3}{\beta'_k \chi_3}, for\ j = 0, 1, \ldots.,3. \quad (1)$$

Greene (2012) as well as Long and Freese (2006) reported that in the multinomial logit model, you estimate a set of coefficients in this case, β(1), β(2), and β(3) corresponding to each outcome:

$$Pr(=1) = \frac{e^{\chi\beta^{(1)}}}{\chi\beta^{(1)} + \chi\beta^{(2)} + \chi\beta^{(3)}} \quad (2)$$

$$Pr(=2) = \frac{e^{\chi\beta^{(2)}}}{\chi\beta^{(1)} + \chi\beta^{(2)} + \chi\beta^{(3)}} \quad (3)$$

$$Pr(=3) = \frac{e^{\chi\beta^{(3)}}}{\chi\beta^{(1)} + \chi\beta^{(2)} + \chi\beta^{(3)}} \quad (4)$$

They noted that the model is however unidentified in the sense that there is more than one solution to $\beta^{(1)}$, $\beta^{(2)}$, and $\beta^{(3)}$ that leads to the same probabilities for =1, =2, and =3. To identify the model, one of $\beta^{(1)}$, $\beta^{(2)}$, or $\beta^{(3)}$ has to be set to 0. Therefore, for this study $\beta^{(3)}$ which is the coefficient for both the ruminants and non-ruminants meat products is set to 0, the remaining coefficients $\beta^{(1)}$ (ruminants meat products) and $\beta^{(2)}$ (non-ruminants meat products) measured the change relative to the = 3 (both ruminants and non-ruminants meat products) group.

Setting $\beta^{(3)} = 0$, the equations therefore becomes:

$$Pr(=3) = \frac{3}{+\chi\beta^{(1)} + \chi\beta^{(2)}} \quad (5)$$

$$Pr(=1) = \frac{e^{\chi\beta^{(1)}}}{\chi\beta^{(1)}+\chi\beta^{(2)}} \quad (6)$$

$$Pr(=2) = \frac{e^{\chi\beta^{(2)}}}{+\chi\beta^{(2)}+\chi\beta^{(1)}} \quad (7)$$

Finally, following Ojo *et al*. (2013), the coefficients of the base outcome ($\beta^3$) were recovered by the use of the following equation:

$$\beta_3 = -- (\beta_1+\beta_2) \quad (8)$$

where

$\beta_3$ = coefficient of the variable of the base outcome (both Ruminants and non-ruminants meat products)
$\beta_1$ = estimated coefficient of the ruminants meat products,
$\beta_2$ = estimated coefficient of the non-ruminants meat products.

## 3. Results and Discussion

*Socio-economic characteristics of the respondents*

Table 1: Showing Socio-economic characteristics of the respondents. (n=452)

| | Frequency | Percentage |
|---|---|---|
| *Age ( year)* | | |
| 18---25 | 41 | 9.07 |
| 26—35 | 140 | 30.97 |
| 36---45 | 136 | 30.09 |
| 46—55 | 87 | 19.25 |
| >55 | 48 | 10.62 |
| Mean | 40 | |
| *Sex* | | |
| Female | 62 | 13.72 |
| Male | 390 | 86.28 |
| *Marital status* | | |
| Single | 73 | 16.15 |
| Married | 379 | 83.85 |
| *Children* | | |
| 1—5 | 318 | 70.35 |
| 6—10 | 105 | 23.23 |
| 11—15 | 14 | 3.10 |
| ≻15 | 11 | 2.65 |
| Mean | 4 | |
| *Household sizes* | | |
| 1—5 | 182 | 40.13 |
| 6—10 | 162 | 35.92 |
| 11—15 | 76 | 16.85 |
| >15 | 32 | 7.09 |
| Mean | 8 | |
| *Ethnicity* | | |
| *Hausas* | 360 | 79.65 |
| Others | 92 | 20.35 |
| *Educational qualification* | | |
| None | 45 | 9.96 |
| Primary | 57 | 12.61 |
| Secondary | 92 | 20.35 |
| Tertiary | 258 | 57.08 |
| *Income levels* | | |
| Less than ₦50,000 | 92 | 20.18 |
| ₦50,000--₦100,000 | 213 | 47.23 |
| Above ₦100,000 | 147 | 32.59 |

*Source: Field Survey, 2014-15.*

Analysis of the results shows the mean age of the household heads to be 40, while about 86 and 83 percents of the household heads were male and married respectively. The average household size was 8 with a mean number of children per household being 4. Meanwhile, over half of the respondents have attained tertiary level of education with nearly half of the respondents being said to be a middle income earners.

Looking at the socio-economic characteristics of the respondents, it can be surmised that meat consumption will be prevalent among the households. This is considering that many consumption studies (Gambo *et al*. 2010; Emodi and Madukwe 2011; Erhabor and Ojogho 2011 as well as Alimi R. S., 2013) have reported the positive impact of age, household size, education and income on consumption especially of nutrients dense foods, such as meat.

*Preference of the respondents for the various raw meat products*

**Figure 1: Showing the respondent revealed preferences for the various meat types**

Table 2: Preferences of Respondents for Different Meat Types

| Meat types | Frequency | Percentages |
|---|---|---|
| Beef | 260 | 52.42 |
| Mutton | 65 | 13.10 |
| Goat meat | 52 | 10.48 |
| Head and Tail | 21 | 4.24 |
| Intestines | 14 | 2.82 |
| Poultry | 25 | 5.04 |
| Ice fish | 15 | 3.02 |
| Fish | 35 | 7.06 |
| Eggs | 9 | 1.81 |
| Totals | 496* | 100 |

*More than the sample size as multiple responses were recorded

The preferences for ruminant meat (beef, mutton or goat meat) by the respondents was clearly evident considering that over 80% of them consumed either of the three category on regular basis. Specifically, the consumption of beef was reported by over 50% of the respondents. Gambo *et al*. (2010) similarly ported that over 67% of the respondents preferred beef than any other types of meat. Similarly, Alimi (2013) reported that 60% of the households preferred beef over other types of meat. The reported popularity of ruminants' meat, especially beef, over other meat types can be attributed to its relative abundance and relatively lower price. This view was concurred to by Gomna and Rana (2007) as well as Sanusi and Adewoyin (2014) who reported a consumption level of 72% for beef and noted that this can be ascribed to its availability and affordability.

Meanwhile, just about 17% of the households reportedly consumed non-ruminants meat (poultry, fish and eggs) products on regular basis. Sanusi and Adewoyin (2014) reported a consumption level of 15% for chicken. The low level of consumption for this category of meat can be attributed to its relatively higher price compared to ruminants' meat.

The reason for chicken"s relative favouritism is not far-fetched as it is perceived to be comparatively tender, tasty and nutritious.

*Revealed preferences analysis*

The multinomial logit results for the revealed preferences of raw meat products consumption by the households is presented in Table 2. The analysis showed that the preferences for the ruminant meat products was positively determined by ethnicity, dependents and location, while negatively determined by education. Meanwhile the preference for non-ruminant meat products was not significantly determined by any of the variable included in the model.

Table 2: Multinomial logit results for the revealed preferences of Raw meat product consumption by the households.

| | Ruminants and non-ruminants (base outcome) | Ruminants meat only | | Non Ruminants meat only | |
|---|---|---|---|---|---|
| | Coefficients --($b_1 + b_2$) | Coefficients | z | Coefficients | Z |
| Age | -0.60743 | -.1767504 (.1364495) | -1.30 | .7841804 (.5563567) | 1.41 |
| Sex | -0.6510007 | .2309107 (.3585596) | 0.64 | -.8819114 (.9480646) | -0.93 |
| Ethnicity | -1.9509432 | 1.531201 (.3725427) | 4.11*** | .4197422 (1.131758) | 0.37 |
| Child | -1.1327834 | .5327732 (.2507881) | 2.12** | .6000102 (1.062109) | 0.56 |
| Household size | 1.5020784 | -.0807094 (.1876729) | -0.43 | -1.421369 (.9102742) | -1.56 |
| Education | 0.4786647 | -.4717809 (.1050194) | -4.49*** | -.0068838 (.435369) | -0.02 |
| Location | -2.012497 | 1.256783 (.1978883) | 6.35*** | .755714 (.6615321) | 1.14 |
| Income | 0.795731 | .0633029 (.2101676) | 0.30 | -.8590339 (.8754453) | -0.98 |
| Constant | 5.782119 | -2.888242 (.6923274) | -4.17*** | -2.893877 (2.394681) | -1.21 |
| LR $chi^2$ (16) | | 130.77 | | | |
| Log likelihood | | -260.96572 | | | |
| Pseudo $R^2$ | | 0.2004 | | | |

*Source: Field Survey, 2014-15.*

The positivity of the ethnicity variable implies that the Hausas prefers ruminant meat than the non-hausas . This should not be surprising considering that rearing of ruminants animals have been part of the traditions of the indigenous Hausas. As such, ruminants meat have been part and parcel of the traditional cuisine of the Hausas. Mullins *et al.* (1994) reported on the important role of ethnicity in determining consumption patterns and observed that ethnicity is significant consumption determinants and substantially mitigate price, income and location factors.

Yayar (2012), noted that the number of the children in the household influence households' consumption choices. The result of this study confirms this assertion by showing a positive relationship between number of children and the preference for ruminant meat. The reason for this positive correlation is the fact that as the number of children in a household increases, the budget share for meat also increases, consequently, considering the households budget constraints', the household tends to substitute away from expensive meat such as poultry to a relatively affordable meat type, mainly; beef. Alimi (2013) as well as Sanusi and Adewoyin (2014) noted the popularity of ruminant meat among households and opined that this may be as a results of among other reasons, its relative affordability.

The results of this study shows the location variable to be positively related to the preference for ruminant meat. In other words, as one move from rural to semi-urban and on to urban areas, the preference for ruminant meat increases significantly. This is as expected, considering the unanimity of most consumption researchers on the positive influence of location on consumption. For example, Melesse and Beyene (2009) reported that household location was found to affect consumption of animal based products by influencing the availability of such products. While other researchers (Ogunniyi *et al.*2011; Ogundari 2012; Adeniyi *et al.*2012) observed that the combination of urbanisation itself and its association with the higher income of urban dwellers is a powerful stimulus to greater demand for animal based products.

The results of this study showed that the more educated the household heads is, the less likely he/she will prefers ruminants meat. This implies that, the households headed by the highly educated were more likely to substitute away from ruminants (red) meat. This may be as a result of health concern regarding red meat. For example Hu and Willett (1998) as well as Norat *et al.*(2002), reported that consumption of red meat is widely believed to be responsible for the development of chronic diseases such as coronary heart disease and colorectal cancer.

**4. Conclusions and Recommendations**

This study revealed consumers within the study area prefers and consumes morel ruminant meat than the nonruminant meat, implying that there is a prospect for ruminant meat production in Sokoto metropolitan it also revealed that even among the various ruminant meat, respondent prefer beef and mutton compared to other categories of meat. It is therefore recommended that government should establish a number of intervention strategies to assist livestock farmers, especially those involved in the production of beef and mutton. This could be in the form of disease prevention /vaccination and feed supplementation, especially during dry season when the availability of feed is at its lowest. In addition to this private sector that wishes to engage in meat production should focus on the production of beef and mutton as this will bring market to the product in the study area

**References**

Ademosum A. (1976); The Livestock Sub-section in the Third National Development Plan. Nig. J. Animal Production 3(1) Pp 10-17.

Ahmed G. and Krishen R. (2007) Inter-household and intra-household patterns of fish and meat consumption in fishing communities in two states in Nigeria *British Journal of Nutrition Vo 3 97, 145–152*

Damisa1M. A & Hassan M. B (2009). Analysis of Factors Influencing the Consumption of Poultry Meat in the Zaria Emirate of Kaduna State, Nigeria. *European Journal of Educational Studies 1(1),*

Damisa M. A. (2008). The Supply Response of Food and Cash Crops to Price and Macroeconomic Policies in Nigeria (1970-2004). An unpublished Ph.D dissertation, Ahmadu Bello University.

Gambo B.G. Raufu I. A. and Ambali A.G. (2010). Residents in Borno State and their meat Preference Among Ruminant species *African Journal of General Agriculture* 6(2).

Gomna A. and Rana K. (2007). Inter-household and intra-household patterns of fish and meat consumption in fishing communities in two states in Nigeria. *British Journal of Nutrition* 97, 145–152.

Greene W H 1993. *Econometric Analysis*. London: Macmillan

Gujarati, D. N (2004) Basic Econometrics, Fourth Edition. © The McGraw−Hill Companies, 2004

Hu F. B. and Willett W.C.(1998). The Relationship between Consumption of Animal Products (Beef, Pork, Poultry, Eggs, Fish and Dairy Products) and Risk of Chronic Diseases: A Critical Review .A Report for World Bank May 19, 1998.

Ikeme A.I., (1990); Meat Science and Technology African Feb publishers ltd, Onitcha, Nigeria Pp 1-6, 89, 119-136.

Norat T., Lukanova A., Ferrari P. and Riboli E.(2002). *Meat Consumption And Colorectal Cancer Risk: Dose-Response Meta-Analysis Of Epidemiological Studies Int. J. Cancer:* 98, 241–256.

Ojo M. A.*, Nmadu J.N., Tanko L. and Olaleye R.S. (2013),Multinomial Logit Analysis of Factors Affecting the Choice of Enterprise Among Small-holder Yam and Cassava Farmers in Niger State, Nigeria. Agri Sci, 4(1): 7-12 (2013)

Oyenuga V.A., (1975); The Challenge of 1980 in Nigeria Agriculture (livestock) Sector, Nigeria J. Animal Production 2(1) Pp 7-11

Sanusi W. A* and Adewoyin J. A (2014).Analysis of Consumer Preference for Meat Types in Ogbomoso Metropolis of Oyo State, Nigeria. *Journal of Agriculture Economics and Rural Development* 2(1):16-20

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

# Impact of Human Capital Development on Economic Growth in Nigeria: 1980-2016

Anyanwu O. Sarah[1], Obida Wafure Gobna[2] and Usman Abdullahi[3]

[1, 2& 3] *Department of Economics, University of Abuja, Nigeria Abuja, Nigeria*

**Abstract**

*This study investigated the impact of human capital development on economic growth in Nigeria between 1980 and 2016. Economists believed that the development and utilization of human capital are important in a nation's economic growth. However, the illiteracy rate in Nigeria is high and many workers are unskilled, leading to their low productivity. Hence, this study evaluated the impact of human capital development on economic growth in Nigeria by adopting autoregressive distributed lag model (ARDL) to analyze the relationship using GDP growth rate as proxy for economic growth; total government expenditure on education (disaggregated into capital and recurrent expenditures on education) and health (disaggregated into capital and recurrent expenditures on health), domestic labour supply as proxy for human capital development. The bounds testing analysis indicated existence of co-integration between economic growth and human capital development indicators. Findings also show that human capital development indicators have positive impact on economic growth in Nigeria within the reviewed periods; however, their impacts are largely statistically insignificant. Evidence indicated that equilibrium is fully restored for any distortion in the long-run and negative relationship between human capital development and capacity utilization. Following the findings, it was recommended that stakeholders need to evolve a more pragmatic means of developing the human capabilities, and its utilization, since it is seen as an important tool for economic growth in Nigeria. Also, proper institutional framework should be put in place to look into the manpower needs of the various sectors, while advocating for more use of local content in terms of labour engagement to reduce the possibility of underutilization of domestic labour supply in Nigeria.*

**Keywords:** Government Expenditure, Economic Growth, Capacity Utilization, Human Capital Development, Education and Health.

**JEL Codes**: E01, E23, E24, H51, H52

## 1. Introduction

Nigeria a country with the largest population in Africa is well endowed with vast human and material resources that can guarantee sustainable economic growth and development. Apart from agricultural, mineral and crude oil resources, it has a population of over 170 million people. These form laudable resources in serving as a large emerging market that triggers production of commodities and also providing large workforce. Nigeria over the years has focused on planning and accumulation of physical capital for rapid growth and development, without recognizing the important role played by human capital in the development process.

Human capital has increasingly attracted both academic and public interest, and it is getting wider attention with increasing globalization, technological development, and also the saturation of the job market. As the global economy shifts towards more knowledge-based sectors such as the manufacture of ICT devices, pharmaceuticals, telecommunications and other ICT- based services, Research and Development, skills and human capital development become central issue for policy makers and practitioners engaged in economic development both at the national and regional level (Johnson, 2011).

Human development is seen as the enlargement of human capabilities, where the strategy is to promote investment in the development of people through education, skills, work productivity, and creativity. The resulting development of human, along with physical and natural capital, serves as a means to promote economic development. The issue is determining the most effective ways to use the least resources to create human capital through human development strategies. Human capital must be trained, educated, and developed within the system of an organization for the purpose of enhancing productivity of the organization through the expertise of its workforce (Zidan, 2001). Developed and developing countries put more emphasis on human capital development towards accelerating the rate of economic growth by devoting necessary time and efforts. Thus, human capital development (which includes education and health) is one of the fundamental solutions for a country to enter the international arena (Aluko and Aluko, 2012).

Human capital is the term economists often use for education, health, and other human capacities that can raise productivity when increased (Todaro and Smith 2009). Health and education are two closely related human capital components that work together to make the individual more productive. The status of human development in Nigeria has not shown remarkable improvement. Investment in education and health sectors are still considered to be relatively far below the level that can appreciably result in rapid improvement in the human capital outlay of the country. The health dimension is assessed by life expectancy at birth; the education dimension is measured by many years of schooling for adults aged 25 years and more and expected years of schooling for children of school entering age (Oladeji, 2015). Also, WHO reports reveals that the health care system in Nigeria is currently weak, thus, limiting the chances of the people and impeding their capability in contributing to the growth of the economy. The preponderance of health-related problems could be attributed to the observed shortage of skilled medical workers at primary health care level (WHO, 2001).

Given the Human Capital Development Index which measures the average achievement of a country in terms of the welfare and quality of life of people, Nigeria still lags behind in economic and social progress required to impact positively on the well-being of average Nigerian, despite its vast resources. For instance, Nigeria was dismally ranked 151 out of 177 countries rated in the 2004 Human Development Report, while the 2009 United Nations Development Programme Human Development Index Report ranked Nigeria 158th out of 182 countries surveyed. The United Nations Development Programme (UNDP) publication of Human Development Index, according to Nnamani (2013) ranked Nigeria among countries with low development index at 153 out of 186 countries and the Human Development Index Report (2015) ranked Nigeria at 152 out of 188 countries and territories. Furthermore, the National Bureau of Statistics put the rising profile of unemployment at 23.9 percent in 2011, (Ikpesu, 2014). Also, over half of Nigeria's population still lives below poverty line (less than one dollar a day) and the economy has remained off track in achieving the Millennium Development Goals (UNDP, 2009). This less than optimal level of human capital formation in Nigeria has its effects on both economic growth and development which creates a problem to be examined. In the light of this background, this research work aims at examining the impact of human capital development on economic growth and capacity utilization in Nigeria,

The terms economic growth and economic development are different economic terms in the literature but are sometimes used interchangeably. The fundamental distinction that lies between them could be the reason for the variation in many scholars' opinions while defining the terms. Scholars like, Perkins et. al. (2009), defined economic growth as a rise in national or per capita income and product. To them, economic development in addition to a rise in per capita income implies fundamental changes in the structure of the economy. It should also be noted that growth may also involve not only more output derived from greater amounts of inputs but also greater efficiency. Jhingan (2012), viewed economic growth as an increase in output, he explained further that it is related to quantitative sustained increase in the country's per capita income or output accompanied by expansion in its labour force, consumption, capital and volume of trade.

Development on the other hand, implies changes in the composition of output and in allocation of inputs by sectors. Sen (2000) posited that development is judged by the expansion of people's entitlements (the set of alternative commodity bundles that a person can command in a society using the totality of rights and opportunities that he or she faces) and the 'capabilities' that these entitlements generate.

Therefore, economic growth has to do with the quantitative sustained increase in the country's per capita output or income accompanied by expansion in its labour force, consumption, capital and volume of trade, without minding the qualitative increase in the economy. On the other hand, economic development means growth plus change. It relates to qualitative changes in economic wants, goods, incentives, institutions, productivity, knowledge or the upward movement of the entire social system. Economic development therefore is a multi-dimensional process involving organization and re-orientation of economic system.

According to Smith (1776) in Folloni and Vittadini (2010), human capital refers to the acquired and useful abilities of all the inhabitants or members of the society. Human capital refers to the abilities and skills of human resources and human capital development refers to the process of acquiring and increasing the number of skilled persons, who are healthy, have the education and experience which are critical for the economic growth of the country (Harbison, 1973). Human capital is thus defined by Meir (1995) as the development of human resources concerned with the two-fold objective of building skills and providing productive employment for non-utilized or under-utilized manpower. This view is corroborated by the United Nations Economic Commission for Africa (1988) and Awopegba (2002) when they argued that human capital is the knowledge, skills, attitudes, physical and managerial efforts required to manipulate capital, technology, land and materials to produce goods and services for human consumption. Therefore, human capital impacts on productivity, employment, income generation and standard of living. By implication human capital development leads to improved capability and ultimately reduction in poverty (Simon-Oke, 2014).

## 2. Literature Review

### *Theoretical Framework*

The theoretical framework adopted for this study was the endogenous growth model which tries to explain long-run economic growth by looking at capital accumulation, labour or population growth, and increase in productivity. In the earlier neo–classical model, human capital was not considered a major input for production and hence was not included in growth models. Perhaps, Solow's (1956) model could be seen as the pioneer in this direction. Solow incorporated human capital as one of the independent variables in his model. The model attributed growth in national income to three sources namely: increase in the stock of physical capital, increases in the size of labour force, and a residual representing all other factors. Solow uses the aggregate production function which is continuous and homogenous of degree one.

$Y = F(L, K, T)$ …………………..………… (1)

Where: Y is aggregate real output, K is stock of capital, L is labour and T is Technical change. Taking technical change as constant, equation 2.1 can be re-written as:

$Y = A\,f(K, L)$ …………………...……………. (2)

Of the numerous studies on the relationship between human capital and growth, certain models have been specified. A more reliable adoption is the use of the augmented Solow human-capital-growth model. This model is an improvement on the Solow growth model. Solow's original model did not explicitly incorporate human capital. In order to do that, Mankiw, Romer, and Weil (1992) came up with the augmented Solow model. The justification for the inclusion of human capital in the model is the fact of non-homogeneity of labour in the production process either within a nation or across different economies due to their possession of different levels of education and skills. This modification facilitates its suitability as an endogenous growth model hence, the adaptation of this model for the Nigerian context. The basic assumption in this approach is that increase in workers' quality through improved education, improves output. This supports the human capital theory which postulates that education and healthcare of workers ensure greater productivity (Olaniyan and Okemakinde, 2008). The augmented Solow model is therefore specified as:

$Y = AK\,(hL)^{\beta}$…………………………….(3)

Where:
Y=Output level; K=Stock of physical capital; h=Level of Human Capital; L=Labour, measured by number of workers; A=Level of Total Factor Productivity; =Elasticity of capital input with respect to output; while β=Elasticity of labour input with respect to output.

Output level (Y) is represented by real Gross Domestic Product (RGDP); stock of physical capital (K) is measured by the country's Gross Fixed Capital Formation; hL which is a measure of total stock of human capital is a product of total school enrollment (h) and the total labour force (L). Econometrically, the model is specified as follows:

$Y = AK\,(hL)^{\beta}\,u$ ….……………………. (4)

When transformed into a log-linear form, it becomes:

$\log Y = {}_0 + {}_1 \log K + \beta \log hL + v$…………. (5)

Where ${}_0 = \log A$ and $v = \log u$

To further suit the Nigerian context and the relevance of the study, the model was modified to accommodate other variables. These variables include government's capital expenditure on education and health (CE) and government's recurrent expenditures on education and health (RE). These two variables were incorporated to capture government investment in human capital development, since the study is focused on government's investment in human capital development and its effect on economic growth. The expanded model is thus stated as follows:

$\log Y = {}_0 + {}_1 \log K + \beta \log hL + \log CE + \log RE + v$ ……………………………………….. (6)

Output level (Y) is represented by real Gross Domestic Product (RGDP); stock of physical capital (K) is measured by the country's Gross Fixed Capital Formation; (hL) which is a measure of total stock of human capital is a product of total school enrollment (h) and the total labour force (L). Human capital development is proxied by government's capital and recurrent expenditure on education and health care—that is (CE) and (RE). It was expected that each of the explanatory variables would exhibit positive relationship with the dependent variable.

Relying on previous studies such as that of: Odusola (1998); Grammy and Assane (1996); Mankiw, Romer, Weil (1992); and Adamu (2003), we used the following model in an attempt to determine the impact of human capital formation on economic development in Nigeria.

RGDP= (CEDU, REDU, PCAB, LAB, GRAD)………………………………… (7)

Where:

RGDP= real gross domestic product as a proxy for economic growth.
CEDU= capital expenditure on education
REDU= recurrent expenditure on education
PCAD= physical capital formation proxy by a gross capital formation
LAB = labour force
GRAD = high level manpower proxy by graduates of tertiary institution.

Investment in human capital is proxy by recurrent and capital investments on education with the intention of finding out whether they both contribute to growth process or otherwise. The choice of the proxy is also supported by UNDP (1996). Adamu (2003) also noted that expenditures on health and nutrition could also be introduced as variables in the equation. She thus stated the linear form of the equation as:

$$RGDP={}_0+{}_1 + CEDU + {}_2REDU + {}_3PCAB + {}_4LAB + {}_5GRAD + U \ldots\ldots\ldots\ldots \quad (8)$$

Where, the a priori expectations are ${}_{1,2,3,4,5}>0$ indicating that the coefficients are positively related to RGDP.

It is believed that improvement in human capital results from education, it is also expected from the model that the more the number of labourers, physical capital and educational capital that are employed, the higher the level of national productivity.

*Empirical Review*

There seems to be a consensus from most of these studies that the development of human capital engenders economic growth as empirically reviewed below.

Sankay, Ismail and Shaari (2010) investigated the impact of human capital development on economic growth in Nigeria during the period 1970 to 2008. Johansen co-integration technique and vector error correction analysis were used to ascertain this relationship. The result indicated that human capital development has a significant impact on Nigeria's economic growth.

Oluwatobi and Ogunrinola (2011) examined the relationship between human capital development efforts of the Government and economic growth in Nigeria and they explored the impact of government recurrent and capital expenditures on education and health in Nigeria and their effect on economic growth. The result showed that there exists a positive relationship between government recurrent expenditure on human capital development and the level of real output, while capital expenditure is negatively related to the level of real output.

Dauda (2010), using the human capital model of endogenous growth developed by Mankiw, Romer and Weil (1992), examined empirically the role of human capital in Nigeria's economic development. The paper employed a variety of analytical tools, including unit root tests, co-integration tests and error correction mechanism (ECM). Empirical results indicate that there is, indeed a long-run relationship among labour force, physical capital investment proxy by real gross domestic capital formation, human capital formation, proxy by enrollment in educational institutions and economic growth in Nigeria. Findings showed that there is a feedback mechanism between human capital formation and economic growth in Nigeria.

Johnson (2011) evaluated human capital development and economic growth in Nigeria by adopting conceptual analytical framework that employed the theoretical and ordinary least squares (OLS) to analyze the relationship using the GDP as proxy for economic growth; total government expenditure on education and health, and the enrolment pattern of tertiary, secondary and primary schools as proxy for human capital. The analysis confirmed that there is strong positive relationship between human capital development and economic growth.

Anyanwu *et. al*. (2015) estimated long-run relationship between economic growth and human capital development indicators, and found that government expenditure on education and health, labour force; primary and tertiary enrolments had positive but insignificant effect on economic growth. The impact of government gross capital formation and secondary enrolment on economic growth was found to be statistically insignificant and negative. It is only tertiary enrollment at lag one that had significant impact on economic growth in the long-run.

Several studies have investigated the relationships between the levels of education and economic growth Bratti et. al.(2004) education and inequality Rehme (2007), technical education and economic growth, (Mustafa, Abbas and Saeed, 2005). These studies found a positive relationship between investment in education and economic growth. Ogujiuba and Adeniyi (2004) examined the impact of government education expenditure on economic growth. Their result showed a statistically significant positive relationship between economic growth and recurrent expenditure on education, while capital expenditure was wrongly signed and not significant in its contributions.

Lawanson (2009) took this study further by including both the health and education expenditures in her model. The objective was to examine the role of human capital investment (proxied by total government expenditure on education and health) on economic growth in Nigeria, it was discovered that a clear relationship exists between human capital development and economic growth. However, unlike the study by Ogujiuba and Adeniyi (2004), the study did not disaggregate expenditure figures on health and education into the recurrent and capital components.

Yesufu (2000), examined the nexus between human capital investment and economic growth in Nigeria. Specifically, the study investigated the causality between human capital investment and economic growth during the period 1975-2005 using co-integrated and Error Correction Mechanism (ECM) technique. The findings of the study revealed that there exists a directional causality between Human Capital Investment and Economic Growth in Nigeria.

Maku (2009) examined the connection between total government spending and economic growth in Nigeria over 30 years (1977-2006). He regressed real GDP on private investment, human capital investment, government investment and consumption spending. The result showed that human capital investment as a share of real output has positive but statistically insignificant effect on the growth rate of real GDP. The result revealed that government expenditure had no significant influence on economic growth in Nigeria based on the analysis, which reveals that the variables have not maintained a uniform pattern in the period of study owing to persistent random shock effect on the time series.

Uwatt (2003) empirically examined the impact of human capital on economic growth, using five variants of the original Solar Model linking physical capital, labour and human capital proxied by total enrolment in educational system to real Gross Domestic Product (GDP). The result showed that physical capital exerted a positive and significant impact on economic growth. On human capital variable, it was human capital from primary school education that was statistically very significant on the growth of the Nigerian economy.

Adamu (2003) undertook an empirical investigation to determine the impact of human capital development on economic growth in Nigeria between 1970 and 2000, using co-integration and error correction mechanisms. The results indicate that investment in human capital in the form of education and training can lead to economic growth because of its impact on labour productivity.

Health is a determinant of human capital, productive asset and an engine of economic growth (World Bank, 1993; Barro, 1996). Some macroeconomic studies have shown that the good health of a population can significantly influence a country's rate of economic growth (Bloom and Canning, 2000; Fogel, 2004; and World Bank, 2004). Adult health status affects the size of the labour force, worker absenteeism and worker efficiency (Mushkin, 1962). Bloom, Canning and Sevilla (2004) in their research about the effect of health on the economic growth, found that good health has a positive, sizable, and statistically significant effect on aggregate output.

Similarly, Knowles and Owen (1995) found a strong and more robust relationship between health, capital and income per capita than between education, capital and income per capita. Strauss and Thomas (1998) found positive returns to health in labour market after correcting for education. In Nigeria, Alayande *et. al.* (2001) also found these positive returns to health for women in labour market after controlling for education status.

**3. Model Specification**

Growth rate of the Gross Domestic Product (GDPGR) was adopted in the model because it is believed to be conceptually more appropriate in growth accounting regressions than per capita GDP (Pritchet, 2001). In an attempt to determine the effect of human capital development on economic growth in Nigeria, it is necessary to develop a model to justify the correlation that exists between the variables. In this regard, multiple regression models are thus used to determine the impact of human capital development on economic growth.

Adamu (2003) model in equations (7) and (8) was therefore adapted due to its suitability and also due to the suggestion for the inclusion of health and nutrition in the model for further study. It therefore becomes necessary to adopt the model with some slight modifications. Thus, the econometric models used for the study are specified as follows:

$$GDPGR_t = \beta_0 + \beta_1 InCEDU_t + \beta_2 InREDU_t + \beta_3 InCHE_t + \beta_4 InRHE_t + \beta_5 InDLS_t + U_t \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (9)$$

$$InCPU_t = \beta_0 + \beta_1 InCEDU_t + \beta_2 InREDU_t + \beta_3 InCHE_t + \beta_4 InRHE_t + \beta_5 InDLS_t + U_t \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (10)$$

Where:

$GDPGR_t$ = GDP growth rate

$\ln CPU_t$ = Log of Capacity utilization

$\ln CEDU_t$ = Log of Capital expenditure on education

$\ln REDU_t$ = Log of Recurrent expenditure on education

$\ln CHE_t$ = Log of Capital health expenditure

$\ln RHE_t$ = Log of Recurrent health expenditure

$\ln DLS_t$ = Log of Domestic labour supply

$\beta_o$ = Constant parameter

$\beta_i$ = Coefficients of the explanatory variables

$U_t$ = Stochastic disturbance term

t = Time Subscript

The dependent variables are: Economic growth measured by growth rate of the Gross Domestic Product (GDPGR) which is calculated by deflating nominal gross domestic product by domestic consumer price index at 2010 constant price, Capacity utilization (CPU).

*Methods of Data Analysis*

The data collected for this research were analyzed using Autoregressive Distributed Lag (ARDL) model along with error correction model. The ARDL model is an innovation in time series econometrics developed by Pesaran and Shin (1996); Pesaran and Pesaran (2001); for testing the existence of co-integration. One of the advantages of using the ARDL approach to testing for the existence of a long-run relationship between variables is that it is applicable irrespective of whether the underlying variables are purely I(0) or I(1), or a mixture of both (Khosravi and Karimi, 2010). However, in the presence of I(2) variables, the computed F-statistics provided by Pesaran et. al. (2001) will become invalid.

Therefore, stationary test was carried out in order to ensure that none of the variables is integrated of second order I(2) or beyond. The Augmented Dickey-Fuller (ADF) test was used for this analysis since it adjusts for serial correlation. The test was done with the following hypotheses:

Null hypothesis ($H_0$): Variable contains unit root and hence it is non-stationary.

Alternative hypothesis ($H_1$): Variable does not contain unit root and hence it is stationary.

In the application of the Augmented Dickey-Fuller (ADF) test, the general specification of the unit root model is given as follows:

$\Delta Y_t = \beta_0 + \beta_1 Y_{t-1} + \alpha_i \sum \quad Y_{t-i} + u_t$…..... (11)

Where:
$Y_t$ = Differenced value of a given time series variable
$\beta_0$ = Constant Parameter
$\beta_1$ = Coefficient of the first lag value of the series variable
$Y_{t-1}$ = First lag value of a series variable
$\alpha_i$ = Coefficient of the lag values of the differenced time series variable
$Y_{t-I}$= Lag values of the differenced series variable
$u_t$ = Error term.

Decision rule: If the calculated ADF Test statistic is greater than the MacKinnon critical values (both in absolute term) at the chosen level of significance, reject the null hypothesis of non-stationarity and accept the alternative hypothesis of stationarity, otherwise do not reject the null hypothesis of non-stationarity.

As earlier stated, the approach is based on the specification of an auto-regressive distributed lag (ARDL) model. The econometrically illuminating advantages of the bounds testing technique include the fact that the endogeneity problems and inability to test hypotheses on the estimated coefficients in the long-run associated with the Engle-Granger (1987) method are avoided; the long and short-run parameters of the model under study are estimated simultaneously. In addition, the ARDL technique has the advantage of not requiring a specific identification of the order of the underlying data (Pesaran *et. al*., 2001), and it has better small sample properties than alternative methods. The two Autoregressive Distributed Lag (ARDL) model used in this study are expressed as follows:

*ARDL I*

$InGDPGR = \delta_0 + \delta_1 InGDPGR_{t-1} + \delta_2 InCEDU_{t-1} + \delta_3 InREDU_{t-1} + \delta_4 InCHE_{t-1} + \delta_5 InRHE_{t-1} + \delta_6 InDLS_{t-1} + \sum \lambda_1 \Delta InGDPGR_{t-i} + \sum \lambda_2 \Delta InCEDU_{t-i} + \sum \lambda_3 \Delta InREDU_{t-i} + \sum \lambda_4 \Delta InCHE_{t-i} + \sum \lambda_5 \Delta InRHE_{t-I} + \sum \lambda_6 \Delta InDLS_{t-i} + \lambda_7 ECM_{t-1} + u_t$……………………………………………………(12)

*ARDL II*

$InCPU = \delta_0 + \delta_1 InCPU_{t-1} + \delta_2 InCEDU_{t-1} + \delta_3 InREDU_{t-1} + \delta_4 InCHE_{t-1} + \delta_5 InRHE_{t-1} + \delta_6 InDLS_{t-1} + \sum \lambda_1 \Delta InCPU_{t-i} + \sum \lambda_2 \Delta InCEDU_{t-i} + \sum \lambda_3 \Delta InREDU_{t-i} + \sum \lambda_4 \Delta InCHE_{t-i} + \sum \lambda_5 \Delta InRHE_{t-I} + \sum \lambda_6 \Delta InDLS_{t-i} + \lambda_7 ECM_{t-1} + u_t$……………………………………………………(13)

Where:
$\delta_0$ = Constant Parameter
$\Delta$ = First difference operator
$\delta_i$, $\lambda_i$ = Vector of the parameter of the lagged values of the natural logarithmic values of the explanatory variables.
$ECM_{t-1}$ = Error correction term.
$u_t$ = Error term.

The terms with the summation signs ($\sum$) in the equations above represent the error correction dynamics while the second part of the equation with $\delta_i$ correspond to the long-run relationship. The null hypothesis in the four ARDL equations is $H_0 = a_1 = a_2 = 0$. This denotes the absence of long-run relationship while the alternative hypothesis is $H_1$: $a_1 \neq a_2 = 0$. The calculated F-statistic is compared with two sets of critical values. One set assumes that all the variables are I(0) and the other assumes they are I(1). If the calculated F – statistic exceeds the lower and upper critical values, the null hypothesis of no co-integration will be rejected irrespective of whether the variables are I(0) or I(1). If it is below the upper value bound, there is no co-integration. Once a co-integration relationship has been ascertained, the long-run and short run parameters of the relationship are then estimated.

**4. Data Analysis**
The data used in this research are examined in this section.

Table 1: Unit Root Test

| | ADF Unit Root Test | | | |
|---|---|---|---|---|
| Variables | Critical Values | At level I(0) | Critical Values | At First Difference I(1) |
| GDPGR | -5.581643 | -4.243644*** | | |
| InCPU | | | -4.168032 | -3.548490** |
| InCEDU | | | -6.392133 | -4.262735*** |
| InREDU | -3.496461 | -3.207094* | | |
| InCHE | | | -2.891796 | -2.617434* |
| InRHE | -4.503508 | -3.548490** | | |
| InDLS | | | -4.362067 | -4.323979*** |

Note:***Statistical significance at 1percent level; ** statistical; significance at 5 percent * Statistical significance at 10 percent; Source: Author's computation using E-views version 9

As a first step in the analysis, the variables were transformed into natural logarithm forms except for growth rate of GDP that was in rates. Tests for unit root in the variables at both level and first difference values were conducted using the Augmented Dickey-Fuller (ADF) test. Table 1 shows that growth rate of GDP, recurrent expenditure on education and recurrent expenditure on health were stationary at level I(0) while capacity utilization, capital expenditure on education, capital health expenditure, and domestic labour supply were stationary after first difference. Therefore, the null hypotheses of a unit root at level and first difference values were rejected in the ADF test. This is because in absolute term, the t-test statistic values of the variables examined were found to be statistically significantly greater than their critical values. While the test statistic values of recurrent expenditure on education and capital expenditure on health were significant at 10 percent, capacity utilization and recurrent domestic health expenditure were significant at 5 per cent, and the test statistic values of other variables were significant at 1 percent as indicated in Table 1. This implies that none of the series is I(2) and can all be included in the ARDL estimation.

The ARDL estimation was done using five different models as specified in chapter three. It began by examining the relationship between human capital development economic growth (ARDL I) followed by the relationship between human capital development and capacity utilization (ARDL II). Five explanatory variables were used in each of the models to avoid much reduction in the degree of freedom by inclusion of more explanatory variables in view of the relatively small number of observations examined (thirty seven) due to data availability problem on employment before 1980s. Also, maximum of two lag lengths were considered to reduce the problem of degree of freedom in the time series analysis.

In each of the ARDL procedure examined, the optimum lag length selection criteria was carried out in order to determine the number of lag(s) to be included in the ARDL models prior to the bound test. The results are presented in Table 2, and Table 6

Table 2: Lag Length Selection for ARDL I Model

| Lag | AIC | SC | HQ |
|---|---|---|---|
| 0 | 6.986722 | 7.316759 | 7.090086 |
| 1 | 6.912913 | 7.531437 | 7.102002 |
| 2 | 6.118578 | 7.030464 | 6.389730 |

*Source: Author's computation using E-views version 9*

The ARDL I model is estimated to ascertain whether there is long run relationship between human capital development and growth rate of gross domestic product. The procedure for estimating the model starts with the optimum lag length selection criteria as reported in Table 2. The Akaike Information Criterion (AIC), Schwarz

Criterion (SC), and Hannan-Quinn criterion (HQ) indicate that two maximum lags are to be included in the ARDL I model. The results of the ARDL bounds testing approach are shown in Table 3.

Table 3: ARDL Bounds Test for Co-integration (ARDL I Model)

| Dependent Variable: ΔGDPDR | | |
|---|---|---|
| Function F-Statistics | | |
| F(GDPGR/InCEDU,InREDU, InCHE, InRHE,InDLS) | | 5.692813*** |
| Critical Value | Lower Bound | Upper Bound |
| 1% | 3.41 | 4.68 |
| 5% | 2.62 | 3.79 |
| 10% | 2.26 | 3.35 |

Note: *** Statistical significance at 1percent level; ** statistical significance at 5 percent; * Statistical significance at 10 percent; Source: Author's computation using E-views version 9. Critical values are obtained from Pesaran et. al. (2001)

Having conducted the optimum lag selection, F-statistic test for co-integration is required to determine whether there is co-integration among the variables captured in the unrestricted error correction version of the ARDL model I. This has been estimated using the bound testing approach and the results presented in Table 4. The bound test results revealed that there is long run relationship between human capital development and economic growth in Nigeria. In the function F(GDPGR/InCEDU,InREDU, InCHE, InRHE,InDLS)), the null hypothesis that there is no co-integration is rejected as the F-statistic, 5.692813 is greater than the critical values at both the lower and upper bounds at 1 per cent level of significance indicating that there is co-integration between human capital development and economic growth in Nigeria. Next step is to examine the long run impacts of each of the variables of human capital development on economic growth in Nigeria.

Table 4: Estimated Long Run Coefficients of ARDL I Model

| Dependent Variable: GDPGR | | |
|---|---|---|
| Independent Variables | Coefficients | P-values |
| C | 73.12893 | 0.8783 |
| InCEDU | 0.520606 | 0.6960 |
| InREDU | 4.676683 | 0.2940 |
| InCHE | -1.723521 | 0.3837 |
| InRHE | -1.545244 | 0.7444 |
| InDLS | 4.649437 | 0.8647 |
| $R^2$ = 0.472614; F-Statistic = 11.78976* (0.002182) | | |
| Durbin-Watson Statistic = 1.860401 | | |

Note: *** Statistical significance at 1 percent level; ** statistical significance at 5 percent;; * Statistical significance at 10 percent; Source: Author's computation using E-views version 9

From Table 4, capital expenditure on education (CEDU) has no long run impact on economic growth in Nigeria as the results are not statistically significant. Also, recurrent expenditure on education (REDU), capital health expenditure (CHE), recurrent health expenditure (RHE), and domestic labour supply (DLS) have no long run impact on economic growth rate in Nigeria. The coefficient of determination ($R^2$) is 0.472614, which implies that 47 per cent of variation in economic growth rate is caused by variation in the explanatory variables in the model. This therefore implies that explanatory variables outside the model account for 53 per cent of variation in economic growth rate for the period under studied. The Durbin Watson statistics is 1.860401 which shows the absence of autocorrelation. The F-statistic (11.78976) is significant at 10 percent which implies that the model is adequate and reliable.

Table 5: Results of Estimated Short Run Coefficients of the Selected ARDL I Mod

Dependent Variable: ΔGDPGR

| Independent Variables | Coefficients | P-values |
|---|---|---|
| C | 17.22270 | 0.2376 |
| ΔGDPGR(-1) | 0.200476 | 0.5530 |
| ΔGDPGR(-2) | 0.180063 | 0.4622 |
| ΔInCEDU(-1) | -0.812692 | 0.5867 |
| ΔInCEDU(-2) | -2.439339 | 0.5860 |
| ΔInREDU(-1) | -2.666183 | 0.7320 |
| ΔInREDU(-2) | 1.438705 | 0.8045 |
| ΔInCHE(-1) | -2.296101 | 0.5494 |
| ΔInCHE(-2) | -0.329016 | 0.9016 |
| ΔInRHE(-1) | 2.521013 | 0.7678 |
| ΔInRHE(-2) | 0.106160 | 0.9876 |
| ΔInDLS(-1) | 11.92905 | 0.9778 |
| ΔInDLS(-2) | -699.6377 | 0.1013 |
| ECT(-1) | -1.225967** | 0.0119 |

Note: *** Statistical significance at 1percent level; ** statistical significance at 5 percent.; * Statistical significance at 10 percent; Source: Author's computation using E-views version 9

The results of the short run relationship are reported in Table 5. The error correction term ECT (-1) included in the equation has the expected negative sign and is statistically significant at 5 percent. The value of the ECT (-1) indicates that there is adjustment to long run equilibrium after shock. The error correction term implies a high speed of adjustment to equilibrium after shock, and approximately, 1.23 percent of disequilibria from the previous year's shock converge back to the long-run equilibrium in the current year. The differenced one period and two periods lag values of all the explanatory variables revealed that there is no existence of significant negative or positive short run relationship between human capital development and economic growth in Nigeria.

Table 6: Lag Length Selection for ARDL II Model

| Lag | AIC | SC | HQ |
|---|---|---|---|
| 0 | 2.164393 | 1.834356 | 2.061030 |
| 1 | 2.345068 | 1.726544 | 2.155979 |
| 2 | 2.076583 | 1.164697 | 1.805431 |

Source: Author's computation using E-views version 9

From Table 6, the Akaike Information Criterion (AIC), Schwarz Criterion (SC), and Hannan-Quinn criteria (HQ) indicate that two maximum lags are to be included in the ARDL II model. The results of the ARDL bounds testing approach are shown in Table 7.

Table 7: ARDL Bounds Test for Co-integration (ARDL II Model)

Dependent Variable: ΔlnCPU

| Function | F-Statistics | |
|---|---|---|
| F(lnCPU/InCEDU,InREDU, InCHE, InRHE,InDLS) | | 0.899850 |
| Critical Value | Lower Bound | Upper Bound |
| 1% | 3.41 | 4.68 |
| 5% | 2.62 | 3.79 |
| 10% | 2.26 | 3.35 |

Note: *** Statistical significance at 1 percent level; ** statistical significance at 5 percent.; * Statistical significance at 10 percent.; Source: Author's computation using E-views version 9. Critical values are obtained from Pesaran et. al. (2001)

Having conducted the optimum lag selection, F-statistic test for co-integration is required to determine whether there is co-integration among the variables captured in the unrestricted error correction version of the ARDL model. This has been estimated using the bound testing approach and the results presented in Table 7.

From Table 7, the bound test results revealed that there is no long run relationship between human capital development and capacity utilization in Nigeria. In the function F(lnCPU/InCEDU,InREDU, InCHE, InRHE,InDLS)), the null hypothesis that there is no co-integration is accepted as the F-statistic, 0.899850 is less than all the critical values at both the lower and upper bounds indicating that there is no co-integration between human capital development and capacity utilization in Nigeria. Next step is to examine the long run impacts of each of the variables of human capital development and capacity utilization in Nigeria.

Table 8: Estimated Long Run Coefficients of ARDL II Model

| Dependent Variable: CPU | | |
|---|---|---|
| Independent Variables | Coefficients | P-values |
| C | -8.640142 | 0.4558 |
| InCEDU | -0.024272 | 0.4523 |
| InREDU | -0.189364* | 0.0843 |
| InCHE | 0.009892 | 0.8346 |
| InRHE | 0.180226 | 0.1239 |
| InDLS | 0.733837 | 0.2709 |
| $R^2$ = 0.615050; F-Statistic = 7.669156 (0.000199) | | |
| Durbin-Watson Statistic = 1.623052 | | |

Note: *** Statistical significance at 1 percent level; ** statistical significance at 5 percent; * Statistical significance at 10 percent; Source: Author's computation using E-views version 9

From Table 8, capital expenditure on education (CEDU) has no long run impact on capacity utilization in Nigeria as the results are not statistically significant but recurrent expenditure on education (REDU) has long run but negative impact on capacity utilization in Nigeria. Capital health expenditure (CHE), recurrent health expenditure (RHE), and domestic labour supply (DLS) have no long run effect on capacity utilization in Nigeria. The coefficient of determination ($R^2$) is 0.615050, which implies that 61 percent of variation in unemployment rate is caused by variation in the explanatory variables. The Durbin Watson statistics is 1.623052 which shows the absence of serial correlation. The F-statistic (7.669156) is significant at 1 per cent which implies that the model is adequate.

Table 9: Results of Estimated Short Run Coefficients of the Selected ARDL II Model

| Dependent Variable: ΔCPU | | |
|---|---|---|
| Independent Variables | Coefficients | P-values |
| C | -0.148557 | 0.3559 |
| ΔInCPU(-1) | 0.361640 | 0.2657 |
| ΔInCPU(-2) | 0.346092 | 0.1995 |
| ΔInCEDU(-1) | 0.007189 | 0.6838 |
| ΔInCEDU(-2) | 0.027225 | 0.6419 |
| ΔInREDU(-1) | -0.071876 | 0.4763 |
| ΔInREDU(-2) | 0.092842 | 0.2924 |
| ΔInCHE(-1) | 0.028433 | 0.5206 |
| ΔInCHE(-2) | 0.022577 | 0.4412 |
| ΔInRHE(-1) | 0.021212 | 0.8531 |
| ΔInRHE(-2) | -0.104705 | 0.2971 |

| Dependent Variable: ΔCPU | | |
|---|---|---|
| Independent Variables | Coefficients | P-values |
| ΔInDLS(-1) | 5.568201 | 0.2037 |
| ΔInDLS(-2) | 0.775751 | 0.8876 |
| ECT(-1) | 0.046185 | 0.7538 |

Note: *** Statistical significance at 1 percent level; ** statistical significance at 5 percent * Statistical significance at 10 percent; Source: Author's computation using E-views version 9

The results of the short run relationship are reported in Table 9. The error correction term (ECT (-1)) included in the equation does not have the correct sign and is not statistically significant. The value of the ECT (-1) indicates that there is no adjustment to long run equilibrium after shock. The differenced one period and two period lag values of respective explanatory variables revealed that there is no existence of significant negative or positive relationship between human capital development and capacity utilization in Nigeria. This means that human capital development and capacity utilization have no short run relationship.

*Discussion of Findings*

This research work empirically examined the effects of human capital development on economic growth and capacity utilization in Nigeria using time series from 1980 to 2016.for the analysis. Firstly, the data were converted into natural logarithm to remove trend in the data, and ADF tests were used in testing for the stationarity of the variables. Due to the outcome of our unit root tests which reveal a mixture of integration order, i.e. I(0) and I(1) among our variables, bound testing approach to co-integration with an autoregressive distributed lagged (ARDL) model became handy; being a technique capable of providing consistent estimation when variables are integrated of different orders. The discussion of the outcome examines how the results of this study are in line with or different from similar studies previously conducted.

The study first reported the results of the relationship between human capital development and economic growth in Nigeria. The findings revealed positive but insignificant long-run relationship between capital and recurrent expenditure on education and economic growth. This is in line with Anyanwu *et. al*. (2015) which found that the long-run estimated model revealed that government expenditure on education and health, labour force, primary and tertiary enrolments had positive but insignificant effect on economic growth. It is also partially in line with the work of Sankay *et. al.* (2010) that found significant positive relationship between capital and recurrent expenditures on education on economic growth but in contrast with the work of Oluwatobi and Ogunrinola (2011) which revealed that capital expenditure on education has long run negative and significant effect on economic growth, and recurrent expenditure on education has significantly positive effect on economic growth.

The result of the study on recurrent expenditure is also in partial agreement with that of Ogujiuba and Adeniyi (2004) which revealed significant positive relationship between recurrent expenditure on education and economic growth. The insignificant nature of positive impact of capital and recurrent expenditure on education on economic growth as revealed by this study could be due to low level of annual budgetary allocation to education, and the fact that educational development is not well tilted towards vocational training and skills needed to contribute more positively to economic activities in the country. The study also showed that capital and recurrent health expenditures have negative but insignificant impact on economic growth. This also is in contrast with the works of Oluwatobi and Ogunrinola (2011) and Lawanson (2009) which revealed positive relationship between recurrent health expenditure and economic growth. However their study did not examine capital expenditure on health and growth relationship. The findings of this study are in partial conformity with the works of Garba (2002), Ncube (1999), Yesufu (2000), Dauda (2010) and Johnson (2011) which found long-run positive and statistically significant effect of human capital development on economic growth. The long run results on domestic labour supply and economic growth relationship revealed positive but statistically insignificant relationship. The statistically insignificant relationship could be as a result of underutilization of domestic labour supply in Nigeria as earlier stated. It is however in partial alignment with the work of Sankay *et. al.* (2010) which revealed positive and significant impact of labour force enrollment on economic growth.

The relationship between human capital development and capacity utilization was also investigated to determine whether the developed human capital is being efficiently utilized in a manner that could have contributed to economic growth. The results revealed a positive but statistically insignificant long-run relationship between capital health expenditure, recurrent health expenditure, domestic labour supply and capacity utilization. Capital and recurrent expenditures on education have negative impact on capacity utilization but only recurrent expenditure on education was found to be significant. On the short-run impact, the results revealed that human capital development has no short-run impact on capacity utilization. This implies that the human capital that the country has developed is not being used efficiently, and this could be due to high unemployment and underemployment in the country. However, there was no access to empirical work in the literature on human capital development and capacity utilization in Nigeria.

**5.0 Conclusion and Recommendations**

The results of the study revealed that there is no co-integration between human capital development and capacity utilization. On the other hand, the results showed that there is co-integration between human capital development and economic growth. The error correction terms of the short-run models were negative with fairly slow speed of adjustment to equilibrium.

The findings revealed positive but insignificant long-run relationship between capital and recurrent expenditure on education and economic growth. The study also showed that capital and recurrent health expenditures have negative but insignificant impact on economic growth. The long run results on domestic labour supply and economic growth relationship revealed positive but statistically insignificant relationship. The finding on the short run relationship between human capital development and economic growth is not significant.

The results revealed a positive but statistically insignificant long-run relationship between capital health expenditure, recurrent health expenditure, domestic labour supply and capacity utilization. Capital and recurrent expenditures on education have negative effect on capacity utilization but only recurrent expenditure was found to be significant. On the short-run impact, the results revealed that human capital development has no short-run effect on capacity utilization.

Based on the results of this research, the study recommends the need for increased annual budgetary allocation to education in Nigeria through re-allocation of budgetary proposal towards education from budgetary items that have no significant bearing on development. This is in view of the fact that no country can achieve sustainable economic growth and development without substantial investment in human capital as education improves people's productivity, creativity, entrepreneurial skills, and technical know-how which benefits the society and ultimately leads to economic growth and development. Also, education should be well tailored towards vocational training and entrepreneurial skills needed to contribute more positively to economic activities in the country.

There is need therefore, for health facilities to be improved upon through better quality of health delivery, more capital expenditure on the health sector, more collaboration with development partners; improvement on the health information system for evidence-based health-related decision making, better working conditions of health workers, and more focus on quality primary health care in order to improve health needs of the vast majority of Nigerians. There is also need for advocacy in order to raise the people's awareness and confidence on Nigeria's health care delivery system. The National Health Insurance Scheme should be made more encompassing to capture more Nigerians in the private and informal sectors of the economy as the health of the people has direct bearing on productivity.

There is the need for improvement in the use of local content in terms of labour engagement to reduce the possibility of underutilization of domestic labour supply in Nigeria. Furthermore, there is need to improve the enforcement of local content laws as it relates to labour so that more Nigerians will be involved in the workforce of foreign companies that are set-up in the country.

Effort geared toward effective utilization of already developed human capital should be intensified to maximize the benefits derivable from government huge investment on human capital development. Emphasis should now be placed more on capacity building and effective utilization rather than mere training and development.

**References**

Adamu, P.A. (2003); *The Impact of Human Capital Formation on Economic Development in Nigeria: An Error Correction Approach In: Human Resource Development in Africa*, Selected Papers for 2002 Annual Conference Nigerian Economic Society Ibadan pp 53-78.

Alayande, B.A., Olayiwola, K.W. and Olaniyan, O. (2001) Nutrition and Productivity of Women: Evidence from Nigeria, An Research Report Presented submitted to the African Economic Research Consortium, (AERC) Nairobi.

Aluko A Y and Aluko O. (2012) Human Capital Development: Nigeria's Greatest Challenge, *Journal of Management Policy and Practice:* 13(1) 163 -178.

Anyanwu, S. O. Adam, J.A. Obi, Yelwa, M. (2015) *Human Capital Development and Economic Growth in Nigeria* Journal of Economics and Sustainable Development; www.iiste.org.ISSN 2222-2855(Online) *6 (14)*, 16-26

Awopegba, P.O. (2002). Human Resources, High Level Manpower and the Development of the Nigerian Economy, *Nigerian Journal of Economic Research*, 1, 87-96.

Barro, R J (1996) Three Models of health and economic growth; unpublished Harvard University *Management Executive*, 9(4), 49–61.

Bloom, D. E. and David, C. (2000) The Health and Wealth of Nations, *American Journal of Applied Sciences* 287(18) 1207-1209.

Bloom, D. E., David C. and Jaypee S. (2004) "The Effect of Health on Economic Growth: A Production Function Approach" *World Development* Elsevier Ltd. Great Britain 0305-750X/$. 32(1) 1–13.

Bratti M, A. Bucci and Moretti E. (2004), Demographic Trends, Human Capital and Economic Growth in Developing countries: Theory and evidence, University of Ancona, Department of Economics, Ancona, Italy.

Dauda, R.O. (2010) Role of Human Capital in Economic Development: *An Empirical Study of Nigeria Case*: Selected Papers for 2010, UK. Oxford Business and Economic Conference Program

Engle, R. F and Granger CWJ (1987) Co-integration and error correction: Representation, Estimation and Testing; *Econometrica*, 55(2) 251-276

Fogel, R. (2004) "New Findings on Secular Trends in Nutrition and Mortality: Some Implications for Population "Theory" In *Handbook of Population an Family Economics* Vol. 1A, edited by Mark R. Rosenzweig and Oded Stark. Amsterdam: North Holland, 1997.

Folloni, G. and Vittadini, G. (2010) "Human Capital Measurement", *Journal of*

*Economic Surveys:* Blackwell Publishing Ltd, 9600 Garsington Road, Oxford OX4 2DQ, UK and 350 Main Street, Malden, MA 02148, USA. 24(2), 248–279

Garba, P.K (2002) *Human Capital Formation, Utilization and the Development of Nigeria:* Selected Papers for the 2002 Annual Conference of the Nigerian Economic Society (NES) Ibadan Polygraphics Ventures Ltd.

Grammy, A. P and Assane, D. (1996); New Evidence on the Effect of Human Capital on Economic Growth Applied Economic Letters, 4, 121–124.

Harbison, F. H (1973): Human Resources as the Wealth of Nations. New York: Oxford University Press. In Imam, H.(2012), Educational policy in Nigeria from the Colonial Era to the post-independence period: *Italian Journal of Sociology of Education* (1) 181-204.

Human Development Index Report (2015)

Ikpesu, O. C. (2014) *Entrepreneurial Human Capital Development and Economic Future of Nigerian Graduates Developing Country;* Studieswww.iiste.org ISSN 2225-0565 (Online) 4(12), 19- 198.

Jhingan, M.L. (2012). *The Economics of Development and Planning* (40th Edition), India: Vrinda Publications (P) Ltd.

Johnson, A.O. (2011). Human Capital Development and Economic Growth in Nigeria, *European Journal of Business and Management,* 3(9), 29-38.

Khosravi A and Karimi, M.S. (2010), To Investigation the Relationship between Monetary, Fiscal Policy and Economic Growth in Iran, Autoregressive Distributed Lag Approach to Co-integration, *American Journal of Applied Sciences* 7 (3) 420-424.

Knowles, S. and Owen P. D. (1995) Health Capital and Cross-Country Variation in income per capita, in Markiw-Romer-Weil Model "Economics Letter 48

Lawanson, O. I. (2009). *Human Capital Investment and Economic Development in Nigeria:* The Role of Health and Education; Oxford: Oxford University Press.

Maku, O. E. (2009) Does Government Spending Spur Economic Growth in Nigeria? Munich: MPRA.

Meir D. (1995): The Power of Their Ideas. Boston Beacon Press Ltd. New York

Markiw, N.G., Romer D. and Weil D. N. (1992) A Contribution to the Empirics of Economics *Quarterly Journal of economics*: 107, 407-437.

Mushkin, S. J. (1962) Health as an Investment, *Journal of Political Economy* from Chicago Press: (70) 129.

Mustafa, U. Abbas, K. and Saeed, A. (2005) Enhancing vocational training for Economic Growth in Pakistan, *the Pakistan Development Review:* 44 (4).

Ncube, M. (1999) Is Human Capital Important For Economic Growth In Zimbabwe*? African Journal of Economics Policy* 6(2), 1-14.

Nnamani, K (2013). *Nigeria's Transformation and Leadership Lessons from Contemporary Issues of National Interest;* A Paper Delivered at the centenary Celebrations of the Ibadan Grammar School, Oyo State, Nigeria. The Nation Thursday, April 18.

Odusola, A.O. (1998). Human Capital Investment and the Empirics of Economic Growth in Nigeria, *Rekindling Investment for Economic Development in Nigeria*, the Nigerian Economic Society (NES) Annual Conference, Ibadan; 257-271

Ogujiuba, K. K., and Adeniyi, A. O. (2004) *Economic Growth and Human Capital Development:* The Case of Nigeria. Nigeria: CBN.

Oladeji A. O. (2015) *International Journal of Recent Research in Commerce Economics and Management* (IJRRCEM) 2(2), 151-164, Available at: www.paperpublications.org

Olaniyan D A and Okemakinde T. (2008), Human Capital Theory: Implications for Educational Development, *European Journal of Scientific Research,* 24(2) 157-162.

Oluwatobi, S. O. and Ogunrinola, I. O. (2011) Government Expenditure on Human Capital Development: Implications for Economic Growth in

Nigeria, *Journal of Sustainable Development* 4(3) 72-80.

Perkins et al (2001) Perkins R, Farmer P, Litchfield P (2009) Realizing ambitions: Better employment support for people with a mental health condition: A Review to the Department for Work and Pensions.

Pesaran, M.H., Shin Y. and R.J. Smith, (2001) Bounds testing approaches to the analysis of level relationships, *Journal of Applied Econometrics,* 16(3) 289-326

Pesaran, M. H., and Shin, Y. (1996) Autoregressive Distributed lag modeling approach to co- integration analysis (DAE Working Paper Series No. 9514) Cambridge, UK: Department of Applied Economics, University of Cambridge

Pritchett, L.(2001) "Where has all the Education gone"? The Word Bank Economic Review: 15(3).

Rehme, G. (2007): Education, Economic Growth and Measured Income Inequality. *Economica*: 74, 493- 514.

Sankay, O. J. Ismail, R. and Shaari, A. H. (2010); The Impact of Human Capital Development on the economic Growth of Nigeria: Prosiding Perkem V Jilid, 1, 63–72.

Sen, A. (2000). A Decade of Human Development, *Journal of Human Development 1(1)*

Simon-Oke, O. O. (2014) Foreign Private Investment, Capital Formation and Poverty Reduction in Nigeria, *European Journal of Business and Social Sciences,* 2(10) 157-168.

Solow, R. M. (1956) A Contribution to the Theory of Economic Growth, *Quarterly Journal of Economics,* 70 (1), 65-94.

Strauss, J. and Thomas, D. (1998) Health, Nutrition, and Economic Development *Journal of Economic Literature,* 36(2) 766-817.

Todaro, M. P. and Smith S. C. (2009) *Economic Development* (Tenth Edition), Pearson Education (Singapore) Ltd. Edinburgh gate Harlow Essex CM202JE England.

UNDP (1996): *Human development report;* New York Oxford University press.

UNDP (2009); Summary: *Human Development Report Nigeria.* Abuja: UNDP, 2008-2009.

UNECA: Africa Development Bank (1988) *Economic Report on Africa;* Addis Ababa. UNECA. http://hdi.handle.net/10855/3500

Uwatt, B. U. (2003); *Human Resource Development and Economic Growth in Nigeria*, 1960- 2000; Proceeding of the Annual Conference of the Nigerian Economic Society: Human Resources Development in Africa, University of Ibadan. 17th-19th September 127-154.

World Bank; (2004): *World Development Report,* Washington D. C.

World Bank (1993): Investment in Health, *World Bank Report.* Washington. D C: The World Bank

Yesufu, T. M. (2000): *The Human Factor in National Development,* Spectrum Books Limited, Ibadan, 310–330.

Zidan, S.S. (2001): The role of HRD in economic development *Human Resources Development Quarterly*, 12(4), p437. Leroy Almendarez HTM

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

# An Empirical Investigation of Income Inequality, Corruption and Economic Growth in Nigeria: 1988 - 2015

Yakubu Omuya Shaidu

*Department of Education Economics, Federal College of Education, OkeneKogi State, Nigeria*

**Abstract**

*Lopsided income distribution and high corruption are key factors in explaining the gap between rising economic growth and high incidence of poverty in Nigeria over the years. Therefore, this study investigates the impact of income inequality and corruption on the economic growth in Nigeria ranging from post Structural Adjustment Era of 1988 to 2015. In order to establish whether income inequality can cause growth to occur and on the other hand whether corruption could cause growth or income inequality, the study adopts Error Correction Model and Granger Causality test. where Gross Domestic Product (GDP) is expressed as a function of Gini coefficient (GINI), corruption perception index (CPI), literacy rate (LR), and external debt servicing (EDS) using yearly time series data obtained from relevant office of statistics in Nigeria. The Unit root test confirmed that all the variables are stationary in their first difference except for gini co-efficient at 5% level. Having regards to the mixed order of integration, the study adopts ARDL Bound tests approach to cointegration which is the appropriate method to test for co-integration of the variables. The empirical findings confirmed that corruption perception index is negatively related to gross domestic product and that corruption has a significant impact on economic growth in Nigeria. Also, Gini coefficient has a negative impact on the economic growth of Nigeria because the wealth of the country hangs in the hands of only few citizens of the country. Literacy rate is positively related to economic growth and external debt servicing has a positive relationship with gross domestic product in Nigeria. The study concluded that Nigeria has the potential to build a prosperous economy, reduce poverty significantly and provide the health, education, and infrastructure services its population needs. However, available evidence indicates that these resources have not been judiciously used to meet the need of the population in terms of human capital development because of high level of corruption in the country. It is observed that corruption impacts negatively on real development of the country. It is therefore recommended that existing reforms and policies on corruption be sincerely reviewed and strengthened to ruthlessly address the causes of corruption rather than its effects and to bridge the income inequality between the rich and the poor. In doing this, the roles of the agencies and commissions saddled with monitoring corrupt practices must be motivated and encouraged. This will amount to strictly enforcing due process and the rule of law in the public administration where corruption is at the highest level.*

**Keywords:** Corruption, Inequality, Income, Poverty, Economic Growth
**JEL Codes**: JI1

## 1. Introduction

Nigeria is a nation blessed with vast human and natural resources. Its oil export alone accounts for about 95% of foreign exchange income and about70% of government income (CBN, 2014). It has a population of 177,155,754 (CIA - World Factbook, 2014). The economy from 1960 to 2013 has witnessed increase in economic growth ranging between 4.2billion US Dollars in 1961 and 510 billion US Dollars in 2013 (Trading economics, 2015). Despite its enormous array of resources, and growth the Nigerian economy is characterized by wide income inequality – with the rich and poor visible even from first sight. Indeed one of the most pathetic features of the Nigerian economy today is that majority of its populace is living in a state of destitution, while the remaining minority is living in affluence (Osinubi, 2003). This has been partly blamed on corruption, inappropriate distribution mechanisms and gross mismanagement of the country's vast resources. All these are characteristics that have eaten so deep into the fabrics of Nigerian government, the public and private sectors, government and non-governmental organizations, have essentially become a way of life and important sources of accumulation of private property in Nigeria (Mustapha, 2008). Corruption alone has greatly contributed to the backwardness and failure of good governance in Nigeria. The country has not been able to implement policies which promote good governance and facilitate the development and success of the democratic process due to prevalence of high (political) and low levels of (bureaucratic corruption). These have produced a country that lacks the middle class which is considered as the bridge to sustainable economic growth. These skewed economic relations do not reflect the geographical spread of resource endowment; rather it is a product of greed, injustice and selfishness, which is beyond any economic principle. This is supported by rational choice theory propounded by Jonathan Levin and Paul, (2004) which defined rational choice to mean the process of determining what options are available and then choosing the most preferred one according to some consistent criterion. Rational choice is a theory in social science that argues human behavior and social life in general, can be explained in terms of rational choices of individuals, social interaction, including political interaction, is considered to be a type of exchange where individuals will interact with each other if the expected gain outweighs the expected costs arising from the interaction. There are certain principles and assumption guiding this theory. They are;

- An individual acts rationally in pursuit of her own self-interest and not in the interest of others. Individuals seek to maximize their gains and minimize their losses.
- An individual has sufficient information upon which to establish her preferences and perform her rational analysis.
- Preferences are transitive in nature. This is logical principle that sounds more complicated than it really is. In a wider sense, this rational choice model when linking it to Nigerian situation based on the subject matter is valid and consistent with the behavior of our leaders.

The concept of inequality has to do with the differences in the share of something between/among two or more persons where the share of one/some is greater than that of others. According to Ray (1998), economic inequality occurs when one individual is given some material choice/resources and another is denied the same thing. Inequality can be in income, consumption, wealth, gender, employment, health variables and many more. But for this study we are interested in income inequality. Income inequality can also be defined as the inequitable distribution of income among the members of a particular group, an economy or society. Income inequality can be measured generally using the Lorenz curve, Gini coefficient and General Entropy class. The Gini coefficient is most frequently used to measure and it is close to the Lorenz curve. The Gini coefficient measures income inequality based on the Lorenz curve and has values between 0 and 1 (0 and 1 inclusive) where figures closer to 0 signifies more equality in the distribution, values closer to 1 shows higher inequitable distribution of income while 0 signifies absolute equality in the distribution. The country has increasing rate of income inequality both in the regions and at the national level.

Income inequality in Nigeria is associated with high poverty rates demonstrated by high unemployment, poor governance, corruption, lack of accountability, gross violation of human rights, nepotism and a skewed income distribution. Information from National Bureau of Statistics 2006 (2012) and UNDP (2009) shows that about 15% of Nigerians population was poor in 1960. Income inequality in Nigeria increase from 27.2 percent in 1980 to 42.7 percent in 2004 and further to 65.5 percent in 2010. While the 27.2 percent for 1980 equals' 17.7 million persons in 2010, 112.5 million persons were found poor in absolute terms. Additional characteristics of poverty level in Nigeria includes; poor infrastructure and impaired access to productive and financial asset by women and vulnerable groups. Poverty has a gender dimension as women are over represented among the poor due to the tenets of tradition and socio-cultural practices, discrimination and lack of access to productive asset and financial services. Inequality and the incidences of poverty have increased seriously over time. Available data from the National Bureau of statistics indicate that the incidence of poverty declined between 1985 and 1992, but since then it has been on the rise almost hitting 70% in recent years. In Nigeria, the twin issues of poverty and resource endowment presents a paradox. This is so because, though the country is rich in land, human and natural resources, the people are still considered to be poor, as nearly 70% of Nigerians in 1999 was living in poverty (F.O.S., 1999; Okojieetal, 2000; World Bank, 2000; Soludo, 2006). Corruption in the country continues to prevent the dividends expected from the exploration of the wide range of resources in the country as few have access to the resources.

Corruption according to Transparency International, (TI) is operationally defined as the abuse of entrusted power for private gains. The World Bank (1997) also defined corruption as the abuse of public office for private gain, which can manifest in form of briberies, patronage, nepotism cronyism, fraud and embezzlement. A recent publication of Transparency International 2016, ranks Nigeria 148th most corrupt country among the countries studied by the organization in the world in the latest Global Corruption Index. The measurement is based on (0-100) with a score of 0 perceived as "highly corrupt" and 100 "very clean". Though some critics may contest the objectivity of these rankings, there is anecdotal evidence that corruption is widespread in Nigeria in particular and in the other African countries. Yet few studies have attempted to empirically investigate the effects of corruption on economic growth, poverty and income inequality in Nigeria. Hence, to what extent does corruption affect the economic growth, poverty and income inequality in less developed countries, like Nigeria. If corruption affects economic growth, income inequality and poverty, what is the mechanism through which it affects economic performance? In fact economists recognize the role of corruption in economic performance but most efforts in literature has focused on the causes of corruption and the effects it has on economic growth. Many studies link corruption to income distribution in a sample of countries. However none of the studies on corruption has empirically investigated either the causes or consequences of corruption in African countries, most especially in Nigeria. As indicated above, in addition to low living standard, income is also highly unequally distributed in Nigeria. Furthermore, corruption in Nigeria is systemic and involves high level political leadership. These facts combined with the perception of widespread corruption in African countries calls for an investigation into the causal relationship among inequality, corruption and economic performance in Nigeria.

## 2. Literature Review and Theoretical Framework

### *Empirical Review*

Three concepts are identified in this study. They are income inequality, corruption and economic growth. Therefore, attention will be focused on them one after the other.

Beginning with Income Inequality, it is generally seen to measure the disparity in income distribution among sections in a population. It measures the income gap between individuals and households in a particular society. It is the extent to which income is distributed unevenly in a group of people. Income in this case not just being money received through pay but all the money received from all sources including wages, profit, interests, dividends, pensions, state benefits and rents (The Equality Trust, 2015).

Income inequality as highlighted by Osahon and Osarobo (2011) refer to the dispersion of distribution of income in the country across the population or segments of the population. Although conceptually distinct, income inequality is often studied as part of the broad analysis covering poverty welfare. Thus, inequality is a broader concept than poverty because it is defined over a whole distribution. Inequality has to do with differences in the share of something between/among two or more persons where the share of one/some is greater than that of others. According to Ray (1998), economic inequality occurs when one individual is given some material choice/resources and another is denied the same thing. Inequality can be in income, consumption, wealth, gender, employment, health variables and many more.

But for this study we are interested in income inequality. Income inequality is defined as the inequitable distribution of income among the members of a particular group, an economy or society. Income inequality can be measured generally using the Lorenz curve, Gini coefficient and general entropy class. The Gini coefficient is most frequently used to measure and it is close to the Lorenz curve. The Gini coefficient measures income inequality based on the Lorenz curve and has values between 0 and 1 (0 and 1 inclusive) where figures closer to 0 signifies more equality in the distribution, values closer to 1 shows higher inequitable distribution of income while 0 signifies absolute equality in the distribution. Income inequality can be within the country or between two or more countries. Some of the factors that lead to inequality as noted by scholars are gender, globalization, educational level and the level of technology in the country. According to neoclassical school, income inequality is as a result of different productive capacity of an individual or group of individuals and this lead to different wage levels and income levels. Non income inequality includes inequality in skills, education, opportunities, happiness, health, wealth, and others.

On corruption; Economic theory has developed two basic views on corruption, one that considers corruption to be exogenous and the other endogenous to the political process. Applying either theoretical view, three basic types of corruption can be identified; corruption for the acceleration of processes, administrative corruption and "state capture". While in most cases, corruption can be attributed to rent appropriation, self-interested individuals seeking to maximize their own personal welfare as well as complicated, ambiguous and unenforceable laws are to be blame. According to Vito Tanzi; "Corruption is the intentional non-compliance with the arms length principle aimed at deriving some advantage for oneself or for related individuals from this behavior. There is an alternative definition of corruption frequently used by the World Bank that specifies corruption as the abuse of public office for private gain. This definition considers the cause of corruption in public authority and its abuse, and links corruption to the state, its activities, state intervention on the market and the existence of the public sector. All economic agents are maximizing their individual utility, ie. Personal welfare (wealth). Accordingly, selfish interests of economic agents are the basic motive for economic agents are the basic motive or economic transactions between them. Resources are allocated to the activities that provide the greatest returns on investment (an allocation decision). In other words, corruption is the misuse of public power for private gain that is to say that corruption involves the misuse of entrusted power (by heritage, education, marriage, election, appointment or whatever else) for private gain. Corruption in wider context, can be defined as an improbity or decay in the decision making process in which decision maker consents to deviate or demands deviation from criterion which should rule his/her decision-making, in exchange for a reward or for the promise or expectation of a reward, while these motives influencing his/her decision making cannot be part of the justification of the decision. Public corruption is commonly defined as the misuse of public office for private gain (Svensson, 2005). This definition would for instance include official selling of government property, accepting bribes in public procurement and misappropriation of government funds. Bribery arises in response to both good and bad policies, to either escape a penalty for violating the good policy or to circumvent the bad. (Djakav, Laporta, Lopez-de-silanes&Schleifer cited in Svensson, 2005) and can thus prevail in any political environment.

Alesinaa and Angeletos (2005) posit that market economies generate large differences in income and wealth and so the poor are always likely to demand redistributive policies, but have a much stronger moral justification for doing so when inequality stems from corruption and rent seeking. Also, bigger governments raise the possibilities for corruption; more corruption may in turn raise the support for redistributive policies that intend to correct the inequality and injustice generated by corruption. This could be a clear case for Nigeria. In a hypothetical non-overlapping generations of a simple dynamic model, the results show that a positive feedback from past to current levels of taxation and corruption arises either when wealth originating in corruption and rent seeking is considered unfair, or when the ability to engage in corruption is unevenly distributed in the population. It also concludes that redistributive and regulatory policies intended to reduce inequality or improve the fairness of economic outcomes may bring about even more opportunities for corruption.

On Economic growth, the concept of economic growth is a multivariate concept; hence there is no single satisfactory definition of it. Economic growth is a process where low income national economic are transformed into modern industrial economics. It involves qualitative and quantitative improvements in a country's economy. Political and social transformation are also included in the concept of economic growth in addition to economic changes.

*Theoretical Framework*

No known unique economic theory clearly justifies the relationship among income inequality, corruption and economic growth. This could be based on the fact that corruption has not until of recent actually been considered an economic variable. In such a situation, the sound frame is to review the link between inequality and economic growth which are core economic variables and then generalize to include theory on corruption. The AK theory model will be most suitable to discuss the links between income inequality corruption and economic growth. The first wave of endogenous growth theory, also called the Ak-theory, emphasizes that longrun economic growth rate depends on the savings rate (physical capital accumulation) and education (knowledge accumulation) Lucas, 1998. Thus $Y = Ak$ where Y is output, A is technology, and k is capital. In this first wave no distinction is made between the physical and human capital studied in neoclassical growth theory, and between the intellectual capital associated with innovations. Instead, constant or increasing returns to scale are assumed, as it is believed that some of the accumulation in capital will be intellectual capital, creating technological progress and offsetting the diminishing returns to capital. Longrun growth is then determined by savings rate, and if a fraction(s), of output is saved, and there is a fixed rate of depreciation, then net investments are given by;

$$\frac{dk}{dt} = sY - \delta k$$

Which in turn implies that the growth rate, g, is given by:

$$g \equiv \frac{1dY}{Ydt} = \frac{1dk}{kdt} = sA - \delta$$

An increase in the capital accumulation will therefore lead to a permanently higher growth rate. A second wave, also called innovation-based theory, separates intellectual capital from physical and human capital, and growth comes through innovation rather than capital accumulation and education. According to Romer (1991) productivity increases along with the degree of product variety. Therefore, in liking this with (corruption) bureaucratic corruption is an inevitable feature of any government intervention in an economy since any intervention requires assignment of responsibility to bureaucrats, who then possess power to extract bribes (Ehrlich and Lui, 1999). This in turn creates an incentive for individuals to become a bureaucrats with the privilege of collecting bribes, a phenomenon often referred to as rent seeking. The cost of corruption then lies in that resources will be invested in such activities, rather than accumulating human capital.

Corruption could also enter endogenous growth model through distortions in the educational system. e.g through inequality in the access to education in distribution of educational materials, in the acquisition of educational goods and services and through administrators and teachers in the system (Heynaman, 2004). Murphy, Schleifer and Vishny (1993) make the argument that corruption reduces the returns of production, and if the fall in these returns is larger than the returns on corrupt and rent seeking activities, resources will flow from productive activities to corrupt ones. Thus, corrupt countries will end up with lower stocks of human capital and other factors of production.

**3. Methodology**

*Research Design*

The research design for this study will involve the use of secondary approach. This will include econometric models. Studies in economics can either be based on primary survey, secondary information or both. Secondary information is information already documented in various forms like printed or electronic materials. At times both the primary and secondary sources as specified are used. This means that the information used in this study are derived from already documented sources.

*Model Specification*

The investigation was done using the dynamic panel estimate.

Kwabena (2002) model was presented in 2 equations as:

$y = \alpha_0 + \alpha_1 k + \alpha_2 edu + \alpha_3 x + \alpha_4$ corrupt $+ \alpha_5 y_o + \alpha_6$govcon + e

gini = $\gamma_o + \gamma_1 g + \gamma_2$edu $+ \gamma_3\, y + \gamma_4$corrupt $+ \gamma_5$govcon + e

With $\gamma$ as coefficients, $y_o$ initial level of income, y for level of per capita income, k investment rate, x growth rate of real exports, growth rate of GDP, edu for education, corrupt for corruption and govcon for government consumption.

To achieve their objective, Sbaouelgi and Boulila (2013) employed Cointegration and Granger causality test for long run and short run analysis, that is to test the existence of a co-evolution between inequality and growth proxies in the long-run. In situations if the long run relationship between these indicators is absent, the causality tests are limited to short-run test of causality. The approach consists of investigating empirically the causality between income inequality and economic growth in some MENA countries.

Their model is specified as:

LGDP per capita = f(LGini, LGFCF,LTrade, LSCHOOL)

This model by Sbaouelgi and Boulila (2013) is built on the basis of their submission that concerning the economic growth, the standard literature on the ties between economic growth and income inequality generally uses the growth rate of GDP per capita. This model is adopted because the context of their work is situated within North Africa and Middle East countries which are developing countries like Nigeria that shares almost the same economic problems or challenges.

This model is substantially adjusted to:

To capture only a single country (Nigeria in this case) compared to panel of countries.
Capture economic growth**(GDP)** directly not its intended impact.
The Gini coefficient (**LGini**) as used by Sbaouelgi and Boulila (2013) will be maintained to capture income inequality. Gini index measures the extent to which the distribution of income or consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution. The model to be used is therefore Sbaouelgi and Boulila (2013) equation above, re-considered as represented as follows (That is equation 1 above becomes):

GDP = f(Gini, CPI, LRt, EDS)---------------2

Where:
GDP is the proxy for economic growth,
Gini is measure of income inequality,
CPI is corruption perception index,
LRt is the Literacy Rate for Nigeria and
EDS is the external debt servicing.
For econometric purposes, the error term is then introduced to capture the shocks of variables not included in the model: Thus equation 2 becomes:

$GDP = C + \beta_1 Gini + \beta_2 CPI + \beta_3 LRt + \beta_4 EDS + e$ --------------------------------------------- 3

With "C" being the constant and $\beta_1$ to $\beta_4$being the coefficients to be estimated.
The a priori expectations are that: $\beta_1, \beta_2$ and $\beta_4 < 0$; $\beta_3 > 0$.

**4. Analysis and Presentation of Result**
This covers analysis of the data collected and the presentation of the result generated using the statistical software E-view 9. The dependent variable is gross domestic product (GDP) while the independent variables include Gini coefficient (GINI), corruption perception index (CPI), literacy rate(LR), and external debt servicing (EDS).Since time series variables from the yearly period of 1995 to 2015 are used, it is essential to examine the properties so as not to end up with a spurious regression. Thus, all variables are examined through descriptive statistics, stationary test results and co-integration test. The major method of analysis employed is Error Correlation Model (ECM) and Granger Causality Test.

*Descriptive Statistics*
This section depicts the graphical representation and the summary statistics of the variables used in the study for the yearly period of 1995 to 2015.

Table 4.1: Descriptive and Summary Statistics of variables

| | Corruption Perception Index (CPI) | External Debt Servicing (N' Billion) | Gross Domestic Product (N' Billion) | GINI Co-efficient | Literacy Rate |
|---|---|---|---|---|---|
| Mean | 1.883 | 183,435.50 | 33,220.38 | 0.4937 | 24.9233 |
| Maximum | 2.70 | 1,136,118. | 94,144.96 | 0.6000 | 43.8400 |
| Minimum | 0.69 | 29,151.91 | 2,895.20 | 0.4200 | 0.0000 |
| Std. Dev. | 0.7320 | 284,405.8 | 30,685.46 | 0.0449 | 14.9446 |
| Skewness | -0.8829 | 2.5179 | 0.7389 | 0.6673 | -0.9313 |
| Kurtosis | 3.2101 | 8.2547 | 2.1588 | 3.2264 | 2.2759 |
| Jarque-Bera | 2.7670 | 46.3505 | 2.5301 | 1.6033 | 3.4942 |
| Probability | 0.2507 | 0.0000 | 0.2822 | 0.4486 | 0.17427 |
| Observations | 21 | 21 | 21 | 21 | 21 |

*Source: Authors Computation and E-views Output 2017*

Corruption perception index averaged 1.88 over the entire period of study; peaked value stood at 2.7 in the year 2012 and was at its lowest ebb with value standing at 0.69 in the year 1996. The skewness shows that the series is negatively skewed while the kurtosis shows that corruption perception index is leptokurtic. This implied that it is not normally distributed and this is further validated by the Jarque-Berra statistics. The standard deviation shows there is no possibility of heteroscedasticity in the variable since the deviation from the mean value is minimal. The total observation between 1995 and 2015 was 20.

External debt servicing averaged ₦183,435.50 billion over the period of study, peaked value stood at ₦1,136,118 billion and was at its minimum value at ₦29,151.91 billion. The skewness shows that the series is positively skewed while the kurtosis shows that external debt servicing is leptokurtic. This implies that it is not normally distributed and this is further validated by the Jarque-Berra statistics. The total observation between 1995 and 2015 was 21.

Gross domestic product in Nigeria averaged₦33,220.38over the entire period of study, peaked value stood at ₦94,144.96 billionand was at its lowest ebb with value standing at ₦2,895.20 billion. The skewness shows that the series is positively skewed while the kurtosis shows that gross domestic product is leptokurtic. The Jarque-Bera statistics shows that the variable is normally distributed since the probability value is greater than 0.05 critical value.

Gini coefficient averaged 0.4937 over the entire period of under this study, peaked value stood at 0.6and was at its lowest ebb with value standing at 0.42. The skewness shows that the series is positively skewed while the kurtosis shows that it is leptokurtic. The JarqueBera Statistics reveals that the variable is normally distributed since the probability value is greater than 5% level of significance. Also, the standard deviation stood at 0.045 with 21 observations being considered.

The Literacy rate in Nigeria which is averaged at 24.92 percent over the review period. Also, it peaked value stood at 43.84 percent and was at its lowest ebb with value standing at 23 percent. The skewness shows that the series is negatively skewed while the kurtosis shows that it is leptokurtic. This implies that the variable is normally distributed and this is further validated by the probability of the Jarque-Berra statistics. The total observation between 1995 and 2015 was 21.

Table 4.2 Correlation Analysis

| Variables | CPI | EDS | GDP | GINIC | LR |
|---|---|---|---|---|---|
| CPI | 1.000 | -0.050 | 0.778 | -0.258 | -0.402 |
| EDS | | 1.000 | -0.211 | 0.114 | 0.268 |
| GDP | | | 1.000 | -0.287 | -0.732 |
| GINIC | | | | 1.000 | 0.079 |
| LR | | | | | 1.000 |

*Source: Authors Computation and E- Views Output 2017*

Table 4.2 shows the correlation analysis between the variables. The correlation value (r=-0.258) shows that there exists a low and negative correlation between corruption perception index (CPI) and gini coefficient (GINI) in Nigeria. In the same way, there is a negative and low correlation (r= -0.050) between corruption perception index and external debt servicing in Nigeria and there is a negative and fair correlation between corruption perception index (CPI) and literacy rate (LR). The correlation between corruption perception index and gross domestic product is high and positive with the correlation value of 0.778.

Gini coefficient has a low and positive correlation with external debt servicing but it has a negative and low relationship with literacy rate. External debt servicing has a weak and negative correlation with economic growth but a positive and weak correlation with literacy rate. Gross domestic product has a strong and negative correlation with literacy rate in Nigeria.

*Preliminary Test Of Variables*

*Unit Root Test*

The theory behind ARMA estimation is based on stationary time series. A series is said to be (weakly or covariance) *stationary* if the mean and autocovariances of the series do not depend on time. Any series that is not stationary is said to be *nonstationary*. While a stationary series is I{0}, a difference stationary series is written as I{d} where d is the order of integration.

Also, the Phillip Perron (PP) test exists to correct for any serial correlation and heteroskedasticity in the errors, non-parametrically by modifying the Dickey Fuller test statistics. One of the advantage of the PP Tests over the ADF tests is that the PP tests are robust to general forms of heteroskedasity in the error term. Also, the PP test uses the Newsey – West heteroskedascity and autocorrelation-consistent covariance matrix estimator.

The summary of the results of the unit root test of the variables using Augmented Dickey Fuller (ADF) Test and the Phillip Perron (PP) Test are presented in Table 4.3 below.

**4.3.2: Summary of Unit Root test Results**

Augmented Dickey Fuller (ADF) Test

| Variables | Levels | Critical Values | | First differences | Critical Values | | Order of Integration | Interpretation |
|---|---|---|---|---|---|---|---|---|
| CPI | -3.37 | 5% | -3.65 | -4.15 | 5% | -3.87 | I(1) | Stationary at 1st difference |
| L(EDS) | -1.62 | 5% | -3.65 | -3.31 | 10% | -3.27 | I(1) | Stationary at 1st difference |
| L(GDP) | -0.04 | 5% | -3.67 | -3.57 | 5% | -3.67 | I(1) | Stationary at 1st difference |
| GINI | -3.90 | 5% | -3.65 | | | | I(0) | Stationary at Level |
| LR | -1.91 | 5% | -3.65 | -4.63 | 5% | -3.67 | I(1) | Stationary at 1st difference |

Phillip Perron (PP) Test

| Variable | Levels | Critical Values | | First differences | Critical Values | | Order of Integration | Interpretation |
|---|---|---|---|---|---|---|---|---|
| CPI | -3.37 | 5% | -3.65 | -3.59 | 10% | -3.27 | I(1) | Stationary at 1st difference |
| L(EDS) | -1.67 | 5% | -3.65 | -3.35 | 10% | -3.27 | I(1) | Stationary at 1st difference |
| L(GDP) | -0.22 | 5% | -3.65 | -3.73 | 5% | -3.67 | I(1) | Stationary at 1st difference |
| GINI | -3.90 | 5% | -3.65 | | | | I(0) | Stationary at Level |
| LR | -1.94 | 5% | -3.65 | -4.63 | 5% | -3.67 | I(1) | Stationary at 1st difference |

*Source: Authors Computation and EVIEWS Output 2017*

Augmented Dickey Fuller (ADF) Test and Phillip Perron tests are conducted on gross domestic product (GDP), corruption perception index (CPI), gini coefficient (GINI), literacy rate (LR) and external debt servicing (EDS) in Nigeria. The result shows that all the variables are non stationary, that is integrated of order 1 with the exception of GINI co-efficient which is integrated at order 0 (that is, stationary at level).

The result shows that the variables are stationary in their first difference except for gini co-efficient. Gross domestic product, gini co-efficient and literacy rate are differenced stationary at 5% level of significance while corruption perception index and external debt servicing are differenced stationary at 10% level of significance.

Having regard to the mixed order of integration, the appropriate method employed to test for co-integration of the variables is the ARDL Bounds Test Approach to cointegration.

*Test for Cointegration (Bounds Test Approach)*

The result of the ARDL bounds test for cointegration is presented in Table 4.4. The result indicates the existence of long run cointegrating relationship between economic growth and the included explanatory variables as the computed F-Statistics is greater than the lower critical bounds at the 5% and 10% significance level respectively. Thus, the null hypothesis of no long run relationships is rejected at the significance of 10% level. Hence, there is a long run relationship among variables.

*Result of test for cointegration (ARDL Bounds Test Approach)*

In view of the fact that the variables are co-integrated, the dynamic (short run) relationship between them can be represented with an error correction model.

*Model Estimation Results*

The results of estimation of the error correction model and the long run version of the model based on the estimated ARDL model are presented in table 4.5.1 below.

*Estimated Error Correction and Long Run Models*

The cointegrating form of the result (that is the error correction model showing the short run effects of the explanatory variables on the dependent variables) indicates that corruption perception index is negatively related to gross domestic product. The negative sign is same to apriori expectation. It suggests that when the country is perceived to be corrupt, its performance begins to fall with time. This happens to be the reality of the economy because the different number of scandals tends to affect key indicators in the economy which in turns affect economic growth and vice versa. Thus, corruption has a significant impact on economic growth in Nigeria.

Also, Gini coefficient has a negative impact on the economic growth of Nigeria because the wealth of the country hangs in the hands of only few citizens of the country. This lead to the inverse relationship between gini coefficient and economic growth in Nigeria and this satisfies the a priori expectation too. When wealth is hoarded by few individuals in the country, there will be limited cash in the hands of the multitude which could have stimulate transaction and increase the turnover of business. A percentage increase in the gini coefficient will lead to 0.27 percent decrease in the gross domestic product and vice versa. Hence, income inequality has a significant impact on economic growth in Nigeria.

The relationship between literacy rate and economic growth is positive and this satisfies the a priori expectation. In other words, the more the human capital are educated and skillful, the more the economic growth. The higher the literacy rate the higher the gross domestic product. An increase in the literacy rate by 100 percent will engender 0.0766 percent increase in the gross domestic product of the economy.

External debt servicing has a positive relationship with gross domestic product in Nigeria. This positive relationship may arise due to the fact that investors are encourage to invest in the country with the knowledge that the Nigerian government is servicing her debt thereby committed to lifting the burden of debt on the economy.

*Justification of the Analysis*

This study contributes to existing studies that examined the linkage between income inequality and economic growth. However, this study bridge the gap in existing literatures, there are scanty literatures on the tripartite concepts (income inequality, corruption and economic growth), most studies either considered the linkage between corruption and economic growth or income inequality and economic growth but this study combined the trio concept together in order to empirically verify the interdependency of the three concepts.

This study expressed GDP as a function of Gini coefficient (measuring income inequality), corruption perception index (measuring corruption level), literacy rate (capturing education gap), and external debt servicing (capturing the effect of external forces). However, the study adopted diagnosis analysis to ensure that necessary precautions are put into consideration to avoid the problem of multicollinearity and autocorrelation. This serves as an advantage over other studies that might not put diagnostic test into consideration. Thus, making the result of this study reliable.

Finally, the trend analysis was captured in this study to show the trend of corruption, income inequality and economic growth in Nigeria over the years, this will enable layman to understand the findings of this study because line trend analysis is easy to trace and understand by layman to be able to see the moving trend of the variables in the economy over the studies period. It further aids quick understanding of the major findings of this study.

**5. Conclusion and Recommendation**

*Summary of Major Findings*

The summary of major findings, conclusion and recommendation that are obtained from the investigation of income inequality, corruption and economic growth. The study expressed gross domestic product as a function of Gini coefficient, corruption perception index, literacy rate, and external debt servicing. The study found that gross domestic product, gini coefficient and literacy rate are differenced stationary at 5% level of significance while corruption perception index and external debt servicing are differenced stationary at 10% level of significance. This shows that all the variables are I(1) except for gini coefficient which is I(0) and the ARDL bounds test approach to cointegration confirmed the existence of long run relationship among the variables.

The study also found that negative relationship exist between corruption perception index and economic growth indicating that the perception of Nigeria has been corrupt, inversely affect the growth of the economy. This happens to be the reality of the economy because the different numbers of scandals greatly affect the performance of the economy even at international level, influencing the performance of the economy negatively.

Finally, the study found that the relationship between literacy rate and economic growth is positive indicating that the more the human capital are educated and skillful, the more the economic growth. The higher the literacy rate the higher the gross domestic product. This suggests that Nigeria government needs to increase education sector financing in order to experience greater economic growth.

*Conclusion*

Nigeria has the potential to build a prosperous economy, reduce poverty significantly and provide the health, education, and infrastructure services its population needs. However, available evidence indicates that these resources have not been judiciously used to meet the need of the population in terms of human capital development because of high level of corruption in the country. It is observed that corruption impacts negatively on real development of the country. This may cost the economy so much that development will be slowed down if not restricted.

The study also concluded that causal effect of corruption in the country will result to income inequality because corruption will make larger proportion of the income to be in the hand of the relatively few people thereby promoting inequality gap between the rich and the poor. Thus, corruption reduction enhances economic growth. The consequences of corruption extend to increase in income gap among the classes in the society. Therefore, it is obvious that in a bid to reduce corruption to minimum in order to restore the fame and dignity of the economy making it an environment for rapid economic growth, the identified issues and problems of corruption setting back the economy over time must be seriously identified and tackled. The problems that are associated with political office holders need to be dealt with by the anti-graft agencies in the country and the use of tax system should be used to correct income gap between the rich and the poor so as to promote classless society as much as possible.

It can also be concluded that there is a tripartite link among corruption, income inequality and economic growth in Nigeria.

*Recommendations*

Based on the vast literatures reviewed for this study as well as the empirical result obtained, it is pertinent to state that for developing countries and Nigeria in particular to achieve rapid economic growth strict measures have to be taken to curtail corruption and income inequality in the country.

Finally, in fighting against corruption, measures and strategies should comprise of Private Anti-Corruption Initiatives, Public anti-corruption initiatives and Public education campaign/programmes. If this is achieved, it will create a long lasting impression in the mind of those that may further want to engage in corruption and with time, this will gradually correct damages caused to the economy in such a way that those effects on the economy will be insignificantly noticeable. Besides this, it will make corruption further hard and more hazardous to engage in.

**References**

Aidt, T. Dutta, J. and Sena, V. (2008). Governance regimes, corruption and growth: Theory and evidence, *Journal of Comparative Economics* Vol. 36, pp195–220.

Akanji, O. O. (2000) Incidence of Poverty and Economic Growth in Nigeria, statistique Developpementet Droits de l'Homme, Session C – Pa 6b, www.portal-stat.admin.ch/iaos2000/akanji_final_paper.doc.

Akinpelu, Y. A., Ogunseye, T. O., Bada, O. T., and Agbeyangi, B. A. (2013).The Socio-Economic Determinants of Corruption in Nigeria,*European Journal of humanities and Social Sciences*, Vol. 19, No.1.

Alesinaa, A. and Angeletos, G. M. (2005).Corruption, inequality, and fairness.*Journal of Monetary Economics*, Vol. 52, pp1227–1244.

Almas Heshmati (2004); Inequalities and their measurement, MTT Economic Research & Iza Bonn pp. 40-45.

Aliyu, S. U. R. and Akanni, O. E. (2008).Corruption and Economic Growth in Nigeria: 1986 -2007. MPRA Paper No. 12504, January 2009 06:02 UTC. Retrieved on January 15, 2015 from Online at http://mpra.ub.uni-muenchen.de/12504.

Bagchi, S. and Svejnar, J. (2013). Does Wealth Inequality Matter for Growth? The Effect of Billionaire Wealth, Income Distribution, and Poverty, CEPR, IZA and CERGE- EI Discussion Paper No. 7733, November.

Bandyopadhyay, D. and Tang, X. (2011).Understanding the economic dynamics behind growth–inequality Relationships.*Journal of Macroeconomics*, Vol. 33, pp14–32.

Bekat, C. M. and Kulkarni, K. G. (2009). Income Distribution and Economic growth: The case of Brazil. retrieved on 13/12/2014 from www.ssc.wisc.edu/.../BrazilIncomeDistribution%20and%20Economic%2.

Bhattacharyya, S.Hodler, R. (2010). Natural resources, democracy and corruption. *European Economic Review*, Vol. 54, pp608–621.

Biswajit, M. and Sugata, M. (2010). Corruption and wage inequality? *International Review of Economics and Finance*, Vol. 19, pp66–172.

Blackburn, K., Bose, N. and Haque, M. E. (2006).The incidence and persistence of corruption in economic development.*Journal of Economic Dynamics and Control*, Vol. 30, pp2447–2467.

BorisjBegovic (2005); The Concept of Corruption, Center for Liberal Democratic Studies (CLDS).Pp.1-7.

CBN (2014). 2013 Statistical bulletin

Chambers, D. (2007) Trading places: Does past growth impact inequality? *Journal of Development Economics*, Vol. 82, pp257– 266.

Chan, K. S., Zhou, X. and Pan, Z. (2014).The growth and inequality nexus: The case of China. *International Review of Economics and Finance*, Vol. 34, pp230–236.

Chetwynd, E., Chetwynd, F. and Spector, B. (2003).Corruption and Poverty: A Review of Recent Literature Management Systems International Final Report, January. Retrieved from www.eldis.org/vfile/upload/1/document/0708/ *doc14285.pdf.*

Central Bank of Nigeria – CBN (2014).2013 Statistical bulletins.

Chiam C. C. (2015). Empirical Studies: Corruption and Economic Growth, *American Journal of Economics*, Vol. 5, No. 2, pp183-188.

CIA - World Factbook (2014).retrieved from https://www.cia.gov/library/publications/the-world-factbook/geos/ni.html on 18/12/2014

Dobson S. and Ramlogan-Dobson C. (2012a). Why is Corruption Less Harmful to Income Inequality in Latin America?*World Development,* Vol. 40, No. 8, pp34–1545.

Dobson, S. Ramlogan-Dobson, C. (2012b). Inequality, corruption and the informal sector. *Economics Letters*, Vol. 115, pp104–107

Dzhumashev, R. (2014). Corruption and growth: The role of governance, public spending, and economic development. Journal of Economic Modelling Vol. 37 202–215.

Edward V. R. (1970). On the Theory of corruption.Economic development and cultural change. Vol. 19, No. 1, pp. 86 – 110.

Farooq, A., Shahbaz, M., Arouri, M. and Teulon, F. (2013). Does corruption impede economic growth in Pakistan? *Journal of Economic Modelling,* Vol. 35, pp622–633.

Federal office of Statistics –FOS (1999). Poverty profile for Nigeria, 1980 – 1996, Lagos.

Fields, G. S. (2007). How much should we care about changing income inequality in the course of economic growth? Journal of Policy Modeling Vol. 29 pp577–585.

Galbraith, J. K. andKum, H. (2002). Inequality and Economic Growth: Data Comparisons and Econometric Tests. University of Texas Inequality Project, 2001 (UTIP) Working Paper Number 21.

Gupta, S., Davoodi H. and Aloso-Terme, R. (1998). Does Corruption affect Income Inequality and poverty? IMF Working Paper, WP/98/76.

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

# Informal Sector and Employment Generation in Nigeria: An Error Correction Model Approach

Yelwa Mohammed[1], Awe Emmanuel Omoniyi[2]

[1&2]*Department of Economics, University of Abuja, Abuja*

**Abstract**

*Small and Medium Enterprises (SMEs) occupy a central place in the economic growth of nations. SMEs have a fundamental role to play in the development of an economy and this cannot be over emphasized. SMEs serve as training arena for local skills and entrepreneurs, and could become channels for mobilizing local savings, ensuring a more equitable distribution of income and reducing the migration of manpower from the rural to urban areas. On this note, ggovernment has identified the need for the development of SMEs. One of such Sectoral strategies is the introduction and pursuit of policies such as concessionary financing to encourage and strengthen the growth of SMEs in Nigeria. However, a well-functioning and regulated informal economy will be a critical prerequisite to sustainable growth. This is because the link between, informality and employment in Nigeria is not fully understood. This study seeks to employ an Error Correction Mechanism using data from the Central Bank of Nigeria having Unemployment, Financial sector output, Informal sector output and Human capital as variables. The finding revealed a significant relationship between Informal Financial Sector and employment generation in Nigeria. The study therefore recommended that there is the need for the government to utilize Informal Financial Institutions in its poverty reduction programmes, since significant percentage of the Small and Medium scale Enterprises (SMEs) could assess credit for investment through them. This will go a long way in creating employment and promoting inclusive growth in the country.*

**Keywords:** IFIS, Investment, SMEs and Poverty Alleviation
**JEL Codes**: O17

## 1. Introduction

Globally, there is an awareness on the need to curb poverty especially in the developing countries, the picture been painted on the global food crises, poor living conditions, low access to basic necessities of life needs to be addressed not only by the developed nations but by the developing nations themselves. Governments should wake up to their responsibilities of providing the necessary infrastructures, making correct policies, ensure its implementation so that these are translated into the reduction of poverty and unemployment, while also promoting economic growth. Poverty is multi-faced, it is characterized by a lack of purchasing power, exposure to risk, insufficient access to social and economic services and limited opportunities for employment generation. Rising unemployment negatively impacts on the economy because it brings about low per capita income which is also an indication of poverty, more importantly it is a waste of a country's resources.

Unemployment and poverty are so intertwine that one can easily confuse one for the other. Although, it is possible for one to be employed and still poor, this is likely to be a case of underemployment. Thus, by unemployment, it includes those underemployed. Unemployment and underemployment reflect the failure to make use of an important factor of production, labour, for fostering economic growth in Nigeria. Low returns to labour as well as high unemployment indicates poverty. Poverty makes it difficult to make investments in education and health that would increase a person's productivity.

It has been contended that the Formal financial sector will promote savings and investment, improve opportunities for credit, and engender reduce poverty. But it has been observed that Formal financial institutions have seriously come short of the expectations as they have made things harder for Nigerians through stringent conditionalities for credit, poor customer services and high interest rates (Frank, 2010). Even the micro finance institutions that were created for the purpose of developing the small and medium scale enterprises has not been able to realize any of the objectives for which it was created, thereby leaving the small and medium scale enterprises to be sourcing for their respective means (Yelwa *et al*, 2015).

The introduction of the informal financial institutions by individuals and groups is to cushion the effects of the Formal financial institutions on the socio-economic wellbeing of the people. This is practically done by borrowing loans to small and medium scale enterprises and individual for the purpose of expanding their respective businesses thereby creating more employment opportunities for the citizens. It has been acknowledged all over the world that small and medium scale enterprises are the powerful tool any country can use to stimulate fast and sustainable socio-economic growth (Awe *et al.* 2018).

It is on this background that the study seeks to evaluate the impact of Informal Financial Institutions on employment generation in Nigeria.

## 2. Literature Review

*The Concept of Unemployment*

One of the greatest challenges facing the Nigeria economy is unemployment which has maintained a rising trend over the years. The total labour force in Nigeria is made up of all persons aged 15-64 years excluding students, home keepers, retired persons and stay-at-home to work or not interested. Unemployed refers to people who are willing and capable of work but are unable to find suitable paid employment. The classical school of thought that provided the earliest thinking on economic issues did not fail to give a central point of reflection on the undesirability of unemployment. The Keynesian revolution of the 1930's, which commanded the explosive attack on economic orthodoxy apparently, treated unemployment as a central issue of great concern. Following the path of the predecessors, economists at all times and in all ages have expressed various degrees of concern over the threat of the monster called unemployment. The population of every economy is divided into two categories, the economically active and the economically inactive. The economically active population (labor force) or working population refers to the population that is willing and able to work, including those actively engaged in the production of goods and services (employed) and those who are unemployed (Njoku and Okezie, 2011).

The next category, the economically inactive population refers to people who are neither working nor looking for jobs. There seems to be a consensus on the definition of unemployment. The International Labour Organization (ILO) defines the unemployed as numbers of the economically active population who are without work but available for and seeking work, including people who have lost their jobs and those who have voluntarily left work (World Bank, 2016). Examples include housewives, full time students, invalids, those below the legal age for work, old and retired persons.

However, the application of this definition across countries has been faulted, especially for the purpose of comparison and policy formulation, as countries characteristics are not the same in their commitment to resolving unemployment problems (Akintoye, 2014).

Moreso, the preponderance of housewives who possess the ability and willingness to work, the definition of the age bracket all stand as limitations to the definition by ILO (Douglason and Gbosi, 2016). The unemployment rate is expressed as a percentage of the total number of persons available for employment at any time. This paper will focus on the relationship between unemployment and poverty as they relate to growth of Nigerian Economy.

Unemployment has been categorized as one of the serious impediments to social progress. Apart from representing a colossal waste of a country's manpower resources, it generates welfare loss in terms of lower output thereby leading to lower income and well-being (Raheem, 2013). Unemployment is a very serious issue in Africa (Rama, 2017) and particularly in Nigeria (Umo, 2018). The need to avert the negative effects of unemployment on poverty has made the tackling of unemployment problems to feature very prominently in the development objectives of many developing countries.

*The Concept of Informal Financial Institutions*

In Africa, the vast majority of financial transactions occur outside the boundaries of the regulated banking sector (Aryeetey and Udry, 2007). It is estimated that 55 percent of the money supply in Nigeria is for instance outside the formal banking sector (Okezie, 2009). Informal lenders provide more credits and attract a larger volume of savings than the formal sector in sub-Saharan Africa (Nissanke and Aryeetey, 2013).

It is important to understand how the Informal Financial Sector works for effective policy making. Three types of informal units have been identified in Africa; including savings mobilization units with little or no lending; lending units that do not engage in any savings; and savings mobilization and lending units (Obadan, 2014).

The Informal Financial Sector is an unregulated market and hence highly flexible with respect to structuring credit arrangements. It is therefore not guided by stringent rules and regulations such as the formal sector. The informal sector is characterized by a strong working relationship between borrowers and lenders, and is more responsive to market conditions. It is also common to see individuals and businesses participating in both the formal and informal sectors. This is particularly true among enterprises, a number of which are controlled and managed by families, friends and relatives with full access to formal sector capital markets.

Berko (2010) noted that the earliest but most primitive means of Informal Financing Institutions were the slavery, forced human labour, child marriage and the practice of "*Iwaga"* in Yoruba area in which a borrower uses his own wife or daughter as collateral for the loan. According to him, these inhumanizing of human race practices had been phased out in Nigeria because of Christianity and civilization.

Umebali (2012) sees informal credit institutions to include all classes of credit, savings associations and markets operating outside the formal financial system guidelines. They gained their popularity as a result of non cooperative attitudes of some conventional banks and other non-banking financial institutions in giving loans to the less privileged or poor. These institutions are often made up of heterogeneous savers and lenders.

According to Osuntogun and Adeyemo (2015), the informal financial market is an indigenous system of saving in varying forms which can be broadly summarized as a situation in which a group of people come together, contribute fixed amount at fixed intervals and assign the total amount contributed to an individual member on rotational basis or offer credit to members and share their accumulated savings at

Furthermore, Robinson (2001) defined microfinance as the supply of loans, savings and other basic financial services to the poor. IFI evolved as an economic development approach intended to benefit the low-income part of a given society, both men and women (Irobi, 2008). According to World Bank (2007), the term refers to provision of financial services (including saving and credit) to the poor.

*The Concept of Small, Micro and Medium scale Enterprises*

European Union (2013) sees medium-sized business as an enterprise that the number of employees is not more than two hundred and fifty persons and whose annual turnover is not more than EUR 50 million or whose annual balance-sheet total will not exceed EUR 43 million. A small enterprise is described as an enterprise which employs fewer than 50 persons and whose annual turnover or balance sheet total will not exceed EUR 10 million. While a micro enterprise is viewed as an enterprise which employs below 10 persons and whose annual returns and/or annual balance sheet total is not more than EUR 2 million (Ifedulova, 2013).

Micro and Small Enterprises play significant role from the overall industrial economy in India. It is estimated that with regards to value, the sector accounts for approximately 39 percent of the manufacturing output and about 33 percent with the total exports of the nation. In South Africa, the word Small, Medium and Micro Enterprises (SMMEs) plays a significant role in their economy while in Nigeria the word Small and Medium Scale Enterprises (SMEs) is used. Base on these analyses, it is concluded that Small and Medium Scale Enterprises are enterprises that can employ at most five hundred (500) employees at any given point in time and it has been proved to be the backbone of every economic system. However, the brain behind every prosperous Small and Medium Scale Enterprise is entrepreneurship which plays crucial roles in managing the small and medium scale enterprises. Entrepreneurial skill is a pillar to which SMEs survives (Yelwa et al. 2012).

*Empirical Review*

Yelwa, et al. (2012), carried out a research on the relationship between Informal Financial Sector and Financing of the Small and Medium scale Enterprises in Nigeria using Niger state as a case study. He concluded that Informal Financial market operators in Minna, Suleja, Bida and Kontagora have contributed largely to investment, job creation, income generation, easy accessibility to credit facilities and supports the production and distribution of goods and services to the people of the towns.

Osuagwu (2012), found that the following four factors determine investment: The expected rate, the supply of funds, Absorptive capacity and the government policies. Based on the study, he concludes that the inadequacy of investment in the economy supply was caused by government policies, limited supply of investment fund i.e. micro- credit and slow rate of expansion of the absorptive capacity due to lack of innovation in the technological development.

Fowowe and Abidoye (2011) examine the effect of financial development as measured by private credit on the growth of poverty and inequality in Sub-Saharan African countries. Their findings show that private credit has no significant influence on poverty in these countries. However, empirical results show that macroeconomic variables such as low inflation and trade openness engender reduction of poverty.

Geda *et al.* (2014) use the rich household panel data of urban and rural Ethiopia that covers the period from 1994 to 2010, the authors attempted to establish the link between finance and poverty in Ethiopia. Their results show that access to finance is an important factor in consumption smoothing and hence poverty reduction.

Rama (2013), in his study of the theoretical and empirical determinants of investment in developing countries identifies macroeconomic and institutional factors, such as financial repression, foreign exchange shortage, lack of infrastructure, economic instability, aggregate demand, public investment, relative factor price and credit availability as important variables that explain private investment. Here, credit availability among other factors was stressed.

*SMEs Growth and Employment Generation in Nigeria*

The baseline economic survey of Small and Medium Industries (SMIs) in Nigeria conducted in 2004 indicated that the 6,498 industries covered currently employ a little over one million workers. Considering the fact that about 18.5 million (28% of the available work force) Nigerians are unemployed, the employment objective/role of the SMIs is far from being reached (CBN 2005). One of the hallmarks of the National Economic Empowerment and Development Strategy (NEEDS) is the empowerment of the poor and the private sector, through the provision of needed financial services, to enable them engage or expand their present scope of economic activities and generate employment. Delivering needed services as contained in the Strategy would be remarkably enhanced through additional channels which the microfinance bank framework would provide. It would also assist the SMIs in raising their productive capacity and level of employment generation.

As at December, 2010, only N8.5 billion (29.5%) of the N28.8 billion Small and Medium Enterprises Equity Investment Scheme (SMEEIS) fund had been utilized. Moreover, 10% of the fund meant for micro credit had not been utilized due to lack of an appropriate framework and confidence in the existing institutions that would have served the purpose. This policy provides an appropriate vehicle that would enhance the utilization of the fund (FAO, 2009; Olaitan, 2011; Yaron, *et al.* 2008; Zeller and Sharma, 2008).

Ariyo, (2010), brought out the need to embark on SMEs development by pointing out the significance of Small and Medium scale enterprises on the economy of Nigeria. He posited that more than 50 percent of businesses in Nigeria are classified as small and medium scale. However, since most businesses are in this category, it is therefore necessary for the government to initiate policies and programmes that will promote the activities of the SMEs since it will have a positive impact on the overall economy such as job creation, improved standard of living, reduces prostitution and violence among youths.

Khandker (2008), in his studies using statistical method on assessment of impact of informal finance among three Bangladesi programs found that every additional takas lent to a woman for investment purpose adds extra 0.18 taka to annual household expenditure.

In the work of Berry *et al.* (2012), in a study conducted in Ghana and South Africa, SMEs takes a large proportion of businesses in the developing nations. He posits that SMEs represents about 72 percent of businesses in Ghana, contribute 70 percent of the nation's Gross Domestic Product (GDP) and 80 percent of employment generation in the same country. He also revealed that South Africa is accounted for 91 percent of businesses, contributing 55 percent of Gross Domestic Product (GDP) and 61 percent employment opportunities.

Dunn and Arhucle (2011), used an analysis of covariance to examine loans to micro entrepreneurs with regard to 305 households in Peru. The analysis uses data at two points over time and looked at changes in borrowers in accordance with control group who have certainly not received micro-credit. 'The study suggests there are significant differences between the borrowers and the control of group with regards to enterprise revenue, productivity, fixed assets and employment creation for others.

*Theoretical Framework*

Undoubtedly, there are extensive research work on the significance of informal sector in the actualization of sustainable economic growth and development. However, there seems to be no consensus in these studies on the empirical form of the specification of a model qualifying the impact of informal sector can take or follow. Conventionally, empirical specification of growth/development oriented model often follows the Solow growth model, although subsequently modified by Mankiw et. al (1992) (which is termed "augmented Solow growth model). Solow (1956) postulated that economic growth is as a result of the accumulation of physical capital and an expansion of the labour force in conjunction with an "exogenous" factor, technological progress, that makes physical capital and labour more productive (see Odusola, 1998). However, Mankiw et al (1992) extend the Solow aggregate production function to include educational capital.

$\boldsymbol{Yt} = \boldsymbol{A}(\boldsymbol{t}) * \boldsymbol{Kt}\ \boldsymbol{\alpha}\ \boldsymbol{k} * \boldsymbol{H}\ (\boldsymbol{t})\ \boldsymbol{\alpha}\ \boldsymbol{h} * \boldsymbol{L}$ …….. (1)

Where Y=output; A for level of technology; k= physical capital; H for stock of human capital and L represents labour force. Assuming constant returns to scale ($\alpha k + \alpha h + \alpha l = 1$), normalizing by the labour factor and consequently taking natural logs to produce a linear form expressed in rates of growth as specified below

$\boldsymbol{y} = \boldsymbol{a} + \boldsymbol{\alpha}\ \boldsymbol{k} * \boldsymbol{K} + \boldsymbol{\alpha}\ \boldsymbol{h} * \boldsymbol{h}$……...……… (2)

With the specification in (1), we, therefore have y as dln(Y/L)/dt, k as growth of physical capital per worker. h is educational capital per worker and "a" the growth rate of the growth accounting residuals (symbolically represented as total factor productivity) $(\boldsymbol{TFP}) = \boldsymbol{y} - \boldsymbol{\alpha k} * \boldsymbol{K} - \boldsymbol{\alpha h} * \boldsymbol{h}$ the implication of equation (2) is that variation in the level of economic growth depends on physical capital and human capital investment. This research work re-emphasizes the fact that growth and development in an economy are explained by selected macroeconomic indicators among which include Gross Domestic Product, Inflation rate, Fiscal deficits, financial deepening, level of interest rate, rate of unemployment and external balances.

## 3. Methodology

*Sources of Data*

The study relied on secondary data obtained were from various issues of the National Bureau of Statistics (NBS), CBN statement of account and annual report and World Bank Data.

*Model specification*

For the purpose of this research work, we proxies development by the rate of unemployment as such the dependent variable(y) in equation (2) becomes level of unemployment as a percentage (%) of total population. Similarly, physical capital component in the same model is broken down into formal and informal sectors so that variables (k) now becomes output of both formal sector per worker and informal sector per worker. With this adjustment incorporated into the model, we can therefore have a specification in the form expresses below:

$\boldsymbol{UMP} = \boldsymbol{\alpha 0} + \boldsymbol{\alpha 1 FSO}\ /\boldsymbol{POP} + \boldsymbol{\alpha 2 INFSO}/\boldsymbol{POP} + \boldsymbol{\alpha 3 HC}\ /\boldsymbol{POP} + \boldsymbol{U}$ ……………..… . $(\mathbf{3})$

The model can further be express in log form as:

$\boldsymbol{Log\ UMP} = \boldsymbol{\alpha 0} + \boldsymbol{\alpha 1 log}\ [\ \boldsymbol{FSO}\ /\boldsymbol{POP}] + \boldsymbol{\alpha 2 log}\ [\ \boldsymbol{INFSO}/\ \boldsymbol{POP}\ ] + \boldsymbol{\alpha 3 log}\ [\ \boldsymbol{HC}\ /\boldsymbol{POP}] + \boldsymbol{U}$ …………………………… . (4)

From the specified model equation above, dependent variable is unemployment as a percentage of total population while the exogenous variables are formal sector output per worker, informal sector output per worker and human capital as a percentage of population while U is the error term.

*A Priori Expectation*

The variables constituting this function (FSO/POP, INFSO/POP and HC/POP) have negative relationship with the unemployment as a percentage (%) of total population function. Therefore, the parameters ($\boldsymbol{\alpha 1}$, $\boldsymbol{and\ \alpha 3}$) are expected to have a negative sign. By economic theory, an appreciable increase in output, demands for labour to cope with the new expansion in the operation. Therefore, an increase in formal and informal sector output is, expected to lower unemployment rate. Similarly, for human capital, sustainable capital investments in education produce more skilled personnel, which consequently, enhance their status in the labour market. Thus, increase in human capital investment equally lowers unemployment rate in the economy.

*Method of Data Analysis*

In the estimation of the model, several procedures are employed to establish the robustness of the relationship. First, the Ordinary Least Square (OLS) estimation methodology was adopted. This study also applies the error correction model (ECM) framework (with particular attention given to causality) through Granger's representation theorem (Engle and Granger 1987). The equation is then estimated with an error correction term, which represents the speed of adjustment to out of equilibrium movements in the stated model.

$$\Delta Log[UMP]_t = \alpha_0 + \sum \alpha_{1i} \Delta UMP_{t-ij}\ i = 1 + \sum \alpha_{2i}\ \Delta\ [\tfrac{FSO}{POP}]_{t-1j}\ i = 1 + \sum \alpha_3\ i\Delta[\tfrac{INFSO}{POP}]_{t-ij}\ i = 1 + \sum \alpha_{4i}\ \Delta[\tfrac{HC}{POP}]_{t-ij} i = 1 + \alpha_{5i}\ ECM_{t-1} + V_t \ldots\ldots(5)$$

Among these criteria, the AIC and SIC is often preferred as it gives the heaviest penalties for loss of degrees of freedom. Thus, the model with the least value of AIC and SIC is assumed to give the best fit for equation (5). The study is based on the use of time series data. The data utilized consists of annual observations on unemployment, formal sector output, informal sector output, human capital and population of the economy for 29 years (1990-2018).

**4. Data Analysis and Estimation**

For this paper, we have applied unit root test to check the stationarity of the variables under study. Specifically, the Augmented Dickey-Fuller (ADF) is used; the ADF is used to avoid spurious regression thereby subjecting each of the variables used to unit root test so as to determine their orders of integration since unit root problem is a common feature of most time series data. The ADF employs the following equation:

$$\Delta\gamma_t = C_1 + C_{2t} + Wy_{t-1} + \sum d_i \Delta y_{t-i}\ ri = 1 + V_t \ldots\ldots (6)$$

The null hypothesis is that there exists a unit root in the time series (non-stationary time series). Ho: $\omega$ = 0 against the alternative hypothesis that the time series is stationary (no unit root) or 1(0) which is H1: $\omega$ <0. In both tests, if the calculated statistic is less (in absolute terms) than the MacKinnon (1991, 1996) critical values, the null hypothesis is accepted and will therefore mean that there is a unit root in the series. In other words, it means the time series is not stationary. The opposite is true when the calculated statistic is greater than the MacKinnon critical value. The unit root test, which is stationary, and cointegrated. Formally, the procedure is as follows. Assuming $\chi t\ and\ \gamma t$ be two (1) series if

$$vt = \gamma t - \alpha_0 - \alpha_1 \chi t \ \ldots\ldots(7)$$

Table 4.1: Unit root test (ADF)

| Variables | ADF Values | Critical Values | Decision |
|---|---|---|---|
| UMP | -5.3153* | -3.6793 | I(1) |
| FSO | -4.5688* | -3.7378 | I(1) |
| INFSO | -4.1827* | -3.7378 | I(1) |
| HC | -6.9652* | -3.6793 | I(1) |

*Note: One, two and three asterisk denotes rejection of the null hypothesis at 1%, 5% and10% respectively based on critical values; Source: Authors' computation, 2019*

The above results i.e. ADF test in Table 1 shows that all the variables are stationary at levels with the exception of unemployment rate and human capital. All the variables are, found to be stationary at 99 percent significance level in their levels and first difference from with the assumption of constant.

Table: 4.2 Cointegration Test Result

| Hypothesis | Eigenvalue | Trace Statistic | 5% Critical Value | Probability value |
|---|---|---|---|---|
| None 0 | 0.648098 | 122.1972 | 69.81889 | 0.0000 |
| At most 1 | 0.584788 | 72.79975 | 47.85613 | 0.0001 |
| At most 2 | 0.430455 | 38.16357 | 29.79707 | 0.0043 |
| At most 3 | 0.291061 | 12.37149 | 15.49471 | 0.1400 |
| At most 4 | 0.035210 | 3.761829 | 3.841466 | 0.0524 |

*Trace test indicates 3 cointegration equations at the 5% level, denotes rejection of the hypothesis at the 5% level; Source: Authors' Computation, (2019)*

The result shows that there is evidence of cointegration. We can also verify the cointegration by testing the residual if the residual is stationary, which means the variables have long run relationship.

*Error Correction Estimates*

The error correction term (ECM) unit root result summarizes the presence of cointegration analysis among the variables under study. In addition, existence of long run relationship among the variables was also examined by applying the framework Engle-Granger (1987). The result of the test on the structural models reveals the existence of cointegrating relationship for unemployment, formal sector output, informal sector output, and human capital. The existence of the cointegrating equations in this respect indicates the need to set up a dynamic error correction model to capture relationship among variables involved.

Table 4.3: Parsimonious Error Correction Estimates

| Dependent Variable: D(UMP) | | | |
|---|---|---|---|
| Method: Least Squares | | | |
| Variable Coefficient | Coefficient | t-Statistic | Prob. |
| D(UMP(-1)) | 25.0047 | 1.2006 | 0.9047 |
| D(FSO/POP(-2)) | -7.5253 | 2.2336** | 0.0396 |
| D(INFSO/POP(-2)) | -56.9231 | 5.1457* | 0.0014 |
| D(INFSO/POP(-3)) | -24.86599 | -1.5734 | 0.1267 |
| D(HC/POP(-2)) | 0.9213 | 1.7957 | 0.0798 |
| ECM(-1) | -0.0493 | 1.9552** | 0.0504 |
| R-squared | 0.6347 | | |
| Adjusted R-squared | 0.5786 | | |
| F-statistic | 21.84775 | | |
| Prob(F-statistic) | 0.009533 | | |
| Durbin-Watson stat | 1.619831 | | |

*Note: One, two and three asterisk denotes rejection of the null hypothesis at 1%, 5% and10% respectively; Source: Authors' computation, 2019*

Table 4.3 explains the impact of informal sector on employment generation. The regression co-efficient of (-7.525) means that, a unit increase in formal sector output brings about 75 percent decrease in unemployment rate. The co-efficient of (-56.923) means that, a unit increase in informal sector output brings about 569 percent decrease in unemployment rate. The co-efficient of 0.921 means that holding all other variables constant, a unit increase in the human capital brings about 92 percent increase in the unemployment rate. The overall co-efficient of determination ($R^2$ ) shows that the equation has good fit with 63 percent of unemployment rate explained by the variables in the equation. The reason for being a good fit is that it is significantly above the bench mark of 50 percent. As the adjusted variables $R^2$ tends to be affected by the number of included explanatory variables. The adjusted ($R^2$ ) was made to purge the influence of the number of included explanatory variables, the model is still of good fit, and the dependent variable explained by the equation by 57.8 percent.

Hence in terms of goodness of fit we can say that the test is conclusive. The Durbin Watson (D.W) statistics of 1.619 as it is significantly around the bench mark of two, we can conclude that there is no autocorrelation or serial correlation in the model specification hence, the linear assumption is not violated. The estimated coefficient for the error correction term reveals which of the variables adjust to correct imbalance in the unemployment situation whilst the variable coefficients show the short-run effects of the changes in the explanatory variables on the dependent variable.

Furthermore, the results confirm that unemployment in Nigeria has an automatic mechanism and that employment generation in Nigeria responds to deviations from equilibrium in a balancing manner. A value of (-0.049) for the ECM coefficients suggests that a fast speed of adjustment strategy of roughly 5%. In terms of the signs and magnitude of the coefficients which signify the impact of informal sector on employment growth, it can be seen that all the variables except human capital concur with a'priori theoretical expectation. The reasons for this could be associated to the fact that growth in knowledge is not complemented or used up by the teeming population; hence, it yields little or nothing to reducing unemployment situation in the country, which means that there is no inclusive growth.

The significant coefficients of all exogenous variables clearly states that Nigeria's employment growth depends on formal and informal sector output in the short run. Above all, informal sector activities in the Nigerian economy have positive impact on employment generation. The results of this study is in relation to the findings of Akerele (1997), Dessy and Pallage, (2003) and Yelwa et al. (2012) that informal sector activities have substantially absorb the large pool of labour force than the formal sector, hence, reduces the rate of unemployment.

**5. Concluding and Recommendations**

Most of the informal sector workers are of low-level education and skills. They seek knowledge and skills. They employ about 96% (Adeyemi, 2017) of the economy in the in the non- agricultural sector. The Therefore contribute significantly in the minimization of unemployment problem. However, this research work seems to concur with observations and recommendations made by many economists. Given the failure of most Nigerian government rural financial intervention programmes, the researchers therefore recommended that there is the need for the government to utilize Informal Financial Institutions in its poverty reduction programmes, since significant percentage of the Small and Medium scale Enterprises (SMEs) could assess credit for investment through them. This will go a long way in promoting employment generation and inclusive growth in the country.

**References**

*Aliyu A. (2012),* Implementation progress report, background, structure achievement and problems, A paper presented at a one day special presidential retreat for permanent secretaries.

Allbusiness.com, (2010). Nigeria Economy. [Online] Available

Ariyo, S.O., (2010). Determining the poor against the background of local situation and circumstances. A Paper Presented at Organizational Workshop of National Poverty Eradication Programme at Benue Hotel Makurdi, Nigeria

Aryeetey, E., & Udry, C. (2007), "The Characteristics of Informal Financial Markets in Sub-Saharan Africa", Journal of African Economies, Supplement Vol. 6 (1), 1997: 161–203

Berry, J. S., Manchflower D.G and Meyer S.O. (2012), "Self employment in OECD countries, Labour Economics" VOL.7, 471-505.

Berkor, M. (2010), Microfinance: An Emerging Market within the Emerging Markets. Washington DC, Inter-American Development Bank.

Byrne, A. Duflo, E. Glennerster, R. and Kinnan, C. (2006) "The Miracle of Microfinance? Evidence from a Randomised Evaluation" Department of Economics, Massachusetts Institute of Technology (MIT) Working Paper, May.

CBN, (2005) Annual Report and Statement of Account: Central Bank of Nigeria, Abuja.

Dunn, A, & Archucle, R. (2011) Financial System and Development; what role for formal and informal sector? Paris, OECD. European Union, (2013). Human Development Reports, CIA World Factbook; World Bank, pages 1-2; December 2003.

FAO, (2009). The survey handbook, Thousand Oaks, CA: Sage Publications

Fowowe, B.and Abidoye, O. (2011); "policy framework and linkages to sources of finance, market opportunities and technical support"; Abuja journal of business

Geda, J. A., Newbold, J. P and Whitford, D. T. (2014). Predicting Bankruptcy: If Cash Flow's Not the Bottom Line, What Is It?. Financial Analysts Journal, 41(5), 47- 56.

Ifedulova, I. (2013), "Analysis of credit on SMEs development" European Union Publications.

IFAD (2001), Poverty Reduction through Enhance Access to Financial Service: Case study of Botswana. Kenya and Namibia. Occasional paper No. 010/2001.

Inegbenebor, J. (2006), " Is there a State of the Art in Microfinance?" In Joe Remeny and BenjaminQuinones Jr(eds), Microfinance and Poverty Alleviation-Case Studies from Asia and the Pacific. London: Printer.

Irobi, N.C. (2008), Microfinance and Poverty Alleviation: A case study of Obazu Progressive Women Association Mbieri, Imo State- Nigeria. Uppsala: Department of Economics

Khandker, S. (2005)," Micro-finance and Poverty: Evidence Using Panel Data from Bangladesh". World Bank Economic Review

Krejcie, J. and Morgan, P. (1970), "Developing Sample Size for Research Activities", Education and Psychological Measurement, H30, pp. 607-610

Mckinnon, R.I. (1973): Money and Capital in Economic Development". Washington D.C.; Institution.

McElvey, O., and Zavoina, J., (1969). The Financial Performance of Non-farm Microenterprises in Ghana. World Development, 36(12), 2733–2762.

Mwakapui, S. (2012). The Impact of Microcredit Programs on Self-Employment Profits: Do Noncredit Program Aspects Matter? The Review of Economics and Statistics, 84(1), 93-115.

Nissanke, M.K. and E. Aryeetey, (2013), Financial Integration and Development. Liberalization and Reform in Sub-Saharan Africa, Routledge, London

Obadan, M.I. (2009a) "Analytical Framework for poverty Reduction: Issue of Economic Growth versus Other Strategies", Proceedings of the 1996 Annual Conference of the Nigeria Economic Society (Ibadan: NES).

Obadan, M. I. (2014) "Poverty in Nigeria: Characteristics, Alleviation Strategies and Programmes", NCEMA Analysis Series, Vol. 2, No. 2.

Okezie, A. (2009) "Isusu Groups and their Performance in Mobilizing Credits for Micro Businesses" Nigeria Journal of Economics, 49 (2), 112-148

Olaitan, J. (2001). The Nigerian Maladapted Financial Systems: Reforming Tasks and Development Dilema, CIBN Press Ltd, Lagos, 229-342.

Osuntogun O. I and Adeyemo, P. O. (2015). Microcredit and microenterprise development: An analysis of some rural based enterprises in Nigeria. Nigeria Journal of Economics and Social Studies, 49(1), 95 – 113.

Osuagwu, C. (2012) Rotating Saving and Credit Associations in Jamaica: Some Empirical Findings on Partner. Social and Economic Studies 45(2&3): 195– 224.

Patrick, A; Leonard S; Patricia M.Y and Ernest T; (1996), "Microfinance, rural livelihoods, and women's empowerment in Uganda" African Studies Centre Research Report 85 / 1996

Rama, M. (2013) Money, Interest and Banking in Economic Development. John Hopkins University Press: Baltimore.

Robinson, M. (2001), The Microfinance Revolution: Sustainable Finance for the Poor. World Bank, Washington

Senn, A.K. (2009). The Standard of Living. Cambridge, Cambridge University Press. The World Bank, (2008). Poverty Reduction Handbook. Washington D.C., U.S.A.

Shaw, E.S. (1973): "Financial Deepening in Economic Development" New York: Oxford University Press.

Stevens, H. (2001). "New Business Ventures and the Entrepreneur", Homewood, Irwin.

Streeten, P. (2008). Does rural location matter? The significance of a rural setting for small businesses. Journal of Developmental Entrepreneurship, 10(1), 49–63.

Thornhill, D. and Lewis, R (2007). The Characteristics and Strategies of High Growth SMEs. International Journal of Entrepreneurial Behaviour and Research, 1(3), 44-79

Tonge, A., Greer, L., Lawton, A. (2013). The Enron story: You can fool some of the people some of the time ---- Business Ethics: An European Review, 12/1, 4-22.

Umebali, F. N. (2012). Survey of Small and Medium Scale Industries and Their Potentials in Nigeria. Small and Medium Industries Equity Investment Scheme (SMIEIS) Seminar. CBN Training Centre, Lagos.

World Bank (2010) African Development Indicators 2005 New York: Oxford University Press. World Bank (2005) World Development Report 2005 New York: Oxford University Press.

World Bank (2007) Global Economic Monitoring Report 2007 World Bank (2008) World Development Indicators 2008 New York: Oxford University Press.

Yaron, I; Woller, G. and Parsons, R. (1998). Assessing the community economic impact of microfinance Institutions. Journal of Developmental Entrepreneurship, 7, 133-150.

Yelwa, M., Hussainat S. and Mohammed P. (2012), Informal Financial Sector and Financing of Small and Medium scale Enterprises (SMEs) in Nigeria.

Zeller, S. and Sharma, H. (1988) "The Micro and Small Enterprises Sector in Ethiopia: An over view" in W. Gebeyehu and D. Assefa. (eds), The Role of Micro and Small Enterprises in the Economic Development of Ethiopia. Addis Ababa: FEMSEDA

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

**Exchange Rate and Economic Growth in Nigeria: Error Correction Mechanism (ECM) Approach (1990-2016)**

Femi Augustine Akomolafe[1], Olabode Agunbiade[2]

[1&2]*Department of Economics, University of Abuja, Abuja*

**Abstract**

*The study examined Exchange Rate and Economic Growth in Nigeria for the period 1990-2016 using Ordinary Least Square (OLS) with Error Correction Mechanism (ECM). The Augmented Dickey-Fuller (ADF) test showed that the variables were found to be stationary at first difference I(1), while Johansen's Cointegration result indicates five cointegrating equations. Granger causality test revealed that there is bi-directional causality between real GDP and exchange rate. It was also revealed that export causes exchange rate and exchange rate in return causes export. However, there is unidirectional causality between Real GDP and import with the causality flowing from RGDP to import. This implies that RGDP Granger causes import. The result showed that the coefficient of Error Correction Mechanism (ECM) is negative and significant. The ECM result shows that about 24 percent disequilibrium in the previous period is being corrected to restore equilibrium in the current period. Assessing the overall significance of the parameters, the study concluded that exchange rate has significant impact on Nigeria economic growth. Hence, the study recommended that government should embark on massive importation of capital goods in order to boost domestic production and discourage the importation of consumer goods and services that can be produced locally; government should encourage exchange rate appreciation through aggressive export strategy towards strengthening the external reserves; and government should invest in productive activities and infrastructural development, towards generating employment and controlling inflation.*

**Keywords:** Exchange Rate, Structural Adjustment Programme, Economic Growth and Error Correction Mechanism (ECM).
**JEL Codes**: O47

## 1. Introduction

The exchange rate plays a central role in the growth of any economy, whether developed or developing. As has been noted by the CBN (2016), the exchange rate plays a pivotal role in the economy because imports and exports constitute a large component of any national economy and it is the exchange rate regime that facilitates the interaction. Essentially, exchange rate changes affect the prices of imported goods, services and exports. When the value of a currency, for example, the Naira falls, imported goods become more expensive and there will be a tendency to reduce the volume of imports. At the same time, other countries will pay less for some of Nigerian products that are exported and that tends to boost export sales and foreign exchange earnings, as well as the country's export industries' competitiveness in the international markets. This makes the exchange rate of a local currency the link between domestic and foreign prices of goods and services.

The significance of the exchange rate arose as a result of unequal resource endowments in different parts of the world, which necessitates the need for trade, exchange and inter-dependence. In international trade, transactions are carried out daily, where participants exchange goods and services, thereby necessitating payments. To effect such transactions, an international acceptable mode of payment is required and this brought about the idea of foreign exchange. According to Fapetu and Oloyede (2014), foreign exchange management is the technique that involves the generation and disbursement of foreign exchange resources so as to reduce destabilising short-term capital flows in an economy. Consequently, in order to ensure that foreign change allocation and utilisation are in consonance with economic priorities and the foreign exchange budget, the central monetary authority, usually the Central Bank, monitors the use of scarce foreign exchange resources.

Obaseki (1991) thus opined that whenever there is disequilibrium in the foreign exchange market caused by inadequate supply of foreign exchange, there may be undue pressure on the foreign exchange reserve. If the reserves are not adequate, this may deteriorate into balance of payments disequilibrium. There is therefore the need to manage a nation's foreign exchange resources so as to reduce the adverse effects of foreign exchange volatility. It is generally accepted that the exchange rate is an essential macroeconomic variable necessary for the management of economic policies and economic reforms in order to achieve stated macroeconomic goals. The central monetary authorities, usually represented by Central Banks, manage the foreign exchange markets and instruments to achieve a variety of overall macroeconomic objectives: to control inflation, maintain international competitiveness, foreign reserves and financial stability, thereby enhancing economic growth. The specific objectives of policy and how they are reflected in foreign exchange management depend on a number of factors, including the stage of a country's development, the degree of financial market development and integration, and the country's overall vulnerability to shocks (CBN 2016).

The exchange rate regime in developing countries remain a critical variable, with a number of countries embracing trade liberalization and structural adjustment as requisites for favourable balance of payments and economic growth(Obansa, Okoroafor, Aluko and Eze, 2013).It is noteworthy that exchange rate policies in developing countries are often sensitive and controversial, given the type of structural adjustments required (e.g. reducing imports or expanding non-oil exports),invariably suggesting a depreciation of the exchange rate. Domestic adjustments of this type are generally perceived as damaging to the economy given their short-run impact on prices and demand(Mordi, 2006).Evidence from the literature suggests that selection of appropriate exchange rate or maintaining relative rate stability is critical for both internal and external balance of payments and economic growth in the long run. On the other hand, inefficient and poor management of the exchange rate causes distortions in the patterns of consumption and production.

The achievement of a realistic exchange rate for the Nigerian Naira continue to generate great challenges to macroeconomic policy formulators, given its significance in stimulating economic growth. Over the years, Nigeria has experienced chronic deficit on her balance of payments account and confront many challenges in monetary actions due to her mono-product economy and over-dependency on imported capital and manufactured goods. The Nigerian budget relies heavily on revenues from oil exports; at the same time, massively importing refined petroleum and other related products (Abdullahi, Abubarkar, Fakunmoju & Giwa, 2016).

The significance of foreign exchange in the macroeconomic management of the Nigerian economy gives impetus to carrying out this study. Since the commencement of the liberalisation of the foreign exchange system that came with the Structural Adjustment Programme (SAP) in 1986, the Nigerian economy has continued to witness severe distortions. It is the quest to examine the impact of exchange rate on the Nigerian economic growth for the period 1990 to 2016 and consider the significance of import, export, inflation rate and foreign reserves in determining the exchange rate and its impact on economic growth in Nigeria. It is obviously difficult to isolate the impact of exchange rate on the macro economy of any nation since other factors contribute to its workings. Therefore, through this analysis, the study intends to identify the impact of exchange rate on the Nigerian economy by relying on existing literature and data provided by national agencies for the assessment. From these, deductions, summary, conclusion and recommendations will be made.

Following from this introductory Section, the paper proceeds with the literature review by examining conceptual, empirical and theoretical Issues. Section three is devoted to identifying the Research Methodology designed for this study. Section four contains results presentation and discussion, while the concluding section five deal with conclusion and recommendations.

## 2. Literature Review

*Conceptual Issues*

*Exchange Rate*

Mordi (2006) has defined exchange rate as the price of one currency in terms of another as it indicates the values of two currencies against each other. Soderstine (1998) views exchange rate as the price of one currency in terms of another, which is the amount of foreign currency that may be bought for one unit of the domestic currency or the cost in domestic currency purchasing one unit of the foreign currency. It is thus the required amount of units of a national currency that can buy another amount of units of another country's currency. The nominal exchange rate is the rate at which the monies of different countries can be exchanged for one another. The real exchange rate is the rate at which the goods and services produced in different countries can be exchanged for one another (Inam & Umobong, 2015).

The nominal exchange rate (NER) is a monetary concept which measures the relative price of two countries' moneys or currencies, e.g., Naira in relation to the U.S. dollar (e.g., N360: US$ 1) and vice versa. But the real exchange rate (RER), as the name implies, is a real concept that measures the relative price of two tradable goods (exports and imports) in relation to non-tradable goods (goods and services produced and consumed locally) (Obadan, 2006).

Anifowose (1994) opines that foreign exchange, as a monetary asset is used on a daily basis to settle international transactions and to finance deficits in a country's balance of payments. He stresses that in addition to holdings of monetary gold and special drawing rights (SDRs), foreign exchange is an important component of a country's stock of external reserves. Obaseki (1991) observes that foreign exchange can be acquired by a country through exports of goods and services, Foreign Direct Investment (FDI) inflows or external loans, aids and grants which can be used in settling international obligations.

The strength of a country's currency depends on a number of factors, including the state of the economy in terms of its competitiveness and volume of its exports, the level of domestic production, and the quantum of foreign reserves. Where the importation of essential goods and services becomes costly, as a result of increase in prices of domestic goods, the purchasing power of the domestic currency reduces– a depreciation of the domestic currency. Exchange rate can either appreciate or depreciate. Appreciation in the exchange rate occurs if less unit of domestic currency exchanges for a unit of foreign currency while depreciation in exchange rate occurs if more unit of domestic currency exchanges for a unit of foreign currency. For the purpose of this study, we adopt the nominal definition of exchange rate, that is the accepted value of local Naira against a major international currency, the US Dollar.

*Exchange Rate Regimes*

An exchange rate regime refers to the method or system adopted by a country's monetary authority (usually the Central Bank) to determine the value of its currency in relation to other currencies (CBN 2016). It can also be defined as the exchange rate system by which the value of a domestic currency is determined vis-à-vis foreign currencies. Based on each country's practices and the degree of monetary policy independence, IMF (2008) has classified the regimes into three broad categories:

1. The hard exchange rate peg (or fixed exchange rate) which ties a country's foreign exchange regime to an anchor country, thereby effectively taking away the management from the Central Bank. Examples of such regimes include Currency/Monetary Union, Formal Dollarisation and Currency Board.
2. The soft exchange rate peg, which is a hybrid between the hard peg (or fixed) and floating exchange rate regimes, which allows the Central Bank limited flexibility over its domestic monetary policy. Such regimes include: Conventional Fixed peg, Horizontal Band, Crawling Peg, Crawling Bands and Tightly Managed Float.
3. Flexible (Floating) exchange rate regime occurs where the international value of a national currency, at any point in time, is determined by the interaction of the market forces of demand and supply of foreign exchange. Flexible exchange rate regimes can be classified according to their degree of flexibility, which in turn depends, to a large extent, on the degree of foreign exchange intervention. Under this are Free Floating or Managed Floating as sub-types.

*Exchange Rate Management in Nigeria*

In Nigeria, the Central Bank of Nigeria (CBN) maintains the stability of the Naira exchange rate in order to achieve its objective of maintaining price stability because domestic prices (inflation and interest rates) are very responsive to exchange rate fluctuations. There are two main types of exchange rates in Nigeria; official and market exchange rates. The official exchange rate is determined by the CBN, while the market exchange rate is basically determined by market forces of demand and supply. When the demand for foreign exchange exceeds supply, the value of the Naira will go up, and if exchange rate supply exceeds demand, the value of the Naira will go down (CBN 2016).

Prior to the establishment of the CBN in 1958 and the enactment of the Exchange Control Act in 1962, agriculture was the major foreign exchange earner. Foreign exchange at this time was earned by private companies and the foreign exchange balances were maintained in foreign banks by commercial banks, which acted as agents for local exporters. The Nigerian exchange rate management has undergone substantial transformation from the immediate post-independence period, when the country maintained a fixed parity with the British pound, through the oil boom of the 1970s, to the floating of the currency in 1986, following the near collapse of the economy between 1982 and 1985.In each of these eras, the economic and political considerations underpinning the exchange rate policy had important repercussions for the structural evolution of the economy, inflation, the balance of payments and real income.

However, a major policy reversal was effected in September 1986 when the flexible exchange rate regime was put in place following the adoption of the Structural Adjustment Programme (SAP). During SAP, there was absence of foreign exchange allocation and import licensing procedures and transactions in foreign exchange were market based. This exchange rate regime helped solve the overvaluation of naira but devalued the naira. Exchange rate depreciation had since increase the naira price of imports and this is expected to discourage importation (Oyejide & Ogun, 1995).

According to Amassoma and Odeniyi (2016)and Nwude (2012) in the year 1986 when SAP commenced, exchange rate stood at N2.02: U. S$1.00, but by 1987, 1990, 1991, it had depreciated to an average of N4.02, N8.04 and N9.91 to US$1.00 respectively. Again, in 1992 and1993 it depreciated to N17.30 and N22.05: US$1.00. In 1994, there was a need for the complete reversal of exchange rate policy due to the continuous depreciation of the exchange rate with there-introduction of a fixed exchange rate regime which made N21.8861 = US$1.00. The dismal performance of the economy as at the end of 1994 led to the re-introduction of the market-based approach under the autonomous foreign exchange market (AFEM) from January 1995 until October1999.

The exchange rate depreciated further from the fixed rate of N21.8881: US$1.00 in 1994to N81.00:US1.00 in 1995, and in less than a year after it was fixed, to N84.38: US$1.00 andN92.65: $15$1.00 in 1998 and 1999 respectively. The rate depreciated further to N128.75 between 2002 and2005. However, it was relatively stable in 2003 and between 2005 and 2008Naira appreciated. The Naira –dollar exchange rate as at 2011 was ₦162.30 but fell to ₦156.15 in2012 and a further decline to ₦155.73 in 2013. The Naira-Dollar exchange value was highly volatile towards the end of 2014 and in 2015with ₦168 for 1USD, ₦204 for 1 USD in February 2015 but later reduced to ₦197 for 1USD as at August 2015 (Amasomma & Odeniyi, 2016).

Nigeria’s exchange rate has been more volatile in the post-SAP period due to its excessive exposure to external shocks. The effect of the recent global economic meltdown on Nigerian exchange rate was phenomenal, as the Naira exchange rate vis-à-vis the Dollar rose astronomically from about N120/$ to more than N180/$ (about 50% increase) between 2008 and 2009. This is attributable to the sharp drop in foreign earnings of Nigeria as a result of the persistent fall of crude oil price, which plunged from an all-time high ofUS$147 per barrel in July 2007 to a low of US$45 per barrel in December 2008 (Onuorah & Osuji, 2014).

Although various internal and external factors accounted for the poor performance of the Nigerian economy, it is necessary to understand the growth process of Nigeria under the various exchange regimes that had been adopted in the country, the effects of production, unemployment, inflation, interest rate, import and export. However, it is worthy of note that Nigeria’s over-dependence on importation of capital and manufactured goods and less emphasis on diversification from oil to concentrate on the manufacturing local goods and services, greatly contributed to the depreciation of the value of the Naira over the years.

*Theoretical Review*

Economic scholars and researchers are yet to agree on a single theory that defines the exchange rate. There are numerous competing theories of the exchange rate concept which evolved over time. Any succeeding theory is usually a critique of an earlier one. Extending from this, the theoretical literature on the impact of exchange rate on the economy is replete with varying positions. There are several exchange rate models, theories and the relative pricing methods that are in use in the determination of foreign exchange rate. Four of the important models or theories can be identified:

*The Mint Parity Theory*

This is associated with the working of the international gold standard. Under this system, the currency in use was made of gold or was convertible into gold at a fixed rate (Brooks, 2014). Here, the value of the currency unit was defined in terms of certain weight of gold and the Central Bank of the country concerned was always ready to buy and sell gold at the specified price. The rate at which a national currency could be converted into gold is called the mint price of gold.

*The Purchasing Power Parity Theory*

This theory was first enunciated by Gustav (1918, cited in Kadochnikov, 2013), a Swedish economist. He wrote that the purchasing power of a currency is determined by the amount of goods and services that can be purchased with one unit of that currency. If there are more than one currency, the exchange rates between them should be such that they provide the same purchasing power to different currencies. That is, the exchange rate between two countries is determined by their relative price levels.

*Theory of Interest Rate Parity (IRP)*

The basic premise of this theory is that in an open economic system, the real future worth of a monetary asset should be the same irrespective of the currency in which it is invested. As per the Fisher Effect (Korab & Kapounek, 2013), the nominal rate of interest is related to real rate of interest and inflation by the equation: $(1 + in) = (1 + ir)(1 + r)$,

where: in = nominal rate of interest, ir = real rate of interest and r = rate of inflation.

The market rate of interest is the nominal rate. The real rate of interest or real rate of return corresponds to increase of purchasing power. The theory of Interest Rate Parity and Fisher effect have been tested. It is found that the countries that have higher rate of inflation have higher nominal interest rates.

*The Balance of Payments Theory*

This theory stipulates that under free exchange rates, the exchange rate of the currency of a country depends upon its balance of payment. According to Brooks (2014), a favourable balance of payments raises the exchange rate, while an unfavourable balance of payments reduces the exchange rate. Thus the theory implies that the exchange rate is determined by the demand for and supply of foreign exchange. Hence, balance of payment equilibrium is the focus of this study. This will accommodate some important variables such export, import, external reserve, oil revenue and so on that determine exchange rate in every economy.

*Empirical Review*

There is a vast body of literature on empirical studies which are concerned with the nexus between exchange rate and economic growth. Yet there is no unanimity regarding the exact impact of exchange rate on economic growth. Kandil (2004) examined the effects of exchange rate fluctuations on real output growth and price inflation in a sample of 22 developing countries. The author argued that depending on the degree of openness, exchange rate volatility and depreciation in particular, hurts economic performance by contracting output growth and inflation. In the long-run, anticipated exchange rate fluctuations significantly increased and decreased inflation and output growth respectively.

A key study by Linjouom (2007) argued that overvaluation of exchange rates resulted in a major setback in the recovery process of Nigeria and Benin Republic. In addition, the author suggested that devaluation accompanied with well-targeted measures alongside an upward adjustment in the domestic price of tradable goods, could restore exchange rate equilibrium and improve economic performance. Fapetu and Oloyede (2014) examined foreign exchange management and Nigerian economic growth from 1970 to 2012, using the ordinary least square estimation technique within the error correction model (ECM) framework. The study revealed that managing the economy’s foreign exchange rate does affect quite a number of economic variables, which in turn affects growth in the economy.

In a study carried out by Afolabi, Uwasejike, Ekpeyong, and Ehinimen (2016), they examined the linkage between exchange rates and economic growth in Nigeria between 1978 and 2014, by analysing OLS regression and discovered that over 66% variations in exchange rates were caused by the regressors included in their model. They also discovered that there was long run equilibrium relation between exchange rates and the explanatory series in the selected time period. Using unit root tests, they ascertained the presence of stationarity in all variables of interest at 1st difference. The Granger causality revealed the short-run causality between exchange rates and economic growth during the period under study. Hence, they concluded that economic growth of Nigeria is inelastically influenced by exchange rates.

Arize, Osang and Slottje (2000) examined the relationship between exchange rate and economic growth in Nigeria between 1970–2010. The result indicated that exchange rate has a strong impact on economic growth. They concluded that exchange rate liberalisation was good for the Nigerian economy as it stimulates economic growth. Onourah and Osuji (2014) used secondary data which were obtained from the World Bank database and adopted the Ordinary Least Square (OLS) method of estimation for data covering the period between 2000 and 2010. The results from the econometric analyses impact of exchange rate on economic growth showed that there was a short-run relationship between exchange rate, inflation rate, interest rate and GDP. The result obtained from the unit root analysis indicated that at least one-time series variable property is stationary. The study concluded that in Nigeria, the factors that influence the level of growth rate are the extent of exchange rate movements and its variables. Obansa,*et al.,* (2013) also examined the relationship between exchange rate and economic growth in Nigeria between 1970 – 2010. The result indicated that exchange rate has a strong impact on economic growth. They concluded that exchange rate liberalisation was good to Nigerian economy as it promotes economic growth.

Yaqub (2010) investigated the effect of exchange rate on output of different sectors in Nigeria. The study adopted the modified IS-LM framework and estimated the behavioural equations. Data on Nigeria from 1970-2007 were utilised. The results obtained indicated that exchange rate had significant contractionary effects on agricultural and manufacturing sectors while it had expansionary effect on services sector. The author concluded that the existing structures in Nigeria could not support an expansionary depreciation argument in the basic sectors during the period of study.

Akpan and Atan (2011) investigated the effect of exchange rate movements on real output growth in Nigeria. Based on quarterly series for the period 1986 to 2010, the paper examined the possible direct and indirect relationship between exchange rates and GDP growth. The relationship was derived in two ways using a simultaneous equations model within a fully specified (but small) macroeconomic model. On the whole, the paper provided empirical estimates of the relation between exchange rate and economic growth in Nigeria. The results suggested that there was a statistically significant direct relationship between the two variables. The vector auto regression results also demonstrated that real exchange rate and real income are significantly cointegrated.

Inam and Umobong (2015) analysed the relationship between exchange rate movements and economic growth in Nigeria using annual data spanning 1970-2011. Employing the Ordinary Least Square (OLS) technique and the Granger Causality Test, the study revealed the existence of a positive and insignificant relationship between exchange rate and economic growth in Nigeria. The results also indicated that there is no causality between exchange rate and economic growth in Nigeria. In view of the fact that exchange rate stability is absolutely imperative for macroeconomic stability, the study recommended, amongst others, that government should adopt appropriate monetary and fiscal policies that will not only ensure a realistic and stable exchange rate, but will also serve to foster economic growth in Nigeria.

The analysis of the results of empirical studies carried out on the impact of foreign exchange on economic growth in Nigeria are far from being unanimous. The results are vary widely. Therefore, this study is designed to probe further the impact of foreign exchange on economic growth in Nigeria over the study period.

## 3. Methodology

*Theoretical Framework*

The Theoretical Framework for this study is premised on the Balance of Payments Theory described above. The theory suggests that the exchange rate is determined by the demand for and supply of foreign exchange. Therefore, the study will accommodate some important macroeconomic variables such export, import, external reserve, oil revenue, etc. that combine to determine the foreign exchange in Nigeria.

*Sources of Data and Estimation Technique*

The study period for this research is the 27-year period from 1990 to 2016. This period represents the immediate post - Structural Adjustment Programme (SAP) era in Nigeria, when the effects of the liberalisation programme ought to have become manifest and thus amenable for study. The data utilised is secondary in nature and sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin and National Bureau of Statistics for the period 1990 to 2016. The Ordinary Least Square (OLS) with Error Correction Mechanism (ECM) were used in the study to establish a relationship among the variables.

The choice of ECM was predicated upon the need to examine the short-run and long run effects of these independent variables on the Nigerian economy. This involved conducting the unit root test using Augmented Dickey Fuller (ADF) test in order to determine the stationarity of the data. The Johansen cointergation test was used to determine the long run relationship among the variables, since cointegration is a necessary condition for testing the ECM. The Pairwise Granger Causality Test was then used to establish the direction of causation among the major variables. These methods were selected as they were necessary to determine both the short run and long run impacts of exchange rate on economic growth in Nigeria.

*Model Specification*

The paper adopts the models of Onuorah & Osuji (2014); and Fapetu & Oloyede (2014) for this study. These were, in turn premised on the earlier work of Sarkar & Amor (2009). This research extended Fapetu & Oloyede's empirical analysis from 2012 to 2016, and also extended Onuorah & Osuji's work from 2010 to 2016. In addition, a number of the variables that were omitted in the earlier works are now included in this study in order to have a better fit.

The basic functional model in its general form is specified as follows:

$$GDP = f(EXR, IMP, EXP, IFR, ORV, EXRS) \quad 3.1$$

Where:
GDP = Gross Domestic Product
EXR = Exchange rate
IMP = Import
EXP = Export
IFR = Inflation rate
ORV = Oil Revenue
EXRS = External Reserves

In order to make the model more robust, oil revenue and external reserves were introduced as part of the explanatory variables. This will also ensure there is no problem of omitted variables. These other variables were included as they may have influence on the exchange rate and at the same time affect the Nigerian economy.

The model in its econometric form is stated as follows:

$$GDP=\beta_0+\beta_1EXR+\beta_2IMP+\beta_3XP+\beta_4IFR+\beta_5ORV+\beta_6EXRS+U \quad 3.2$$

Where:
U = Error Term, which is assumed to be normally distributed with zero mean and constant variance
$\beta_0$ = constant term
$\beta 1$, $\beta 2$, $\beta_3$, $\beta_4$, $\beta_5$, and $\beta_6$ are parameters to be estimated.

A-Priori Expectations:
$\beta_1< 0$, $\beta_2< 0$, $\beta_4< 0$; $\beta_3> 0$, $\beta_5> 0$, $\beta_6> 0$

## 4. Results Presentation and Discussion

The variables used in this study underwent unit root test using the Augmented Dickey Fuller (ADF) test.

Table 4.1: Unit Root Stationarity Result

| Time Series | ADF Statistics | Critical Value | | Stationary Status |
|---|---|---|---|---|
| | | -4.394309 | 1% level | (1) |
| RGDP | -6.402972 | -3.612199 | 5% level | |
| | | -3.243079 | 10% level | |
| | | -3.724070 | 1% level | (1) |
| EXR | -4.146501 | -2.986225 | 5% level | |
| | | -2.632604 | 10% level | |
| | -4.134593 | -3.724070 | 1% level | (1) |
| IMP | | -2.986225 | 5% level | |
| | | -2.632604 | 10% level | |
| | -3.655449 | -2.660720 | 1% level | (1) |
| XP | | -1.955020 | 5% level | |
| | | -1.609070 | 10% level | |
| | -4.054620 | -3.724070 | 1% level | (1) |
| IFR | | -2.986225 | 5% level | |
| | | -2.632604 | 10% level | |
| | -3.736689 | -2.660720 | 1% level | (1) |
| ORV | | -1.955020 | 5% level | |
| | | -1.609070 | 10% level | |
| | -5.379498 | -4.394309 | 1% level | (1) |
| EXRS | | -3.612199 | 5% level | |
| | | -3.243079 | 10% level | |

*The critical values for rejection of hypothesis of unit root were from MacKinnon (1991) as reported in Eviews; Source: E-view Output, 2018.*

The variables were found to be stationary at first difference I(1).This implies that all the variables were differenced of I(1) as revealed in Table 4.1 which justify the adoption of error correction technique.

Table 4.2: Johansen's Cointegration Result

| Hypothesized No. of CE(s) | Eigenvalue | Trace Statistic | 0.05 Critical Value | Prob.** |
|---|---|---|---|---|
| None * | 0.993102 | 301.6765 | 125.6154 | 0.0000 |
| At most 1 * | 0.911124 | 177.2629 | 95.75366 | 0.0000 |
| At most 2 * | 0.896455 | 116.7501 | 69.81889 | 0.0000 |
| At most 3 * | 0.683188 | 60.05637 | 47.85613 | 0.0024 |
| At most 4 * | 0.490420 | 31.32019 | 29.79707 | 0.0331 |
| At most 5 | 0.338187 | 14.46600 | 15.49471 | 0.0710 |
| At most 6 * | 0.152842 | 4.146699 | 3.841466 | 0.0417 |

*Trace test indicates 5 cointegrating eqn(s) at the 0.05 level; Source: E-view Output, 2018*

The Johansen's Cointegration Result shown in Table 4.2 revealed that the variables are cointegrated which indicates five cointegrating equations since likelihood ratios of (301.6765, 177.2629, 116.7501, 60.05637 and 31.32019) are all greater than their respective critical values (125.6154, 95.75366, 69.81889, 47.85613 and 29.79707) at 5 percent level of significance. This implies that there is long run relationship among the variables under investigation.

Table 4.3: Granger Causality Tests

Lags: 2

| Null Hypothesis: | Obs | F-Statistic | Prob. | Decision Rule |
|---|---|---|---|---|
| EXR does not Granger Cause GDP | 25 | 0.06771 | 0.9347 | Rejected |
| GDP does not Granger Cause EXR | | 1.70262 | 0.2076 | Rejected |
| IFR does not Granger Cause GDP | 25 | 0.01886 | 0.9813 | Rejected |
| GDP does not Granger Cause IFR | | 1.28122 | 0.2995 | Rejected |
| IMP does not Granger Cause GDP | 25 | 0.02115 | 0.9791 | Rejected |
| GDP does not Granger Cause IMP | | 6.05809 | 0.0088 | Accepted |
| ORV does not Granger Cause GDP | 25 | 9.93883 | 0.0010 | Accepted |
| GDP does not Granger Cause ORV | | 7.80462 | 0.0031 | Accepted |
| XP does not Granger Cause GDP | 25 | 12.1407 | 0.0004 | Accepted |
| GDP does not Granger Cause XP | | 7.50529 | 0.0037 | Accepted |
| IFR does not Granger Cause EXR | 25 | 0.61269 | 0.5518 | Rejected |
| EXR does not Granger Cause IFR | | 1.35109 | 0.2816 | Rejected |
| IMP does not Granger Cause EXR | 25 | 1.46948 | 0.2538 | Rejected |
| EXR does not Granger Cause IMP | | 0.93849 | 0.4078 | Rejected |
| ORV does not Granger Cause EXR | 25 | 1.92300 | 0.1722 | Rejected |
| EXR does not Granger Cause ORV | | 0.93743 | 0.4082 | Rejected |
| XP does not Granger Cause EXR | 25 | 2.35360 | 0.1208 | Rejected |
| EXR does not Granger Cause XP | | 0.82177 | 0.4540 | Rejected |
| IMP does not Granger Cause IFR | 25 | 0.67592 | 0.5199 | Rejected |
| IFR does not Granger Cause IMP | | 0.25248 | 0.7793 | Rejected |
| ORV does not Granger Cause IFR | 25 | 1.16512 | 0.3322 | Rejected |
| IFR does not Granger Cause ORV | | 0.20678 | 0.8149 | Rejected |
| XP does not Granger Cause IFR | 25 | 1.18119 | 0.3274 | Rejected |
| IFR does not Granger Cause XP | | 0.20179 | 0.8189 | Rejected |
| ORV does not Granger Cause IMP | 25 | 4.47784 | 0.0247 | Accepted |
| IMP does not Granger Cause ORV | | 0.03444 | 0.9662 | Rejected |
| XP does not Granger Cause IMP | 25 | 4.88900 | 0.0187 | Accepted |
| IMP does not Granger Cause XP | | 0.04120 | 0.9597 | Rejected |
| XP does not Granger Cause ORV | 25 | 0.84088 | 0.4460 | Rejected |
| ORV does not Granger Cause XP | | 0.38917 | 0.6826 | Rejected |

*Source: E-view Output, 2018*

The result in Table 4.3 indicates that there is bi-directional relationship between real GDP and exchange rate. This implies that real GDP causes exchange rate as well as exchange rate causes real GDP in Nigeria. Also, inflation causes Real GDP and Real GDP causes inflation in Nigeria. In related development, there is bi-directional relationship between inflation rate and exchange rate. It was also revealed that export causes exchange rate and exchange in return causes export while there is unidirectional causality between Real GDP and import. The causality flows from RGDP to import. This implies that RGDP Granger causes import.

Table 4.4: Regression Result: Long Run Estimation

Dependent Variable: RGDP(1)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 386751.9 | 33772.33 | 11.45174 | 0.0000 |
| EXR(1) | -176.5262 | 362.2949 | -0.487245 | 0.6317 |
| IMP(1) | 44.27184 | 10.28925 | 4.302727 | 0.0004 |
| XP(1) | 302.2777 | 57.57560 | 5.250101 | 0.0000 |
| IFR(1) | -999.3969 | 775.6847 | -1.288406 | 0.2131 |
| ORV(1) | -256.4560 | 52.77620 | -4.859312 | 0.0001 |
| EXRS(1) | -3.05E-06 | 1.67E-06 | -1.829953 | 0.0830 |

| | | | |
|---|---|---|---|
| R-squared | 0.946438 | | |
| Adjusted R-squared | 0.929524 | | |
| F-statistic | 55.95517 | Durbin-Watson stat | 2.221318 |
| Prob(F-statistic) | 0.000000 | | |

*Source: E-view Output, 2018.*

Having established a cointergration among the variables, the Ordinary Least Square can then be used, based on the order of intergration as has been carried out in Table 4.1. The result in Table 4.4 shows that exchange rate, inflation, oil revenue and external reserve have inverse relationship with Real Gross Domestic Product in Nigeria. However, import and export have direct relationship on Real Gross Domestic Product. This implies that a unit change in exchange rate, inflation, oil revenue and external reserve on average, holding other variables constant, will lead to 176.5262, 999.3969, 256.4560 and 3.05E-06 decrease in real GDP respectively. On the other hand, a unit change in import and export on average holding other variables constant will lead to 44.27184 and 302.2777 increases in real GDP respectively. The result further revealed that export and import have positive significant impacts on the Economic Growth in Nigeria with P-values of 0.0004 and 0.0000, which is less than 0.005 respectively while oil revenue has negative significant impact on Nigeria economic growth with P-value of 0.0001. However, the exchange rate, inflation and external reserve do not have significant impact on economic growth in Nigeria with P-values of 0.6317, 0.2131 and 0.0830 respectively greater than 0.005. The value of R-Square shows that about 95 percent change in Real GDP was explained by the explanatory variables. This implies that the model has a good fit. The *Adjusted $R^2$* is given as 0.929524 (or 93 percent). This means that 93 percent of the variations in the in real GDP are accounted for by the included variables, after the co-efficient of determination ($R^2$) has been adjusted to make it insensitive to the number of included variables. The results showed that F- statistic is given as 55.95517 with p-value of 0.00000 which is less than 0.05 indicates that independent variables jointly have significant impact on economic growth in Nigeria at 5% level of significant Finally, given the value of DW as 2.221318 shows that the model is free from autocorrelation, which by implication means that the model can rise to forecast power with strong degree of certainty.

Table 4.5: Error Correction Mechanism (ECM): Short -Run Estimation

| Dependent Variable: RGDP | | | | |
|---|---|---|---|---|
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 332566.7 | 38006.50 | 8.750259 | 0.0000 |
| EXR | 573.2668 | 331.3456 | 1.730118 | 0.1041 |
| IMP | 42.22662 | 7.072498 | 5.970539 | 0.0000 |
| XP | 58.42134 | 28.44598 | 2.053764 | 0.0579 |
| IFR | -127.3780 | 434.4279 | -0.293209 | 0.7734 |
| ORV | -54.90718 | 25.99495 | -2.112224 | 0.0518 |
| EXRS | 1.83E-06 | 1.08E-06 | 1.694675 | 0.1108 |
| ECM | -0.235275 | 0.092659 | -2.539154 | 0.0227 |
| R-squared | 0.992458 | | | |
| Adjusted R-squared | 0.988436 | | | |
| F-statistic | 246.7335 | Durbin-Watson stat | | 1.600881 |
| Prob(F-statistic) | 0.000000 | | | |

*Source: E-view Output, 2018*

The result in Table 4.5 revealed that the coefficient of Error Correction Mechanism (ECM) is negative and significant. This indicates that about 24 percent disequilibrium in the previous period is being corrected to restore equilibrium in the current period. The independent variables were both positive and negative related to RGDP.

Exchange rate, import, export and external reserve have positive impact on RGDP while inflation and oil revenue have negative impact on RGDP. This implies that a unit change in exchange rate, import, export and external reserve on average holding other variables constant will give 573.2668, 42.22662, 58.42134 and 1.83E-06 increase in RGDP respectively while a unit increase in inflation and oil revenue will lead to 127.3780 and 54.90718 decreases in RGDP respectively.

In addition, Export, import and oil revenue have significant impact in RGDP with p-value of 0.0000, 0.0579 and 0.0518 respectively. On the other hand exchange rate, inflation and external reserve have insignificant impact on RGDP with p-value of 0.1041, 0.7734 and 0.1108 respectively. The value of R-square indicate that the model has a good fit with about 99% variation in RGDP was explained by independent variables while 1% was not capture in model due to effect of extraneous variables.

Adjusted R-squared also indicates that 99 percent of the variations in the in real GDP are accounted for by the included variables, after the co-efficient of determination ($R^2$) has been adjusted to make it insensitive to the number of included variables. Lastly, the value of DW implies that the model is absent of autocorrelation. It means the forecasting power of the model is reliable with high degree of certainty. Giving F- statistic as 246.7335 with p-value of 0.00000 which is less than 0.05 indicates that independent variables jointly have significant impact on economic growth in Nigeria at 5% level of significant.

## 5. Conclusion and Recommendations

*Conclusion*

The empirical evidence in this study revealed that export and import have positive significant impact on economic growth in Nigeria, while inflation, external reserves and exchange rate have insignificant impact on economic growth in Nigeria. However, oil revenue has negative significant impact on the economic growth in the short run, but in the long run it has insignificant impact. In terms of the overall significance of the parameters, the study concluded that exchange rate has significant impact on Nigeria economic growth and development. Import was statistically significant both in the long run and short run. By implication, increases in importation and export of goods and services will have positive and significant impact on economic growth in Nigeria. This means that importation of capital goods will boost Nigeria economy and lead to favourable balance of payment equilibrium. This will, in turn lead to the value of the Naira to appreciate. Other relevant variables to be considered are oil revenue and external reserves which are some of the determinants of exchange rate, As revealed in this study, oil revenue has negative significant impact on Nigeria economy. The funds generated from oil are supposed to have positive impact on the Nigerian economy, but the reverse was the case. This may be due to ineffective utilisation of oil proceeds and lack of investment in productive activities that possess the capacity to boost economic growth.

*Recommendations*

Based on the findings, the following recommendations were made.

i. Government should embark on massive importation of capital goods in order to boost domestic production and discourage the importation of goods and services that can be produced locally.
ii. Government should enhance the exchange rate regime through aggressive export promotion strategies towards strengthening the external reserve.
iii. Funds generated from oil should be invested in productive activities and infrastructural development, towards generating employment and controlling inflation.

**References**

Abdullahi, I. B., Abubarkar, M. A., Fakunmoju, S. K.,& Giwa, K. O. (2016). Evaluating the Granger Causality Effect of Exchange Rate on Nigerian Balance of Payment: A Granger Causality Analysis. *Account and Financial Management Journal, 1*(3), 162-174.

Afolabi, B.,Uwasejike, A., Ekpeyong, K. Y.,& Ehinimen, C. (2016). Exchange Rate and Economic Growth: The Nigerian Experience. *International Research Journal of Finance and Economics, Issue 153, September*,85-94.

Akpan, E. O.,& Atan, J. A. (2011). Effects of exchange rate movements on economic growth in Nigeria, *CBN Journal of Applied Statistics, 2* (2), 1-14.

Amassoma, D.,& Odeniyi, B. D. (2016). The Nexus Between Exchange Rate Variation and Economic Growth in Nigeria. *Singaporean Journal of Business, Economics, and Management Studies, 4* (12), 8-28.

Anifowose, O. K. (1994). Allocation and Management of foreign exchange: The Nigerian Experience.*The CBN Bulletin, 18*(4).

Arize, A. C., Osang, T.,& Slottje, D. J. (2000). Exchange Rate Volatility and Foreign Trade: Evidence from Thirteen LDCs. *Journal of Business and Economic Statistics, 18*(1), 10-17.

Brooks, C. (2014). *Introductory Econometrics for Finance*. United Kingdom: Cambridge University Press, 3rd Edition.

CBN (2016). *Foreign Exchange Rate - Education in Economics Series No 4*. Research Department. Central Bank of Nigeria.

Fapetu, O.,& Oloyede, J. A. (2014). Foreign Exchange Management and the Nigerian Economic Growth (1960 – 2012). *European Journal of Business and Innovation Research 2*(2), 19-31.

IMF (2008). Back to the Basics: Exchange Rate Regimes: Fix or Float? *Finance and Development. 45* (1).

Inam, U. S.,& Umobong, E. C. (2015). An Empirical Analysis of the Relationship between Exchange Rate Movements and Economic Growth in Nigeria.*European Journal of Business and Management, 7*(30), 191 -199.

Kadochnikov, D. V. (2013). Gustav Cassel's purchasing power parity doctrine in the context of his views on international economic policy coordination. *The European Journal of the History of Economic Thought*, *20*(6).

Kandil, M. (2004). Exchange Rate Fluctuations and Economic Activity in Developing Countries: Theory and Evidence. *Journal of Economic Development 29*(1).85-108.

Korab, P., & Kapounek, S. (2013). International Fisher Effect under Exchange Rate Regime Shifts: Evidence from 10 Examples. *Society and Economy. 35* (4), 451-469.

Linjouom, M. (2007). The Impact of the Real Exchange Rate on Manufacturing Exports in Benin.*Africa Region Working Paper Series, 107*

MacKinnon, J. G. (1991). Critical values for cointegration tests. In R. F. Engle and C. W. J. Granger (eds.). *Long-run Economic Relationships: Readings in Cointegration.*Oxford: Oxford University Press, 267–276.

Mordi, M. C. (2006). Challenges of Exchange Rate Volatility in Economic Management of Nigeria, In the Dynamic of Exchange Rate in Nigeria, *CBN Bullion, 30* (3). 17-25.

Nwude, E. C. (2012). A Survey of Foreign Exchange Rate Determinants in Nigeria. *European Journal of Business and Management*, *4*(13), 168-174.

Obadan,M. (2006) Overview of Exchange Rate Management in Nigeria from 1986 to 2006. *CBN Bullion, July – September, 30* (3). 1-9.

Obansa, S. A. J., Okoroafor, O. K. D., Aluko, O. O., &Eze, M. (2013). Perceived relationship between exchange rate, interest rate and economic growth in Nigeria: 1970-2010. *American Journal of Humanities and Social Science*, *1*(3), 116-124.

Obaseki, P. J. (1991). Foreign exchange management in Nigeria: past, present and future. *CBN Economic and Financial Review. 29* (1), 57-78.

Onuorah. A. C.,& Osuji, C. C. (2014). Exchange Rate and the Economic Growth in Nigeria.*International Journal of Management Sciences. 2* (2), 78-87.

Oyejide T. A.,& Ogun, O. (1995). Structural Adjustment Programme and Exchange Rate Policy,In: A. Iwayerni (ed.). *Macroeconomic Policy Issues in an Open Developing Economy: A case study of Nigeria.*Ibadan: NCEMA Publications.

Sarkar, A. U.,& Amor T. H. (2009). The Effect of Exchange Rate Disequilibrium and Financial Integration on Economic Growth. *International Journal of Economics and Finance, 1*(2), 69-80.

Soderstine, B.O. (1998). *International Finance (2nd Ed.)*. London: Macmillan Educational Limited.

Yaqub, J. O. (2010). Exchange Rate Changes and Output Performance in Nigeria: A sectorial Analysis, *Pakistan Journal of Social Sciences. 7*(5), 12-19.

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

# Zakah Institution and Poverty Alleviation Nexus in Kano State, Nigeria: A Structural Equation Model Approach

Daud Mustafa [1], Abubakar Jamilu Baita [2], Aliyu Mamman[3]

[1]*Department of Economics and Development Studies Federal University Dutsinma (FUDMA), Katsina State – Nigeria*
[2]*Department of Economics, Yusuf Maitama Sule University, Kano – Nigeria*
[3]*Department of Business Management, Federal University Dutsinma (FUDMA), Katsina State – Nigeria*

**Abstract**

*This study empirically examines the impacts of Zakah institution on poverty alleviation using Structural Equation Model approach. This is in view of the socio-economic and spiritual significance of Zakah institution in Muslim societies like Kano state, Nigeria. Kano state is the most populated state in Nigeria with over 15 million people and poverty rate of over 70%. Therefore, in order to achieve the objectives of this study, primary data through questionnaire method was utilized and 1,230 copies of questionnaires were administered but only 899 were considered usable. Basically, the findings emanating from this study support Zakah effectiveness hypothesis. In this connection, Zakah payment has positive impact on poverty alleviation. Also, Zakah awareness and perceptions have positive effect on poverty alleviation. Similarly, effective and efficient management of Zakah positively affects poverty alleviation. As a matter of fact, this study recommends that Zakah institution should be adopted as a core fiscal measure for poverty alleviation in Muslim societies like Kano state with necessary and required legal and political supports. Also, more awareness and public advocacy should be intensified to mobilize and motivate especially high ability Zakah payers like the business class, for enhanced Zakah revenue. More importantly, trustworthy, sincere and competent people should be assigned to operate and manage Zakah institution, so as to optimize its revenue potentials in Kano state.*

**Keywords:** Nigeria; Poverty Alleviation; Structural Equation Model; Zakah Effectiveness Hypothesis; Zakah Institution
**JEL Codes**: P36

## 1. Introduction

Zakah institution (ZI) is not only a fundamental pillar of Islam but also, the central pillar and foundation of Islamic economy since the Prophetic era and even now in modern Muslim economies. Similarly, ZI is a viable, vibrant and sustainable Islamic social security safety net and fiscal measure for tackling poverty and other socio-economic phenomena like unemployment, income inequality and begging among others, in Muslim societies like Kano state, Nigeria (Mustafa, Tabiu & Bello, 2017a; Ahmed, 2004; Sadeq, 1994). Essentially, the primary objective of Zakah is to alleviate poverty in the society and this is evident in the fact that five (5) of the prescribed beneficiaries (*Asnaf*) belong to these categories (see Q9:60). In this direction therefore, it has been noted in the various studies on Zakah institution that it has the potentials to improve the socio-economic and spiritual well-being of the downtrodden masses and more so, ZI can even make them to be more productive and successful citizens. Thus, Zakah system as an important Islamic economic institution transfers wealth or income from the rich (i.e. the Surplus Saving Unit – SSU) to the poor and needy (i.e. the Deficit Saving Unit – DSU) (Aliyu, 2002; Akanni, 2006; Mustafa & Maiyaki, 2011; Mustafa & Idris, 2015).

Importantly therefore, there are studies that have established positive and impressive link between both Zakah institution and poverty alleviation in Muslim societies like Indonesia, Malaysia, Nigeria, Saudi Arabia, Sudan and a host of others. It was also noted that Zakah potentials are yet to be fully explored in Muslim countries, especially in Nigeria with Muslim population of over 90 million people. However, it is instructive to mention that Kano state, which is the focus of this study, is one of the 14 most poverty-ridden states in Nigeria, despite her natural endowments and Islamic economic legacy like Zakah institution, which dates back to the 19th century *Dawlatul-Usmaniyyah* – Sokoto Caliphate (1804-1903). Furthermore, the poverty rate in Kano state is over 70%, especially among the youths and women (Sadeq, 1994; Aliyu, 2002; Abu Bakar & Abdul Rahman, 2007; Zainal, Abu Bakar & Saad, 2016; Mustafa *et al.*, 2017a). Interestingly, a study by Mustafa *et al.* (2017a) revealed that historically, Kano state generated the highest Zakah collection of ₦16.14 million in 2012 but in 2015, it dropped to ₦6.54 million (Kano State Zakkah and Hubusi Commission, 2010, 2015). Yet, as noted by Mustafa *et al.* (2017a), the enormous potentials to generate as much as ₦25 billion (i.e. USD82m) exists in Kano state to tackle poverty, if qualified and conscious Zakah payers (ZPs) of one million people will pay ₦25,000 each.

In this connection, figure 1 presents the research model through which this study can be conceptually espoused in line with the central thesis of this study. As such, the figure shows that poverty alleviation is the dependent variable and three (3) other variables i.e. Zakah awareness, Zakah payment and Zakah management, serve as the independent variables (which represent Zakah institution as a vector variable). In this regard, this study empirically examines the Zakah effectiveness hypothesis, considering the economic dynamics and potency of Zakah institution, especially in alleviating poverty in Muslim economies like Kano state. Thus, it investigates the effect of Zakah awareness and perceptions on poverty alleviation and it determines whether effective and efficient Zakah management affects poverty alleviation in Kano state. In order to achieve the set objectives, questionnaire method was utilized to generate data from the eight (8) metropolitan local government areas of Kano state; while Structural equation model (SEM) was adopted as the technique for data analysis. In this connection, the choice of Kano state as the case study is based on her being the most populated state (with over 15 million people) and Islamically informed state in Nigeria with high ability Zakah payers. The state has high level commercial and business orientations; yet, poverty rate in Kano state is over 70% (Muktar, 2017; Mustafa *et al.* 2017a; Ibrahim, 2015).

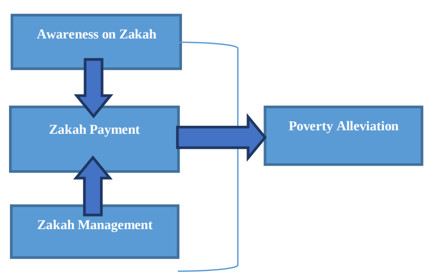



*Figure 1: Conceptual Model of Zakah Institution for Poverty Alleviation*
Source: Adapted from Zainal, Abu Bakar and Saad (2016).

**2. Literature Review**

Abdullahi (2006) examines the impact of Zakah on the beneficiaries in the six (6) local government areas of Kano metropolis with the use of questionnaire and Key informant interview (KII) methods. The sample size was 577 respondents for the questionnaire survey and six for KII. The findings from the study indicates that the Zakah provided was for the purpose of setting-up/boosting their capital base, cater for the orphans or feed family and payment of medical expenses. Majority of the respondents noted that the amount provided as Zakah did contribute to the enhancement of their well-being but did not take them out of poverty. The findings also established that 17% of the respondents were dissatisfied with the distribution of Zakah by the Kano State Zakah and Hubusi Commission. Among the reasons advanced included: (i.) the amount (i.e. between ₦5,000 - ₦10,000) given was not sufficient; (ii.) wastage of time before disbursement; (iii.) some respondents were requested to share their ₦5,000 with some people while others enjoyed their full amount; and (iv.) local politicians got involved in the exercise of Zakah disbursement thereby favoring their candidates. However, the techniques of data analysis adopted were too simplistic and not robust enough for better results to be derived.

Also, a study by Ashafa (2014) investigates the distribution of Zakah in Lagos and Ogun states of Nigeria. His study considered the activities of NGOs working on Zakah collection and distribution as the basis for assessment. Thus, the study adopted simple random sampling and interview methods to collect data from seven (7) Muslim NGOs in the two sampled states. The findings recorded by the study show that Zakah has positive impacts on the beneficiaries except that its collection was restricted to only cash Zakah. Some of the beneficiaries were empowered to become business owners while students received scholarships into various higher institutions. However, some of the challenges confronting Zakah institution as noted by the study are: inefficient administration of Zakah, circumvention by eligible payers, lack of trust, inadequate knowledge and lack of proper record keeping by the Zakah agencies. Another study by Ahmad, Othman and Salleh (2015) on the acquisition of information on Zakah distribution and management in Malaysia utilized questionnaire method to generate data on respondents' perceptions towards Zakah distribution based on six (6) Likert scale. Most of the respondents are poor and needy people. The findings emanating from the study established that some of the recipients are grateful for the Zakah gesture because of its positive impacts in their lives. However, the recipients are dissatisfied with the waiting time (i.e. three weeks) before the disbursement of Zakah. Also, sourcing of information about Zakah activities, especially distribution was largely through relative friends. Nonetheless, the recipients are delighted for receiving Zakah but are disappointed with the Zakah agency, especially in terms of Zakah management. While the study is commendable for its merits, it did not provide information about the sample size used and the actual number of questionnaires utilized for analysis, which could have affected the outcomes. Also, the method of data collection should have been complemented with interview method or any other suitable method for robustness of results.

In a related empirical study by Abdussalam, Johari, and Alias (2015) on the effectiveness of Zakah on poverty reduction of the poor Muslims in Kwara state, Nigeria with special attention given to the womenfolk in the collection of data. The study employed mixed methods of data collection i.e. both primary and secondary data by using questionnaire of 360 copies, interview and published works on Zakah. The findings revealed that Zakah does not have significant impact on poverty alleviation among the many respondents sampled, especially women. The study was however quick to state that this outcome was as a result of ineffective Zakah management in the state, which is been handled by individual Muslim scholar and the amounts distributed were also not significant. In view of this, such Zakah distribution is not expected to make any significant impact since it negates some of the basic guidelines and principles of Zakah like the principle of sufficiency credited to Khalifah Umar Ibn Khattab (R.A.) that whenever you give Zakah, you should enrich the people. Doing this will take them out of poverty and make them also to become Zakah payers.

An empirical study by Ali and Saaid (2016) examined the impact of Zakah on poverty alleviation in Sudan by adopting structured questionnaire of 50 copies to collect data. The findings emanating from their study noted that in spite of some operational inefficiency and challenges' confronting the Sudanese Zakah Chamber (SZC), poverty was positively and significantly impacted upon by Zakah. Again, a pilot study conducted by Mustafa *et al.* (2017b) on the institution of Zakah for poverty alleviation in Kano state adopted 165 questionnaires, ehich were distributed across three (3) local government areas of Kano metropolis (i.e. Dala, Fagge and Kano Municipal). In this connection, the findings established that the four dimensional constructs satisfy the reliability and validity tests. Similarly, it notes that 98.65% of the respondents are business men and women with huge Zakah payment of ₦100million in the last 15 to 20years. Also, 80% of Zakah payers are relatively young people of 25 to 55years with some of them as old beneficiaries of Zakah. These findings established that huge Zakah potentials exist in Kano state, which must be judiciously explored for societal welfare.

In a more recent study by Ayuniyyah, Pramanik, Md Saad and Ariffin (2018) on the role of Zakah distribution programmes in poverty alleviation and income inequality reduction in West Java (Indonesia). The study adopted questionnaire method using 1,309 Zakah beneficiaries managed by the National Zakat Board of Indonesia (BAZNAS). The findings of the study indicate that Zakah distribution programmes (ZDPs) by BAZNAS have potentials to significantly alleviate poverty and reduce income inequality. This is in view of the fact that the falah index adopted indicates approximately 60% increase in the well-being of the beneficiaries, which suggests that the material and spiritual conditions of the beneficiaries both in the urban and rural areas were enhanced a year after their enrolment into the ZDPs. Thus, the result of this lends credence to the Zakah effectiveness hypothesis reported in some of the studies.

## 3. Methodology

*Sample Size and Sampling Techniques*

Kano state is a Muslim populated state with an estimate of over 15 million people, which makes her the most populated state in Nigeria with official creation in May, 1967. The state is known for her Islamic heritage of civilization, commerce and scholarship. Kano state is a commercial nerve centre with manufacturing and agricultural sectors having dominance. As such, Kano state is popularly known as "the Centre of Commerce" with over 3million hectares of cultivable land. The hectares of land have been very useful in the production of rice, grains, groundnuts/peanuts and livestock, among others. Furthermore, the state consists of 44 local government areas (LGAs), which are divided into urban (Kano metropolis) i.e. eight (8) LGAs and rural (36) LGAs (Muktar, 2017; Mustafa & Idris, 2015). According to the 2006 National Population Census for Kano metropolis, the population was 2,828,861. Table 1 presents the breakdown of the allocated sample size based on LGAs peculiarities (see Appendix I). Essentially, the sample size for this study was determined by adopting the recommendation of Krejcie and Morgan (1970). They recommended 384 copies of questionnaires for a population of 1,000,000 people and above, for any study. Since the population of this study is almost 3 million people, 384 was multiplied by 3 and approximated to 1,230 copies of questionnaires, so as to take care of sampling error.

*Table 1: Distribution of Sample Size*

| S/N | Local Government Area | No. of Sample Size | % Share |
|---|---|---|---|
| 1. | Fagge | 250 | 20.3 |
| 2. | Dala | 220 | 17.9 |
| 3. | Kano Municipal Council (KMC) | 220 | 17.9 |
| 4. | Ungogo | 100 | 8.1 |
| 5. | Gwale | 120 | 9.8 |
| 6. | Kumbotso | 100 | 8.1 |
| 7. | Tarauni | 100 | 8.1 |
| 8. | Nassarawa | 120 | 9.8 |
| | **Total** | **1230** | **100** |

*Source: Authors' Computation (2018).*

The questionnaires of Abdullahi (2006) and Nadzri, AbdulRahman and Omar (2012) were adapted and structured questionnaire with seven (7) point Likert scale was adopted to generate data from Zakah payers in Kano metropolis. Furthermore, multistage and convenience sampling methods were employed for the allocation of questionnaire to the 8 LGAs in line with the recommendation of Wedgwood and Sansom (2003). They posited that multistage sampling technique is suitable and appropriate when big cities, wider geographical areas across cities or urban and rural settlements are involved in a study of this nature.

*Hypotheses and Model Specification*

*Hypotheses for this Study*

The main objective of this study is to empirically examine the Zakah-poverty alleviation nexus in Islamic economic discourse. In the same vein, the study investigates the effect of Zakah awareness and perceptions on Zakah payment by Zakah payers and also, it accounts for the effect of effective and efficient management of Zakah institution on Zakah payment. Therefore, three (3) hypotheses have been formulated for validation in this study and they are stated as:

H1: Zakah awareness and perceptions have positive effect on poverty alleviation.

H2: Zakah payment has positive impacts on poverty alleviation.

H3: Effective and efficient management of Zakah positively affects poverty alleviation.

*Model Specification*

The central thesis of this study is Zakah-poverty alleviation nexus. As such, the economic specification of this relationship is hereby given as follows:

POV = f(ZAP, ZP, ZM) 1

Where:

POV = Poverty alleviation
ZAP = Zakah awareness and perceptions
ZP = Zakah payment
ZM = Zakah management

In this regard, the econometric specification of the model is provided as:

$$POV_i = \beta_0 + \beta_1 ZAP_i + \beta_2 ZP_i + \beta_3 ZM_i + \varepsilon_i \qquad 2$$

*Techniques of Analysis and Sources of Data*

This study adopted Structural equation model (SEM) approach for data analysis, which comprises reliability analysis, correlation analysis, measurement model and structural model. The adoption of Structural equation model is to provide for robustness test. Indeed, SEM is considered as the mother of all model analysis techniques (Nik Mat, 2008). Also, the adoption of SEM in analyzing Zakah-poverty alleviation nexus discourse is meant to provide for innovative approach and deliberately intended to spur more researches adopting SEM in future researches in Islamic economics and finance studies. In this regard, the two models in SEM (i.e. measurement and structural/hypothesized models) having been utilized to achieve the objectives of this study. Furthermore, the study utilized primary data, which was collected through questionnaire method and also, secondary data was obtained from various published works on Zakah institution and poverty alleviation on Nigeria and other Muslim countries. It is however, important to note that the data utilized in this study for SEM estimation are cross sectional in nature, which was collected at a point in time, over cross sections of selected Zakah payers.

**4. Results and Analysis**

*Rate of Response on Questionnaire for Large Scale Study*

This study distributed 1,230 copies of questionnaires, which were administered in 8 LGAs of Kano metropolis with each local government allocated according to its peculiarities (see Appendix I). However, 1,129 copies of questionnaires were returned and only 899 (73%) were considered usable for analysis. In this regard, table 3 presents the breakdown of the questionnaires distributed to each local government sampled. As indicated in the table, Fagge LGA received the highest number of questionnaires (250) with the highest number of usable questionnaires (232); while Dala and KMC received 220 copies of questionnaires each and 190 and 159 respectively, were considered usable. However, Nassarawa LGA has the least copies of returned and usable questionnaires, due to the reluctant and skeptical attitude of the respondents.

*Table 3: Rate of Response on Administered Questionnaires*

| Local Government | Allocated Questionnaires | Returned Questionnaires | Usable Questionnaires | % Share |
|---|---|---|---|---|
| Fagge | 250 | 243 | 232 | 25.81 |
| Dala | 220 | 217 | 190 | 21.13 |
| KMC | 220 | 215 | 159 | 17.69 |
| Gwale | 120 | 100 | 87 | 9.68 |
| Nassarawa | 120 | 94 | 28 | 3.11 |
| Tarauni | 100 | 96 | 82 | 9.12 |
| Kumbotso | 100 | 75 | 55 | 6.12 |
| Ungogo | 100 | 89 | 66 | 7.34 |
| **Total** | **1,230** | **1,129** | **899** | **100** |

*Source: Authors' Computation (2018).*

*Demographic Characteristics of Respondents*

Crosstab analysis has been adopted to discuss the demographic characteristics of the respondents presented in this study (see Appendix II). The results show that 92.89% are males and only 7.11% are females. Their educational backgrounds revealed that most of the respondents are secondary school certificate holders i.e. 311 (35.18%), insignificant numbers of the respondents are PhD holders (i.e. 0.90%) and other educational levels not indicated in the options have 10.86%. Interestingly, most of the respondents are business men and women in terms of occupation i.e. 710 (84.42%), civil servants are just 11.18% (94) and other types of occupation represent 4.40% (37). All in all, 34.68% (309) of the respondents fall within the age group of 31-40 years, which represent the highest respondents and 29.63% (176) captures those within the age bracket of 41-50 years. This particular finding suggests that the existence of a young and vibrant generation of Zakah payers between the age group of 21-50 years (i.e. 74.19%). Furthermore, large chunk of the Zakah beneficiaries are the poor and needy (i.e. 41.86%), while other beneficiaries include orphanage (4.75%), Zakah Commission insignificantly attracted 1.58%. In this connection, this result on Zakah Commission is consistent with the findings of Mustafa *et al.* (2017b), Wali (2013) and Abdullahi (2006) about lack of public trust and inefficiency of the Commission, which creates less patronage image for the Commission.

*Estimates from the Structural Equation Model*

*Measurement Model*

In line with the rule of thumb, a two-step approach as recommended by Anderson and Gerbing (1988) was used in this study. Firstly, the purification of the measurement model was done and secondly, it was followed by the investigation and evaluation of the conceptual model. Figure 2 presents the measurement model and the estimates arrived at. In this vein, the goodness of fit (GOF) index results for the measurement model is presented in table 4. Some of the indices used for GOF analysis include CMIN/DF (i.e. ratio) has 4.6; adjusted goodness of fit index (AGFI) has .935; comparative fit index (CFI) has .918; Tucker Lewis index (TLI) has .940; and the root mean square error approximation (RMSEA) has .064.

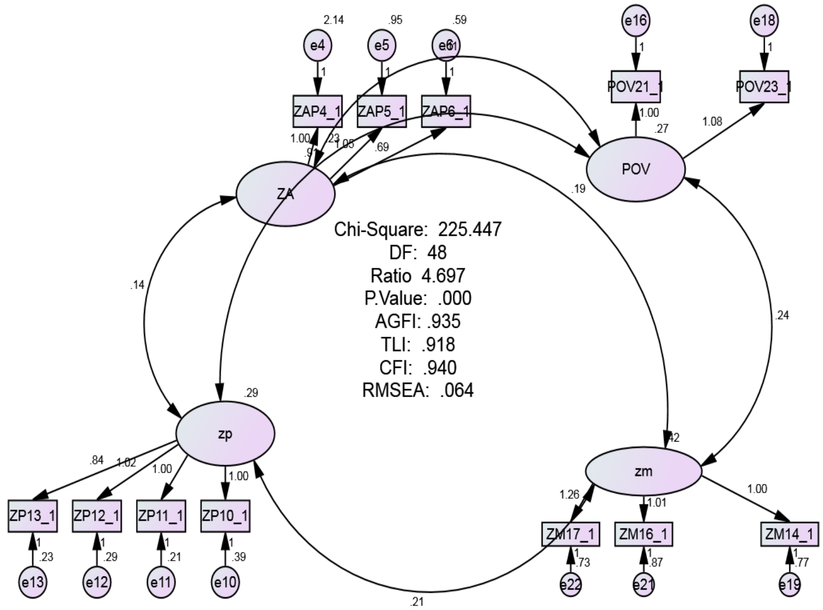



*Figure 2: Measurement Model utilized for this Study.*
*Source: Authors' Computation (2018).*

Admittedly, AGFI, CFI, TLI and RMSEA, all exceed the recommended values in the literature, especially by Chau and HU (2001), Browne and Codec (1993) and Bagozzi and YI (1988). Thus, it can be concluded that the measurement model fits appropriately with the data collected.

*Table 4: Goodness of Fit (GOF) Index for Measurement Model*

| **Quality of fit measure** | **Recommended value** | **Values of Measurement model** |
|---|---|---|
| $X^2$/df | $\leq$ 3.00 | 4.6 |
| AGFI | $\geq$ 0.80 | 0.935 |
| CFI | $\geq$ 0.90 | 0.918 |
| TLI | $\geq$ 0.90 | 0.940 |
| RMSEA | $\leq$ 0.08 | 0.064 |

*Source: Computed by the Authors (2018).*

*Reliability Analysis*

In order to evaluate the internal consistency, convergence and discernments validity, confirmatory factor analysis (CFA) was conducted on the measurement model. As rightly noted by Sekaran and Bouggie (2010), the essence of the reliability analysis is to indicate the extent to which the survey instruments are free from random error and also to measure the stability of the various items in the scale adopted. Table 5 presents the psychometric properties of the measures.

*Table 5: The Psychometric Properties of the Measures*

| Construct | AVE | CR (*pc*) | CA |
|---|---|---|---|
| ZAP | 0.412 | 0.695 | 0.6 |
| ZP | 0.499 | 0.799 | 0.8 |
| ZM | 0.387 | 0.653 | 0.7 |
| POV | 0.502 | 0.668 | 0.7 |

*Source: Authors' Computation (2018).*

From the results presented in table 5, it indicates that the Composite reliability (CR) values range from 0.653 to 0.799, which are acceptable. In the same vein, the Cronbach's alpha (CA) values are from 0.6 to 0.8, which are also acceptable, especially in line with the benchmark of Sekaran and Bouggie (2010) of alpha 0.6 as minimum alpha value to be accepted.

*Correlation among Constructs*

The four (4) constructs adopted for this study are Zakah awareness and perceptions (ZAP), Zakah payment (ZP), Zakah management (ZM) and Poverty alleviation (POV). In this vein, table 7 indicates that the values of the square roots of the average variances extracted (AVE) for all the constructs exceed the inter-correlation of the constructs with the other constructs in the model. This is in line with the recommendations of Chin (1998) and Fornell and Larcker (1981). Therefore, in line with the results presented in table 6, the following interesting conclusions can be deduced: (i.) ZM leads to the lowest decrease in POV i.e. .137 decrease in poverty for every one unit increase in ZM; (ii.) ZP leads to decrease in POV by .193, which means that for every one unit increase in ZP, poverty decreases by .193; and (iii.) ZAP has the most positive and significant impact on POV by .394. This implies that for every one unit increase in ZAP, poverty falls by .394. To this end, it can safely be submitted that ZI has positive and significant impact on poverty and thus, lending strong support to Zakah effectiveness hypothesis.

*Table 6: Result of Correlations among the Constructs*

| Construct | ZAP | ZP | ZM | POV |
|---|---|---|---|---|
| ZAP | **0.622** | | | |
| ZP | 0.240 | 0.708 | | |
| ZM | 0.207 | 0.232 | 0.706 | |
| POV | 0.394 | 0.193 | 0.137 | 0.642 |

**Source: Computed by the Authors' (2018).**

**4.4.4 Hypothesis Testing using SEM**
The results of hypothesis testing based on the structural model in appendices III and IV provide the basis for the interpretations presented in table 7. The estimates revealed that the standardized path coefficients proved to be very significant i.e. at 1% significance level for all the constructs and also for the 12 items utilized for the estimation. For instance, ZP has CR of 12.115 with respect to POV at 1% significance level, which is the highest among the four constructs. This implies that H1 is supported i.e. Zakah payment positively impacts on poverty alleviation.

*Table 7: Result of Hypotheses Testing*

| Hypothesis | Statements of Hypothesis | Result |
|---|---|---|
| $H_1$ | Zakah payment positively impacts on poverty alleviation in Kano state. | Supported |
| $H_2$ | Zakah awareness and perceptions have positive effect on poverty alleviation in Kano state. | Supported |
| $H_3$ | Effective and efficient management of Zakah institution should positively affect poverty alleviation in Kano state. | Supported |

*Source: Compiled by the Authors (2018).*

Also, ZAP and POV have CR value of 4.404 at 1% significance level, which suggests that ZAP has positive and significant effect on poverty; thus validating H2. Also, the CR between ZM and POV is given as 8.942 at 1% significance level, which suggests that effective and efficient Zakah management of Zakah institution positively affects poverty alleviation. This means that H3 is also supported by this finding.

*Discussion of Results and Findings*
In the light of the results and findings presented above, it is evidently clear that this study has brought to the limelight some interesting discoveries and contributions to the Zakah literature, especially with the adoption of SEM approach. Therefore, the findings in table 8 provide ample empirical evidences that ZI impacts positively on poverty because ZP, ZAP and ZM, all lead to decrease in poverty. More importantly, the hypothesis testing in table 8 revealed that all the hypotheses are supported by the findings. As a matter of fact, ZP has CR of 12.115 with respect to POV at 1% significance level (see Appendix IV), which represents the highest value among the four (4) constructs. By this result, Zakah payment impacts positively on poverty and as such, it validates H1. These findings lend support to Zakah effectiveness hypothesis, which is consistent with earlier finding of Ahmad *et al.* (2015), Ashafa (2014), and Wali (2013) but negate the finding of Abdussalam *et al.* (2015). Similarly, the CR for ZAP and POV is given as 4.404 at 1% significance level. In the same vein, CR between ZM and POV has 8.942 at 1% significance level, which also validates H3. Furthermore, empirical evidences support that Zakah effectiveness

hypothesis exists in the state, in spite of the meagre Zakah revenue generated; it still makes positive impact on poverty in Kano state. Also, the study recorded new Zakah payers of 37.24% of the respondents and a young generation of Zakah payers was identified within the age bracket of 21-50 years, which constitute 74.19% of the respondents as presented in table 5. This suggests that ZI has a lot of potential revenue base in Kano state. These findings lend credence to earlier findings by Mustafa *et al.* (2017b), Ibrahim (2015) and Wali (2013). All in all, it is evidently obvious that Zakah institution in Kano state, has enormous potential revenue base with promising positive impacts on poverty alleviation.

**5. Conclusion and Recommendations**

It is evidently clear from the various findings recorded in this study that Zakah institution (ZI) has positive impacts on poverty alleviation in Kano state, which lends credence to the Zakah effectiveness hypothesis in the literature. In the same connection, Zakah awareness and perceptions has positive effects poverty alleviation. Similarly, effective and efficient management of Zakah positively affects poverty alleviation in Kano state. This particular finding connotes that many Zakah payers who perceived effective and efficient management of Zakah institution shall be willing and ready to patronize the Zakah Commission owned by the State government and hence, more funds for poverty alleviation in the state. Furthermore and interestingly, the study discovered a group of Zakah beneficiaries who are now Zakah payers (i.e. 37.24% of the respondents) and a young generation of Zakah payers within the age bracket of 21-50years, which represents 74.19%. These findings suggest that potential revenue base for sustainability of Zakah fund for poverty alleviation exists in Kano state, which must be explored and maximized for the good of the downtrodden masses and the society at large.

In view of the foregoing presentation of results and discussion of the findings, it is hereby recommended that ZI should be adopted as a core fiscal measure for poverty alleviation in Muslim societies like Kano state with necessary and required legal and political supports by the Kano state government. In this connection therefore, ZI needs to be greatly promoted and supported among high ability Zakah payers, especially the business class by more awareness and sensitization as well as providing fiscal incentives and motivation by the Kano state government. More importantly, trustworthy, sincere and competent people should be assigned to manage ZI because it should not be meant and left for every Tom, Dick and Harry to be operated and managed. Moreover, Kano state government as a major stakeholder in Zakah management via the Zakah Commission should take the lead through exemplifying good governance in the form of more accountability, transparency and information disclosure in the management of Zakah revenue. Considering the Islamic awareness and the high level of commercial and business orientations in Kano state, Zakah institution shall contribute tremendously to the socio-economic and spiritual well-being of the people, "if and only if" all hands shall be on deck to faithfully and persistently implement the recommendations stated above.

**References**

Abdullahi, S.A. (2006). *An assessment of the impacts of zakah on the beneficiaries in the six local government areas of Kano metropolis.* Being a Research Project sponsored by the Kano State Zakkah and Hubusi Commission.

Abdussalam, O.I., Johari, F. & Alias, M. (2015). Is zakah effective to alleviate poverty in a Muslim society? A case of Kwara state, Nigeria. *GJAT, 5*(1), 33-41. Retrieved from www.gjat.myz

Abu Bakar, N.B., & Abdul Rahman, A. (2007). A comparative study of zakah and modern taxation. *J.KAU: Islamic Economics, 20*(1), 25-40.

Adamu, S. & Saad, R.A. (2016). The impact of public governance quality, accountability and effectiveness on intention to pay zakat: Moderating effect of trust on zakat institutions.

*International Journal of Management Research & Review, 6*(1), 1-8.

Ahmed, H. (2004). *Role of zakah and awqaf in poverty alleviation. Occasional Paper No. 8.* Jeddah: Islamic Research and Training Institute, Islamic Development Bank - IDB.

Akanni, A.A. (2006). Profiling a model for the administration of zakat in a multi-religious society: The case of South-western Nigeria. *Journal of Philosophy and Culture, 3*(2), 129-150.

Ali, K.M. & Saaid, A.E. (2016). Zakah for poverty alleviation: Evidence from Sudan. *IRTI Working Paper No. WP/2016/11*. Jeddah: Islamic research and Training Institute.

Aliyu, S.U.R. (2002). An appraisal of the performance and predicaments of the Kano Zakah Foundation. *Al-Ijtihad: The Journal of Islamization of Knowledge and Contemporary Issues, 3(*1), 71-87.

Anderson, J. & Gerbing, D. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411-423.

Ashafa, S.A. (2014). The administration of Zakat in Lagos and Ogun states. *Research on Humanities and Social Sciences, 4*(21), 74-87.

Ayuniyyah, Q., Pramanik, A.H. Md Saad, N. & Ariffin, M.I. (2018). Zakat for poverty alleviation and income reduction: West Java, *Indonesia. Journal of Islamic Monetary Economics and Finance, 4*(1), 85-100.

Bagozzi, R. & YI, Y. (1988). On the evaluation of structural equation model. *Journal of Academy of Marketing Science, 16*(1), 74-94.

Browne, M. & Codeck, R. (1993). *Alternative ways of assessing model fit*. Newbury Park: Sage Publications.

Chau, P. & HU, P. (2001). Information technology acceptance by individual professional: A model comparison approach. *Decision Sciences, 32*(4), 699-719.

Chin, W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern Methods for Business Research* (pp. 295-336). Mahwah, New Jersey: Laurence Erlbaum Associates.

Chin, W. (2010). *How to write-up and report PLS analyses. Handbook of partial least squares: Concepts, methods and application.* New York: Springer.

Falk, R.F. & Miller, N.B. (1992). *A primer for soft modeling*. Ohio: The University of Akron Press.

Fornell, C. & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.

Ibrahim, S.M. (2015). Systematic zakat management and administration: A framework for Kano state, Nigeria. *IJRDO – Journal of Applied Management Science, 1*(8), 1-19.

Johari, F., Ab.Aziz, M.R. & Mohd Ali, A.F. (2014). A review on literatures of Zakat between 2003-2013. *Library Philosophy and Practice (e-journal), Paper 1175,* 1-15. Retrieved from http://digitalcommons.unl.edu/libphilprac/1175

Kano State Zakkah and Hubusi Commission (2010). *The comprehensive achievements from inception to date (2010=1431AH).* Kano: Author.

Kano State Zakkah and Hubusi Commission (2015). *Zakah (cash) collected from individuals and corporate bodies in Kano state.* Kano: Planning Research and Statistics Department, Kano State Zakkah and Hubusi Commission.

Kefeli, Z., Johari, F., Ahmad, N., Mohd Daud, S. N. & Shah Zaidi, M. A. (2017). Factors affecting quality of life of medical assistance recipients of Zakat fund in Malaysia. *International Journal of Economics, Management and Accounting, 25*(1), 125-140.

Krejcie, R. & Morgan, D. (1970). Determining sample size for research activities. *Educational and*

*Psychological Measurement, 30*, 607-610.

Muktar, B. (2017). *An empirical study of education expenditure on human capital development in Kano state, Nigeria.* An Unpublished Undergraduate Project, Department of Economics, Yusuf Maitama Sule University, Kano - Nigeria.

Mustafa, D. & Maiyaki, A.A. (2011). The economic significance of the zakah system: An exploratory analysis of its fiscal characteristics. *Elixir Finance Journal, 36,* 3085-3090. Retrieved from www.elixirjournal.org.

Mustafa, D.A. & Adewale, A.A. (2014). Towards poverty alleviation: Islamic social security measures and distributive justice as panacea. *Bayero International Journal of Islamic Finance* (BIJIF), *1*(1), 101-115.

Mustafa, D.A. & Idris, M. (2015). The contributions of Islamic economic institutions to modern Nigeria. *Journal of Islam in Nigeria, 1*(1), 36-58.

Mustafa, D.A. & Maiyaki, A.A. (2016). Synergising zakah and Islamic banking for economic empowerment of the Ummah. In Y. O. Imam, R. I. Adebayo & A. I. Aliagan (Eds), *Dynamics of revealed knowledge and human sciences* (pp. 90-108). Ibadan: Spectrum Books Ltd.

Mustafa, D., Sabiu, T.T. & Bello, A.I. (2017a). Re-engineering the institutions of zakah and waqf for economic empowerment in Kano state, Nigeria. *Northwest Journal of Social and Management Sciences, 1*(1), 34-53.

Mustafa, D., Baita, A.J., Sabo, M. & Adhama, H.D. (2017b). *Zakah system for poverty alleviation in Kano state, Nigeria: Pilot study on the validity and reliability of survey instrument* (pp. 79-87). Conference Proceedings: Faculty of Social and Management Sciences (FSMS), Yusuf Maitama Sule University, Kano – Nigeria.

Nadzri, F.A.A., AbdRahman, R. & Omar, N. (2012). Zakat and poverty alleviation: Roles of zakat institutions in Malaysia. *International Journal of Arts and Commerce, 1*(7), 61-72.

National Population Commission (2006). *Population census.* Abuja: Author.

Nik Mat, N.K. (2008). *Understanding the concept of structural equation modeling.* College of Business, Universiti Utara Malaysia.

Sekaran, U., & Bouggie, R. (2010). *Research methods for business: A skill building approach* (5th ed.). West Sussex, UK: John Wiley & Sons Ltd.

Wali, H.N. (2013). Utilization of zakat and Islamic endowment funds for poverty reduction: A case study of Zakat and Hubsi Commission, Kano State-Nigeria. *Journal of Economics and Sustainable Development, 4*(8), 141-147.

Wedgwood, A. & Sansom, K. (2003). *Willingness-to-pay surveys – a streamlined approach: Guidance notes for small town water services.* Water, Engineering and Development Centre (WEDC), Loughborough University.

Zainal, H., Abu Bakar, A. & Saad, R. A. (2016). Reputation, satisfaction of zakat distribution, and service quality as determinants of stakeholder trust in zakat institutions. *International Journal of Economics and Financial Issues, 6,* 72-76.

**Appendix I**

*Demographic Information about the Population of Study*

| S/N | LGA | Population Size | Number of Markets | Allocated Questionnaires |
|---|---|---|---|---|
| 1. | Nassarawa | 596,669 | Small = 4 | 120 |
| 2. | Dala | 418,777 | Big = 4 | 220 |
| 3. | Kano Municipal Council (KMC | 365,525 | Big =4 and Small = 2 | 220 |
| 4. | Ungogo | 369,657 | Small = 2 | 100 |
| 5. | Gwale | 362,059 | Small = 4 | 120 |
| 6. | Kumbotso | 295,979 | Big = 1 and Small = 2 | 100 |
| 7. | Tarauni | 221,367 | Big = 1 and Small = 2 | 100 |
| 8. | Fagge | 198,828 | Big = 4 | 250 |
| | Total | 2,828,861 | Big = 14 Small =16 | 1230 |

*Source: National Population Commission (2006) and Authors' Compilation (2018).*

**Appendix II**

*Demographic Characteristics of the Respondents*

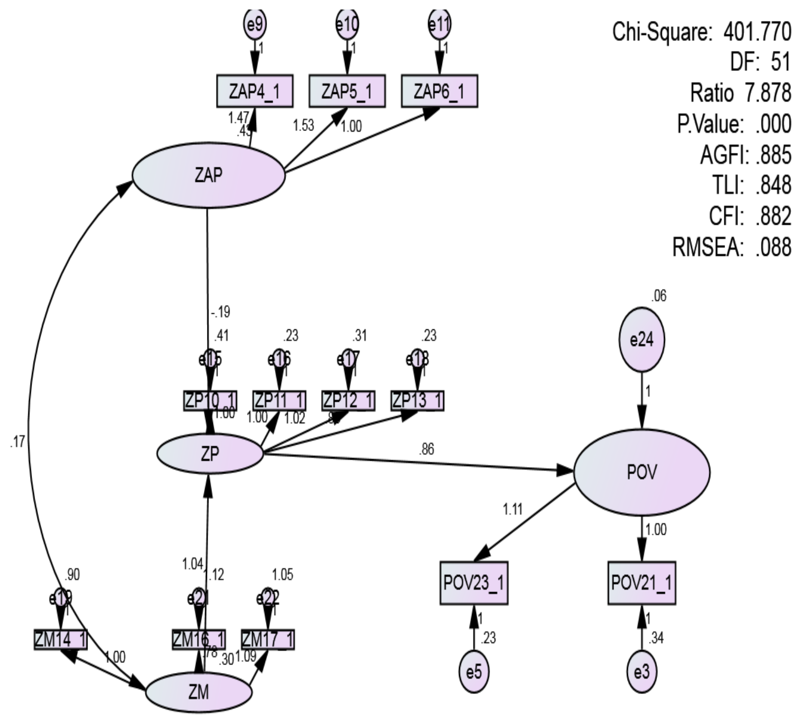
| **Demographic Status** | Frequency | **Percentage** |
|---|---|---|
| Education Level | | |
| Primary | 145 | 16.40 |
| Secondary | 311 | 35.18 |
| Degree | 145 | 16.4 |
| Masters | 38 | 4.30 |
| PhD | 08 | 0.90 |
| Non-formal | 141 | 15.95 |
| Others | 96 | 10.86 |
| Total | 884 | 100 |
| Occupation | | |
| Business | 710 | 84.42 |
| Civil service | 94 | 11.18 |
| Others | 37 | 4.40 |
| Total | 841 | 100 |

| | | |
|---|---|---|
| Age | | |
| 21-30 | 88 | 9.88 |
| 31-40 | 309 | 34.68 |
| 41-50 | 264 | 29.63 |
| 51-60 | 176 | 19.75 |
| 60 and above | 53 | 5.95 |
| Total | 890 | 100 |
| Gender | | |
| Female | 62 | 7.11 |
| Male | 810 | 92.89 |
| Total | 872 | 100 |
| Major Beneficiaries of Zakah | | |
| Poor & Needy | 370 | 41.86 |
| Orphanage | 42 | 4.75 |
| Family & Friends | 162 | 18.33 |
| Zakah Commission | 14 | 1.58 |
| Others | 13 | 1.47 |
| More than one category | 283 | 32.01 |
| Total | 884 | 100 |
| Once a Beneficiary of Zakah | | |
| No | 551 | 62.76 |
| Yes | 327 | 37.24 |
| Total | 878 | 100 |

**Source: Computed by the Authors (2018).**

**Appendix III**

*Hypothesized Model for this Study*




*Source: Generated by the Authors (2018).*

**Appendix IV**

*Result of Hypothesized Model Estimates*

| Constructs & Items | Estimate | S.E. | C.R. | P-value |
|---|---|---|---|---|
| ZAP<-->ZP | .137 | .025 | 5.421 | *** |
| ZAP<-->POV | .113 | .026 | 4.404 | *** |
| ZAP<-->ZM | .194 | .036 | 5.442 | *** |
| ZP <-->POV | .232 | .019 | 12.115 | *** |
| ZP <-->ZM | .207 | .023 | 8.869 | *** |
| POV<-->ZM | .240 | .027 | 8.942 | *** |
| ZAP4 | .143 | .127 | 16.901 | *** |
| ZAP5 | .952 | .092 | 10.347 | *** |
| ZAP6 | .594 | .045 | 13.089 | *** |
| ZP10 | .391 | .022 | 17.987 | *** |
| ZP11 | .209 | .014 | 15.065 | *** |
| ZP12 | .288 | .017 | 16.631 | *** |
| ZP13 | .234 | .014 | 17.286 | *** |
| ZM14 | .336 | .021 | 16.224 | *** |
| ZM16 | .239 | .019 | 12.526 | *** |
| ZM17 | .775 | .049 | 15.885 | *** |
| POV21 | .872 | .052 | 16.692 | *** |
| POV23 | .731 | .058 | 12.669 | *** |

*Source: Authors' Computation (2018).*

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

**Determinants of Claims Settlement in Insurance Industry: A Panel Data Analysis of Nigeria's Insurance Sector**

Umaru Baba [1], Olubusoye Olusanya Elisa [2], Sule Magaji [3]

[1] *National Insurance Commission*
[2] *Department of Statistics, University of Ibadan*
[3] *Department of Economics, University of Abuja*

**Abstract**

*This article investigates key determinants of Claims Settlement in the Insurance industry in Nigeria. The empirical analysis is anchored on a panel data of all the fifty six (56) underwriting institutions in Nigeria. Variables examined includes: premium income, insurance claims, management expenses, assets, Insurance funds, underwriting profit, and investment income of underwriters. Two econometric models, fixed effect and random effect models were estimated. The Hausman's specification test was performed to select the appropriate model for the study. The results shows that Gross Premium, Underwriting profit, Insurance Funds and Management Expenses were the main drivers of Insurance Claims Settlement in the Nigerian Insurance industry, with a negative correlation of Claims Settlement to Management Expenses at eighty one percent. The study recommends that, though other factors are essentially important, the management expenses of insurance institutions must be kept reasonably low in order to achieve an experience of efficiently adequate Insurance claims settlement in Nigeria.*

**Keywords:** Claims Settlement, Insurance, Premium, Panel Data, Fixed Effects, Random Effects
**JEL Codes**: I13

## 1. Introduction

The business of Insurance can simply be described as that of spreading risks which facilitates investment by essentially reducing the capital amount needed to be kept by firms and individuals as a protection from uncertain events or risks.

The Nigerian Insurance industry was ranked 61 in the world (AXCO, UK 2015) and growing at about 3% (NAICOM, 2015) based on gross premium income. The industry, despite its huge potentials and historic existence since 20th century, remained grossly small contributing just about 0.41% to gross domestic product (GDP) in 2015 (NAICOM NISD 2015) and plays an insignificant role to employment generation in the country owing to many factors including public confidence.

The Insurance sector in Nigeria is one of the most underdeveloped and untapped resource in the country. This bothersome phenomenon is due to a variety of factors including; Poor Insurance education, poverty, culture and more importantly poor level of confidence in the sector by the populace (Ola Gam-Ikon, 2012).

Confidence that a claim will be made good by Insurance Company (insurer) to the policy holder (insured) or a third party beneficiary of a given Insurance policy is fundamentally the moral fiber of any Insurance policy and, the main reason why Insurance is bought in the first place(Ola Gam-Ikon, 2012). Therefore Claims settlement remained an important element in the Insurance business model and a necessary component when it crystallizes.

An Insurance claim as cited in the financial dictionary of Investopedia is a formal request to an Insurance company asking for a payment based on the terms of the Insurance policy. The Insurance Company reviews the claim for its validity and then pays out to the insured or requesting party (on behalf of the insured) once approved. An Insurance policy is usually a promise of assistance when things go wrong, guided by the provided and agreed terms and conditions. When a claim agreed upon crystallizes, it will be lodged to activate the insurer's response that will thereafter assess and fulfill the promise it made in the policy. Insurance companies are expected to promptly assess all of the claims that are made, and to pay out all claims that are covered by the wording in their policies.

The Insurance Company might also decide to appoint a loss assessor, loss adjuster or an investigator to get more information. If so, the Insurance Company will give you an estimate of how long it will take to make a decision about your claim. It will also notify you within five business days of appointing that person and it continue to update the claimant about the progress of your claim. If your claim is complex, the Insurance Company will negotiate with you to arrange a different timeframe for settling the claim.

Our problem of interest with regards to the Determinants of insurance Claims Settlement in Nigeria, is also as cited in Ola Gam-Ikon, (2012) and the Proshare financial report (2018) on "The Nigerian Insurance Sector Report: Unlocking Potentials for Growth" etc. Studies identified the poor public confidence in the fact that claims will not be settled by Insurance company as at when due has continue to militate against the growth of the industry. This fear or poor confidence is not a myth as it has been empirically found out that many Insurance companies do actually delay payment of claims or simply deny it, relying on some erratic clauses hitherto not noticeable by policy holders.

Poor Claims Settlement behavior by insurance underwriters is established (Ola Gam-Ikon, 2012), however, there is no scientific investigation on the major determinants of claims settlement in the Nigerian Insurance industry. This article, intend to investigate the major determinants of Claims Settlement in the Nigerian Insurance Industry, an econometric technique of Panel Data Analysis approach.

This article is organized to give the background of the study, problem statement, and justification in the first section, literature review and methodology in the second and third sections respectively, section four presents the analysis and discussion of results, and our conclusion on the study.

## 2. Literature Review

*Conceptual Review*

According to the financial dictionary of Investopedia, an Insurance claim is a formal request to an Insurance company (Insurer) asking for a payment based on the terms of the Insurance policy. The Insurance Company thereby reviews the claim for its validity and then pays out to the insured or requesting party (on behalf of the insured) once approved. That is to say, when a valid Insurance claim is made, the insurer makes an appropriate payment to the policy holder. A claimant or the policyholder could agree with the settlement based on terms and conditions or

An Insurance claims could cover everything tangible such as death benefits, Life Insurance policies and even simple health examinations. It is also common where third parties could file claims on behalf of the insured person, but usually only the person(s) listed on the policy is entitled to claims payment.

Indeed a claim, according to the Encyclopedia of Quantitative Risk Analysis and Assessment (2008) in its article titled: "Basic concepts of insurance", is described as the defining moment in the relationship between an insurer and its insured or the policyholder. It is the main indicator that the cost incurred in paying premiums was worth the expense. In fact Policyholders retention is mostly dependent on actual claims settlement and its quality, and if handled poorly, the insurer may not only lose the customer, but also faces reputational damage. As astrategic element in the Insurance business model, claims also represent by far the largest single cost to insurers which could be as far as 80 percent of all net premiums made. Therefore good management of the element is fundamental to long term financial stability of Insurers. However, prudent claims management does not mean cutting costs at the expense of giving the positive claims experience to the insured but striking an optimum equilibrium.

Insurance claim settlement is meant to indemnify a policyholder against financial and other insured loss. The Insurance contract is primarily initiated by payments of the premiums as a consideration for completion of the contract between the insured party and an insurer. This could be revolve around costs for medical services and goods, physical damage or consequential liabilities on automobiles usage risks, property damage or liability from home ownership, the loss of life or any other tangible goods and services.

*Empirical Review*

Only a few studies have empirically attempted to gauge directly the determinants of Claims settlement by Insurance companies of either in developed or developing economies. Studies mainly concentrate on related issues such as factors influencing the avenue, by which claims settlements are made, kind of businesses of which claims complaints are major, and variations in factors affecting how early settlement can be made.

Morrison, et al (1995), investigates the factors that determine the means by which injured workers are settled their claims in Australia during 1990. Workers' compensation claims can be settled by either of these three ways; lump sum payment, that is settlement following a specific injury payment, early settlement payment and settlement following a common law payment. In investigating the factors influencing the mode of claims settlement, different modes of claims settlement by lump sum are unique and predictable from a range of variables that include injury characteristics and demographics, using data from a state in Australia, results of logistic regression modeling revealed that those who received a lump sum settlement could be reliably distinguished from those who did not receive such a payment. Each mode of settlement varied in the extent to which it could be predicted. Contrary to expectations, the most difficult form of settlement mode to predict was that of specific injury payments (4% accurate) with the most predictive being early settlement payments (81% accurate). Common law payments were also highly predictable (48% accurate). The form of lump sum payment received by injured workers was found to depend on a range of injury characteristics, indices of severity and for common law payments, gender and potential income loss. It is argued that although injury characteristics play a part in the process of claims settlement, personal circumstances and Insurance company policies are influential in dictating the form by which workers compensation cases are finalized.

JojiRao, et al (2013), in a similar study on factors influencing claims in general Insurance business in India, in order to understand the dependency of claims over the sectors and segments, statistical hypothesis testing along with cross tab analysis has been conducted. Also evaluating the relationship of these factors over the sectors and segments, a multiple regression model was applied. Results shows that there exists an association between type of sectors, that is, public and private and segments of

Insurance namely fire, marine and miscellaneous. The study also recommended a claim projection model for the general Insurance players in the underwriting process.

Also a study by Mercedes, et al (2013), focusing on the forecasting the maximum compensation offer in the automobile claims negotiation process. Using a real database, a log-linear model is implemented to estimate the maximum offer according to attributes of the victim and characteristics of the claim record, including medical reports.The model specification includes residual correlation among BI victims involved in the same judicial verdict. Results found that, a negotiated agreement means reducing the time that the claim is provisioned within the company and, financial settlements awarded by courts present different variability according to the forensic participation. It concluded that settlement values for subjective injury claims are systematically lower relative to special damages, and indicate that insurers use their negotiating power to obtain lower settlements on questionable claims as a rational response to the presence of fraud and build up claims. It suggest for better underwriting capacity on the side of insurers and involvement of expert brokers by the Insured.

In a similar study by Gavin, et al (1993), on Factors influencing the cost of workers' compensation claims. An empirical model was estimated of the total costs of finalized workers' compensation claims, using a sample comprised of 8,232 claims made by workers in Western Australia, that were closed in 1990. Findings revealed that the variables representing the method of claim settlement was an important determinant of the cost of individual workers' compensation claims. In addition, it is also found that type of injury; gender, age, and occupational classification have significant effects on the model. Therefore more efficient compensation methods were recommended for an effective and more proficient claims settlement.

**3. Methodology**

This study is aimed at determining the factors that affects the Insurance claims settlement in the Nigerian Insurance industry. Focus of the study is on Insurance industry of post consolidation era. Sample size consist of all the fifty six (56) Insurance companies in Nigeria (Life and Non-Life business) which are the underwriters of Insurance policies as at the period under study and, by extension the actual insurers that settles claims when and if it crystalizes. This sampling technique is adopted so as to avoid sampling error since the total population is readily known and, to take cognisance of the actual total players in the industry, therefore errors are minimised in deriving conclusion about the industry. Data of endogenous variables, from year 2007 to 2016 of the Insurers including; gross premium income, net premium income, gross claims, management expenses, underwriting profit, investment income, profit after tax, total assets, total capital, total equity, total reserves, Insurance funds, taxation, form the sample for the study. Two econometric models, fixed effects and random effects models are estimated. The Hausman's specification test was performed to select the appropriate model for the study.

The data and information is analyzed to assess the determinants of the Insurance Claims Settlement in the Nigerian Insurance Industry by way of the Panel Data Analysis. As indicated the analysis used logistic regression methods to achieve the objective of the study and, STATA 11.2 for the various estimations and the results interpreted based on fixed effects,random effects, and Pseudo $R^2$.

*Data Analysis*

In this study, an attempt is made to assess the determinants of Insurance claim settlement in the Nigerian Insurance sub-sector using the technique of panel data analysis. The study is focused on the post consolidation period of Insurance industry, a period of 2007 to 2018 when underwriters are better capitalised and financially more stable. Focus is on the entire fifty six (56) Insurance companies registered as underwriters (non-life Insurance and life Insurance) by the National Insurance Commission (NAICOM) as seen from its Annual Publication of the Nigeria Insurance Industry Statistics and Directory. Therefore all operators are fully individually represented in the sample of the whole avoiding entirely any sampling error and finally help in deriving conclusion about whole population.

The sample consists on a strongly balanced panel data, from year 2007 to 2016 of the fifty six (56) Insurance companies of which nineteen (19) were operating pure non-life Insurance, fifteen (15) operating on only life Insurance business and twelve (12) operating both non-life and life businesses, commonly refers to as Composite Insurance Companies. Data is collected from the foremost source of Insurance data in Nigeria, the NAICOM Annual Publication of the Nigeria Insurance Industry Statistics and Directory financial highlights, including Balance Sheets, Revenue Accounts and Profit and Loss accounts of Insurance companies.

*Investigational Technique*

Panel data analysis is employed in this study as the Statistics consists of observations from a number of companies in time series modus. As panel data consists of observations for the same cross sectional units at particular point in time, there may exist cross sectional effect of firms on some or groups of particular firms. There are several techniques that could be employed to unravel such problems. The two main tools recommended are fixed effect and random effect models. In this study also, these techniques are adopted on the basis of decision making criteria as cited in Bilal Sharif, et al (2011) which is adopted from Desomsak, et al (2004), illustrated in Figure 1.

The Figure describes decision making criteria for model selection in panel data analysis. If a random sample is drawn from a population then it is mandatory that authors should perform panel data techniques of fixed effects model and random effects model. After this authors apply the Housman's specification test, if the result of this test rejects the null hypothesis, which is, "difference in coefficients not systematic", then authors uses fixed effects model otherwise they apply random effects model. But in case of random effects model, authors further test the validity of random effects model by applying Breusch Pagan Lagrange multiplier test and should use random effect model only by rejecting null hypothesis of "no random effects". Otherwise researcher can use pooled Ordinary Least Square (OLS) regression.

Therefore in this study, based on this approach, the random effect model is chosen for the Insurance firms selected for the given period of 2007 to 2016. The random effect model in this case assumes that variables in the study are uncorrelated at all. Both the fixed effects and random effects models are further defined as follows:

**ncit1 = β0i + β1gpit+ β2npit+ β3gcit + β4mgteitβ5urpit + β6tait + β7insfit + β8invincit + uit**

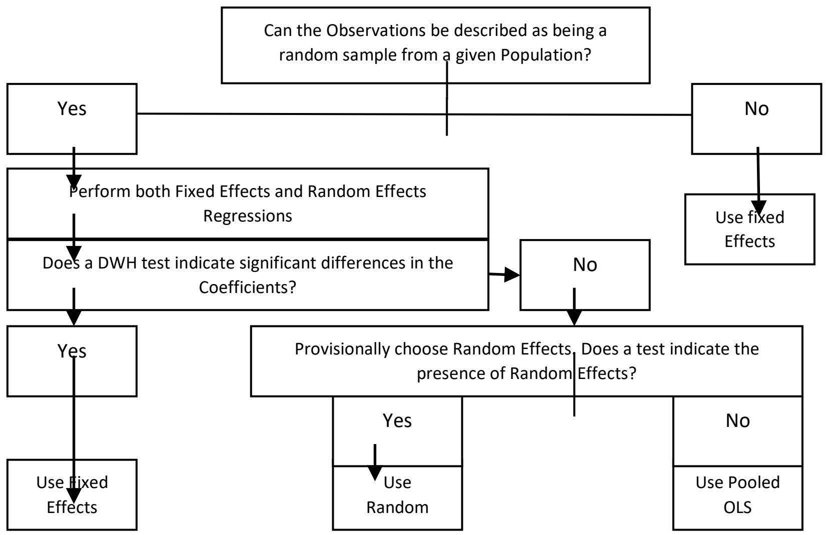
**ncit2 = β0i + β1gpit+ β2npit+ β3gcit + β4mgteitβ5urpit + β7tait + β8insfit + β9invinc + uit+ eit**

Where:

gp = Gross Premium of each firm i at time t
np = Net Premium of each firm i at time t
gc = Gross Claims of each firm i at time t
nc = Net Claims of each firm i at time t
mgte = Management Expenses of each firm i at time t
urp = Underwriting Profit of each firm i at time t
ta = Total Assets of each firm i at time t
insf =Insurance Funds of each firm i at time t
invinc = Investment Income of each firm i at time t

Figure 1

Decision making criteria for the selection of model




Source: Adapted from Dougherty (2011) as cited in Bilal Sharif, et al (2011).

## 4. Results

**Table 1: Descriptive Statistics**

. summarize ncgpnpgcmgteurp ta insfinvinc

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| nc | 18 | 32.56 | 15.54128 | 10.21 | 55.66 |
| gp | 18 | 121.5144 | 63.08072 | 30.74 | 204.34 |
| np | 18 | 90.2505 | 36.95797 | 29.98 | 138.49 |
| gc | 18 | 41.02 | 20.286 | 11.55 | 71.6 |
| mgte | 18 | 30.331 | 21.2607 | 9.1 | 69.93 |
| Urp | 18 | 27.985 | 21.31208 | 2.39 | 53.41 |
| ta | 18 | 363.9222 | 179.0264 | 127.23 | 700.3 |
| insf | 18 | 86.21 | 63.49252 | 31.82 | 208.32 |
| invinc | 18 | 258.3178 | 110.0648 | 104.42 | 488.77 |

**Table 2: Pearson Correlation Coefficient Matrix**

```
. correlate ncgpnpgcmgteurp ta insfinvinc(obs=18)
```

| | nc | gp | np | gc | mgte | urp | ta | insf | invinc |
|---|---|---|---|---|---|---|---|---|---|
| nc | 1.0000 | | | | | | | | |
| gp | 0.8015 | 1.0000 | | | | | | | |
| np | 0.7966 | 0.9741 | 1.0000 | | | | | | |
| gc | 0.9674 | 0.8435 | 0.8373 | 1.0000 | | | | | |
| mgte | 0.7550 | 0.9007 | 0.7928 | 0.7940 | 1.0000 | | | | |
| urp | 0.5795 | 0.9356 | 0.9150 | 0.6347 | 0.8018 | 1.0000 | | | |
| ta | 0.7704 | 0.9192 | 0.8252 | 0.8059 | 0.9735 | 0.8357 | 1.0000 | | |
| insf | 0.8297 | 0.7307 | 0.6176 | 0.8183 | 0.8998 | 0.5214 | 0.8815 | 1.0000 | |
| invinc | 0.7544 | 0.7300 | 0.6046 | 0.7543 | 0.8842 | 0.5530 | 0.8941 | 0.9636 | 1.0000 |

This section of the study explains the outcome of fixed effect and random effect models, analysis and discussion of findings. However, prior to that, a brief on the descriptive statistics and Pearson's correlation coefficient matrix is necessary. These are indicated in tables 1 and 2 respectively, of the all the variables intended for period of 2007 to 2016. From descriptive statistics as shown in table 1, number of observation is 18 for all the variables in the model. Net claims ratio, which is the dependent variable is 32.56%, which shows that for the period of 2008 to 2016, 32.56 % of the total claims were settled by Insurance companies against the gross claims filed by policy holders of Insurance sector in Nigeria. The standard deviation of the net claims is 15.54, minimum value of the net claims is 10.21% and the maximum value is 55.66%.

Similarly, the mean, standard deviation, minimum and maximum values for all independent variables are given in the table 1. Table 2 presents the correlation between all the predictors of the sample data. Correlation between predictors can cause the multicollinearity but here correlation between predictors is fairly small, indicating the non existence of multicollinearity in the models.

**Table 3: Fixed Effects Model**

```
. xtregncgpnpgcmgteurp ta insfinvinc, fe

Fixed-effects (within) regression          Number of ob       =        18
Group variable: id                         Number of groups   =         2
R-sq:  within  = 0.9631                    Obs per group: min =         9
       between = 1.0000                                   avg =       9.0
       overall = 0.9488                                   max =         9
F(8,8)         =     26.09
corr(u_i, Xb)  = 0.4154                        Prob> F           =    0.0001
-----------------------------------------------------------------------------
nc |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+---------------------------------------------------------------
gp |   .2120517    .301529     0.70   0.502    -.4832754    .9073787
np |  -.1546783   .3644156    -0.42   0.682    -.9950222    .6856656
gc |   .467941+2   .1739563     2.69   0.027     .0667971    .8690852
mgte |-.7891783   .3686624    -2.14   0.065    -1.639315    .0609588
urp |   .1254499   .4789804     0.26   0.800     -.979081    1.229981
 ta |   -.0248512   .0488763    -0.51   0.625    -.1375601    .0878576
```

```
insf |   .3457782   .1355848     2.55   0.034     .0331191    .6584372
invinc  -.064775   .0442342    -1.46   0.181    -.1667792    .0372291
 _cons | 17.95038    17.7341     1.01   0.341    -22.94454    58.84529
-------------+----------------------------------------------------------------
sigma_u |  3.7445515
sigma_e |  3.6363781
    rho |  .51465265   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(1, 8) =     0.05              Prob> F = 0.8232
. estimates store fe
```

**Table 4: Random Effects Model**

```
. xtregncgpnpgcmgteurp ta insfinvinc, re

Random-effects GLS regression            Number of obs      =        18
Group variable: id                       Number of groups   =         2
R-sq:  within  = 0.9628                  Obs per group: min =         9
       between = 1.0000                                 avg =       9.0
       overall = 0.9741                                 max =         9
                                         Wald chi2(8)       =    338.02
corr(u_i, X)   = 0 (assumed)              Prob> chi2        =    0.0000
------------------------------------------------------------------------------
nc |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------+----------------------------------------------------------------
gp |   .2526809   .2316304     1.09   0.275    -.2013064    .7066682
np |  -.2081421   .2661937    -0.78   0.434    -.7298723     .313588
gc |   .4790082   .1581843     3.03   0.002     .1689727    .7890437
mgte | -.8155353   .3315978    -2.46   0.014    -1.465455   -.1656156
urp |   .2102762   .2907426     0.72   0.470    -.3595688    .7801211
  ta |  -.0171846    .033929    -0.51   0.613    -.0836842    .0493149
insf |   .3273717   .1037481     3.16   0.002     .1240291    .5307143
invinc |  -.0637484   .0416312    -1.53   0.126     -.145344    .0178473
 _cons |   14.34164   7.928343     1.81   0.070    -1.197626    29.88091
------------+----------------------------------------------------------------
sigma_u |          0
sigma_e |  3.6363781
rho |          0   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

. estimates store re

The results of panel data techniques: fixed effects and random effects models are depicted in Tables 3 and 4. A robust option is used in both models in order to control heteroskedasticity. In both techniques total assets (ta), net premium (np), management expenses (mgte), and investment income are measured insignificant at 5% level. While underwriting profit (urp),Gross Premium (gp),Insurance finds (insf), and Gross Claims (gc) tested positively significant in the fixed and Random effect models at the same level of significance

**Table 5: Hausman's Specification Test Model**

```
. hausmanfe re
```

| | ---- Coefficients ---- (b) fe | (B) re | (b-B) Difference | sqrt(diag(V_b-V_B)) S.E. |
|---|---|---|---|---|
| gp | .2120517 | .2526809 | -.0406292 | .1930468 |
| np | -.1546783 | -.2081421 | .0534638 | .2488767 |
| gc | .4679412 | .4790082 | -.011067 | .0723778 |
| mgte | -.7891783 | -.8155353 | .0263571 | .1611052 |
| urp | .1254499 | .2102762 | -.0848263 | .3806455 |
| ta | -.0248512 | -.0171846 | -.0076666 | .0351812 |
| insf | .3457782 | .3273717 | .0184064 | .0872901 |
| invinc | -.064775 | -.0637484 | -.0010267 | .0149501 |

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(8) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 0.05

Prob>chi2 = 1.0000

$R^2$ is slightly higher in fixed effects, 0.9631 as compared to 0.9628 for random effects. While at both random and fixed effects models the between $R^2$ is equal at 1.00, the overall $R^2$ of random effect is higher at 0.974 compared to that of fixed effect model which stood at 0.948. Both models are good fit as fixed effects model has significant F test and random effects model has significant Wald $Chi^2$ test. Table 5 provides the output of Hausman's specification test, indicating a $Chi^2$ statistics of 0.05 which is insignificant at 5% level of significance whereby the difference in coefficients are not systematic, this signifies that random effects model should be appropriate for this study as compared to the fixed effects model.

*Findings and Discussion*

From the empirical results obtained in table 4, the major determinants of Insurance Claims Settlement in Nigeria includes the amount of Gross premium (gp) generated by an Insurance company, the sum total amount of Gross Claims (gc) filed by claimants, the total underwriting profit (urp) and the sum total of Insurance funds (insf) of Insurance companies. The behavior of Management Expenses (mgte) is also found to be a major determinant of Insurance Claims Settlement.

The empirical results shows that for any unit increase in the amount of gross premium (gp) received could results in an increase likelihood of claims settlement by underwriters by about twenty five (25%) percent. This is implied, since it is possible that a growth in premium might have lead to increased financial stability, liquidity and carriage capacity by Insurance companies, thereby claims settlement could be carried out with ease. Increased gross premiums also is usually accompanied by increased underwriting responsibility of more written Insurance policies and or higher rates on existing more risky prone policies which could also lead to an increased level of Claims settlement by Insurance companies.

Similarly, of major determinants of Insurance Claims settlements in Nigeria is the sum total amount of Gross Claims (gc) filed by claimants. The study shows that a unit increase in Gross Claims (gc) would lead to an forty eight (48%) percent increase in Insurance Claims Settlement by Insurance companies. This finding is in line with common practice since net claims paid to Insurance policy beneficiaries is usually the actual residual element of the gross claims which is the real value entitled by the beneficiaries. Therefore, level of Claims Settlement is dependent on the level of Gross Claims (gc) filed by claimants.

Underwriting profit (urp) made by Insurance companies is also a factor determining Insurance claims settlement in Nigeria. Underwriting profit of Insurance companies refers to profits drivable from providing Insurance or reinsurance coverage, exclusive of the income resulting from investments. From the study, it was seen that a unit increase in such profits leads to a twenty one (21%) percent increase in settlement of Insurance claims. This goes to show that efficiently prudent underwriters with good underwriting profit profile tend to settle Insurance claims and it is a proficient factor in determining Claims settlement in the Nigerian Insurance sector. This finding is strictly in line with economic theory, that business efficiency and profits making, contributes to firms' financial soundness and stability and, that financially stable Insurance companies tend to do better in terms of Insurance claims settlement when risks eventually crystallizes.

Total Assets (ta), despite its growth of about sixty three (63%) percent over the period of the study, with the change in non-life business at seventy one (71%) percent and forty seven (47%) in Life business, maintained a non-significance value to Insurance Claims. This could be attributable to the real estate inclination in investment by most Insurance companies and other fixed assets that contribute a distant value to the liquidity and solvency needs of Insurance firms. From table 4, the Total Assets of Insurance companies is insignificantly related to Insurance Claims Settlement, a unit increase in the Assets leads to a fall in Claims Settlement by about 17%, indicating that firms diverting away resources that could be channeled to Insurance Claims Settlement to build and grow the Assets base of Insurance company, thereby affecting adversely the needed Claims Settlement drive of the industry.

Growth in Insurance Funds (insf) on the other hand, could lead to growth in Claims Settlement in Insurance industry at about 32% with a unit increase in the fund pool as is shown in table 4. Insurance Fund refers to obligations that Insurers owe policy holders also referred to as policy holder liability. This is line with both theory and intuitive expectation that such financial safety nets could give confidence to Insurance firms to better honor Insurance contracts and also to help protect policy holders by regulators.

Investment Income (invinc) and Management Expenses (mgte) maintained an inverse relationship with Insurance Claims Settlement in Nigeria as seen from the results. Investment Income for Non-Life Insurance business which grew by about four hundred and five (405%) percent in the period 2008 to 2016, is found to have essentially contributed very little to claims settlement. From the empirical results, a unit growth in Investment Income could lead to fall in Claims Settlement by about 63% indicating diversion of Investment Income to other uses. It is also attributable to the ever increasing Management expenses in the industry which grew at about 132% for Non-Life and at over 50% for Life businesses during the period under study. Empirical results shows that,a unit increase in Management Expenses could lead to an adverse effect on Claims Settlement, causing it to a massive fall at about 81% percent level.

## 5 . Conclusion

In this article, the Literature and empirical analysis of Determinants of Insurance Claims Settlement in the Nigerian Insurance Industry is scrutinized, through panel data of fifty six (56) Insurance Companies from 2007 to 2016 (post industry consolidation era) by applying two econometric panel data techniques (fixed effects and random effects). Gross Premium, Underwriting profit, Insurance Funds and Gross Claims, and Management Expenses are the main drivers of Insurance Claims Settlement in the Nigerian Insurance Industry. Total Assets and Investment income were found to behave contrary to both theory and regulators intuitive expectation. This study is expected to open the horizons for forthcoming studies to investigate the Determinants of Insurance Claims Settlement in the Nigerian. It is recommended that, management expenses of insurance institutions must be kept as reasonably low in order to achieve a timely and adequate insurance claims settlement in Nigeria. While also upcoming studies may streamline to factor in only one kind of business rather than looking at the entire industry or increase panel size by including more variables data. This article unlike others is able to clarify the Determinants of the poor Insurance Claims Settlement in the Nigerian Insurance sector which is a leading draw-back to its growth in the economy.

**References**

Afrinvest Report (2018). The Nigerian Insurance Sector Report: Unlocking Potentials for Growth. A Proshare, Nigeria's Premier Financial, Business and Economic Information Hub

AXCO UK, (2015). World Insurance Industry Ranking, 2015 edition, United Kingdom

Bilal, Sharif, Muhammad Adnan Naeem and Abdul Jabbar Khan, (2011), Firm's characteristics and capital structure: A panel data analysis of Pakistan's Insurance sector. African Journal of Business Management Vol. 6(14), pp. 4939-4947.

Basic Concepts of Insurance (2008) Encyclopedia of Quantitative Risk Analysis and Assessment"

Gavin, A. Wood.
David, L. Morrison,Sally Macdonald (1993). Factors influencing the cost of workers' compensation claims: The effects of settlement method, injury characteristics, and demographics. Journal of Occupational Rehabilitation, Volume 3.

Investopedia: What is term insurance? at www.investopedia.com/term-life-insurance

JojiRao, T. Krishan, K. Pandey, (2013) "A study on factors influencing claims in general Insurance business in India", The Journal of Risk Finance, Vol. 14 Issue: 3

Mercedes, Ayuso and Miguel Santolino, (2012), Forecasting the Maximum Compensation Offer in the Automobile Bodily Injury Claims Negotiation Process. Group Decision and Negotiation Journal, the Institute for Operations Research and the Management Sciences. Vol. 21, issues 5.

NAICOM NIID (2015), Nigeria Insurance Industry Directory & Statistics, 2015 edition. The National Insurance Commission Annual Publications

*Ola E. Gam-Ikon (2012).* How Regulators Underdeveloped the Insurance Industry in Nigeria. Proshare, Nigeria's Premier Financial, Business and Economic Information Hub

Richard, A Derrig, (2003). Determinants of Total Compensation for Auto Bodily Injury Liability Under No-Fault: Investigation, Negotiation and the Suspicion of Fraud. Available from: https://www.researchgate.net/publication/228748383_

Sharon, Tennyson and Danial, Asmat (2009). Bargaining in the Shadow of the Law: The Impact of Bad Faith Liability on Automobile Insurance Settlements. The Insurance Research Council (IRC)

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

**Evaluation of the Effect of Noncurrent Assets on Profitability in Nigerian Banking Sector: Evidence From Panel Data**

Tajudeen Adejare Adegbite [1], Felix Ebun Araoye [2]

[1] *Department of Accounting and Finance, Kings University, Odeomu, Osun State*
[2] *Internal Audit, Ladoke Akintola University of Technology, Ogbomoso, Oyo State.*

**Abstract**

*This study examined the effect of noncurrent assets on profitability of sampled Nigerian commercial banks. Secondary data were used in this study. The data was obtained from annual reports accounts of ten (10) Nigerian commercial Bank purposefully selected from 2006 to 2017. Panel Data analysis technique was used to analyse the effect of independent variables (Building, Land, Leasehold premises, fixtures and fitting, and investment in computers) on dependent variable (Net profit). Results showed that there is a positive significant effect of BDG, ICT, MACH on NETPR (β= .0052578; .0195288; .0719033 t = 0.001, 0.000; 0.009 < 0.05). (β= .0195288, t = 0.000 < 0.05). LEASE, LAND, and FIXF also had positive significant effect of LEASE on NETPR (β = .0434922; .1678305; .0499863 t = 0.007; 0.005; 0.000 < 0.05). In conclusion, investments in noncurrent assets had positive significant impact on the Nigerian Banks' profitability. Noncurrent assets are used to generate revenue for the benefits of shareholders. It is recommended that banks should establish efficient noncurrent asset management and optimization program in the bank in order to improve their profitability. This program should be designed to eliminate or reduce the effect of carry cost for assets that are no longer needed or used in the bank. Banks should also improve the investments in noncurrent assets in terms of ICT so as to boost their profitability.*

**Keywords:** Noncurrent assets; Panel Data; Net profit; Commercial banks; Investment;
**JEL Codes**: G21

## 1. Introduction

*Background to the study*

No firms can grow and sustain without investment in noncurrent asset. Investment in noncurrent assets like land, building, plant and machinery, fixtures, fittings and motor vehicle it is imperative for every organisation with profit motive. Investment in noncurrent assets enhances the productive capacity of firms and generates long term profitability (Olatunji and Adegbite, 2014). Noncurrent asset investment decisions are among the most important decisions taken by firms because they affect shareholders wealth, the long-term perspective of the firm's survival, a competitive advantage and also the overall economic welfare of society. Every firms invest considerable amounts of money on noncurrent asset in order to increase financial performance, maximize revenue, and maintain the competitive position in the market. Noncurrent asset are the category of assets that generally indicate the most important use of a company's resources. Investments in noncurrent assets such as buildings, equipment and machinery increase the firm's production capacity in order to increase the long-term profit of the company. This category of assets does not change frequently and they are purchased to produce and sell more. Assets have significant role in determining the efficiency and the profit ratio of a firm. Since a firm acquires plant and machinery and other productive noncurrent assets for the purpose of generating sales. Therefore, efficiency in the use of noncurrent assets should be judged in relation to sales. Olatunji and Adegbite, (2014) asserted that noncurrent assets turnover ratio measures the efficiency with which a firm is utilizing its investment in noncurrent assets. It also indicates the adequacy of sale in relation to investment in noncurrent assets. Generally, a high noncurrent assets turnover ratio indicates efficient utilization of noncurrent assets in generating sales, while a low ratio indicates inefficient management and utilization of noncurrent assets.

Banking sector just as firms in the brewery and other industries require a large amount of noncurrent asset investment in large capital equipment while, service companies and computer software producers need a relatively small amount of noncurrent assets. Effective organization of noncurrent assets is one of the most important parts of the entire corporation and in creating value for shareholders. The main purpose of any firm is to reduce the cost of production in order to maximize their profit. But, maintaining liquidity of the firm also is an important objective. The problem is that increasing profits at the expense of noncurrent asset can bring serious problems to the firm. Yet, some organisations find it difficult to increase their investment in noncurrent asset. Olatunji and Adegbite (2014) analysed the effect of investment in fixed assets on profitability of selected Nigerian banks with Pearson product moment correlation and multiple regressions. Why did the study employ Pearson product moment correlation and multiple regressions?

This study employed panel data to examine the effect of investment in noncurrent asset on profitability of selected Nigerian banks. It also analyses the relationship between noncurrent assets values and Return on Investment (ROI) and determines the effect of noncurrent assets investment on Net profits of sampled Nigerian commercial banks.

## 2. Literature Review

*Empirical Review*

Olatunji and Adegbite (2014) examined the effect of investment in fixed assets on profitability of selected Nigerian banks. The study also analyzed the significant components of fixed assets investment of selected Nigerian Commercial Banks. Data were obtained from annual reports and accounts of selected Nigerian commercial Banks. Pearson product moment correlation and multiple regressions were employed to analyze the relationship between the dependent variable (Net profit) and independent variables (Building, Land, Leasehold premises, fixtures and fitting, and investment in computers.). Findings showed that there is a significant relationship between dependent variable (Net Profit) and the independent variables (Building, information communication and technology, machinery, leasehold, land and fixture and fitting) with the adjusted $R^2$ @ 96%. Therefore, investments in fixed assets have strong and positive statistical impact on the profitability of banking sector in Nigeria.

Ibam (2007) argued that a company's investment in fixed asset is dependent, to a large degree, on its line of business. Some businesses are more capital intensive than others. According to Ibam (2007) fixed asset turnover ratio looked at asset over time and compares the ratio to that of competitors. This gives the investor an idea of how effectively a company's management is using fixed asset. It is a rough measure of the productivity of a company's fixed assets with respect to generating sales. The higher the number of times turned over, the better. However investors look for consistency or increasing fixed assets turnover rates as positive balance sheet investment qualities (Ibam, 2008).

Eriotis *et al.* (2000) investigated the relationship between debt to equity ratio and firm's profitability taking into consideration the level of a firm's investment and the degree of market power. The study used panel data for various industries, covering a period 1995-96. They concluded that firms which prefer to finance their investment activities through self-finance are more profitable than firms which finance investment through borrowed capital. According to them, firms used their investment in fixed assets as a strategic variable to affect profitability.

Berger and DeYoung (1997) indicated that most research on bank efficiency is mainly weighted on cost efficiency; Zheng et al. (2007) as stated in Alayemi (2013) also emphasized the cost efficiency of small and mid-sized banks in Taiwan. It was not until recently that profit efficiency began to be noticed. The study of profit efficiency considers both the cost efficiency and earning efficiency. Berger and DeYoung (1997) pointed out that while conducting research on cost efficiency, profit must be assumed to reach its maximum level under the pre-determined bank inputs and outputs. However, the above assumption may be inconsistent with reality due to the ignorance of quality problems. For instance, higher quality banks may have higher costs that induce cost inefficiency. However, the higher quality banks may generate higher earnings and profits, thus it makes profit efficiency.

Sayeed and Hogue (2009) studied the impact of assets and liability management on profitability of public and private commercial banks in Bangladesh. According to them, banks' profitability is almost always of concern in modern economy. Banks are in business to receive deposits or liabilities and to issue debt securities on the one hand and create or invest in assets on the other hand. Thus commercial banks incur cost for their liabilities and earn income from their assets. Thus profitability of banks is directly affected by management of their assets and liability. Their study examined how assets and liability management together with external variable such as degree of market concentration and inflation rate impact the profitability of selected commercial banks in Bangladesh. The study also dealt with the impact of Assets and Liability Management (ALM) on the profitability of the sixteen Bangladesh commercial banks classified into private and public. The results show that the use of total income the dependent variable for private and public banks show evidence that all of the assets have significant contribution to total income of the private banks.

Beneish *et al.* (2001), and Fairfield, Whisenant and Yohn (2003), among others have identified a rather strong negative relationship between investment intensity and profitability. Gautam (2008) found out that high fixed cost can deplete a company's profit especially if sales fall. The revelation that other variables do not have significant impact on profit after tax may be explained by the fact that companies probably adjust selling prices of their products to take care of changes in variable cost other than fixed cost.

Khalid (2012) examined the relationship between the asset quality management proxies and profitability nexus. Using the return on assets and profitability ratios as proxies for bank profitability for the period 2006-07 to 2010-11, operating performance of the sample banks is estimated with the help of financial ratios. Also multiple regression model was employed to examine if bank asset quality and operating performance are positively correlated. The results showed that a bad asset ratio is negatively associated with banking operating performance, after controlling for the effects of operating scale, traditional banking business concentration and the idle fund ratio.

Okwo *et al.* (2012) studied the investment in fixed assets and firm profitability, evidence from the Nigerian Brewery Industry. A cross sectional data was gathered for the analysis from the annual reports of the sampled brewery firms for a period of 1995 to 2009. The four brewery firms that constitute the sample were those quoted on the Nigerian Stock Exchange and their inclusion in the analysis is based on the availability of data for the sample period. The brewery firms that constitute the sample are: Nigerian Breweries Plc, Guinness Nigeria Plc and International Breweries Plc, Champion Breweries Plc. The result of the tested hypothesis showed that the level of investment in fixed assets does not strongly and significantly impact on the level of reported profit of breweries in Nigeria.

## 3. Methodology

Secondary data were used in this study. The data was obtained from annual reports accounts of ten (10) Nigerian commercial Bank purposefully selected from 2006 to 2017. Panel Data analysis technique was used to analyse the effect of independent variables (Building, Land, Leasehold premises, fixtures and fitting, and investment in computers) on dependent variable (Net profit).

*Model Specification*

Net profit is the explained variable in this model, while the explanatory variables are book values of Building, Land, Leasehold premises, fixtures and fitting, and investment in computers. Thirteen Nigerian Commercial Banks were purposively selected for the survey and analysis. This study employs annual data on the effect of investment in fixed asset on profitability of selected Nigerian banks from the period of 2006 to 2017.

$$\boldsymbol{P} = \boldsymbol{f}(\boldsymbol{X1},\ \ \boldsymbol{X2},\ \ \boldsymbol{X3}, \boldsymbol{X4}, \boldsymbol{X5}, \boldsymbol{X5}\ \ \mu) \qquad \textbf{(1)}$$

A regression model relates $Y$ to a function of $X$ and μ

Where:

$P$ - Dependent variable, i.e Profitability

$\boldsymbol{X1 - X5}$ - Independent variables i.e investment in fixed assets by description

μ. - Error term

$$\sum_{i=1}^{n} \boldsymbol{NETPR} \ = \ \boldsymbol{a0} + \sum_{i=1}^{n} \boldsymbol{a1BDG} + \sum_{i=1}^{n} \boldsymbol{a2ICT} + \sum_{i=1}^{n} \boldsymbol{a3MACH} + \sum_{i=1}^{n} \boldsymbol{a4LEASEH} + + \sum_{i=1}^{n} \boldsymbol{a5LAND} + \sum_{i=1}^{n} \boldsymbol{a6FIXF} + \mu\boldsymbol{1} \qquad (\boldsymbol{2})$$

Transforming equation (1) to the natural logarithm it changed to

$$\sum_{i=1}^{n} \boldsymbol{LOGNETPR} \ = \ \boldsymbol{a0} + \sum_{i=1}^{n} \boldsymbol{a1LOGBDG} + \sum_{i=1}^{n} \boldsymbol{a2LOGICT} + \sum_{i=1}^{n} \boldsymbol{a3LOGMACH} + \sum_{i=1}^{n} \boldsymbol{a4LOGLEASEH} + + \sum_{i=1}^{n} \boldsymbol{a5LOGLAND} + \sum_{i=1}^{n} \boldsymbol{a6LOGFIXF} + \mu\boldsymbol{3} \qquad (\boldsymbol{3})$$

**Where:**

$\boldsymbol{NETPR} \ - \ \boldsymbol{Net\ profit}$
$\boldsymbol{BDG} \ - \ \boldsymbol{Building}$
$\boldsymbol{ICT} \ - \ \boldsymbol{Investment\ in\ computer}$
$\boldsymbol{MACH} \ - \ \boldsymbol{Machinery}$
$\boldsymbol{LEASEH} - \ \boldsymbol{Leasehold\ Premises}$
$\boldsymbol{LAND} \ - \ \boldsymbol{Land}$
$\boldsymbol{FIXF} \ - \ \boldsymbol{Fixtures\ and\ Fitting}$

## 4. Results and Discussion

Table 1: Pooled effect Model on effect of Noncurrent assets investment on Net profit

| Dependent variables | Independent variables | Coefficient | Standard error | T | P>/T/ | (95% conf. Interval) |
|---|---|---|---|---|---|---|
| LOGNETPR | LOGBDG | .0114622 | .0214881 | 3.98 | 0.004 | -.0315975 .053311 |
| | LOGICT | .0203016 | .0171476 | 4.61 | 0.000 | -.0136985 .054143 |
| | LOGMACH | .0763049 | .0514375 | 4.22 | 0.001 | -.028427 .1731567 |
| | LOGLEASE | -.0413753 | .0444736 | 3.89 | 0.011 | -.1296911 .0469405 |
| | LOGLAND | .2792015 | .1436933 | 3.00 | 0.019 | -.0061449 .564548 |
| | LOGFIXF | -.0942741 | .1689904 | 5.30 | 0.000 | -.4298556 .2413073 |
| | CONSTANT | 14.61139 | 2.846329 | 5.13 | 0.000 | 8.959143 20.26363 |
| R-squared = 0.6768 | | Adj R-squared = 0.6377 | | | Prob > F = 0.0005 | |

*Source: Researcher's Computation (2018)*

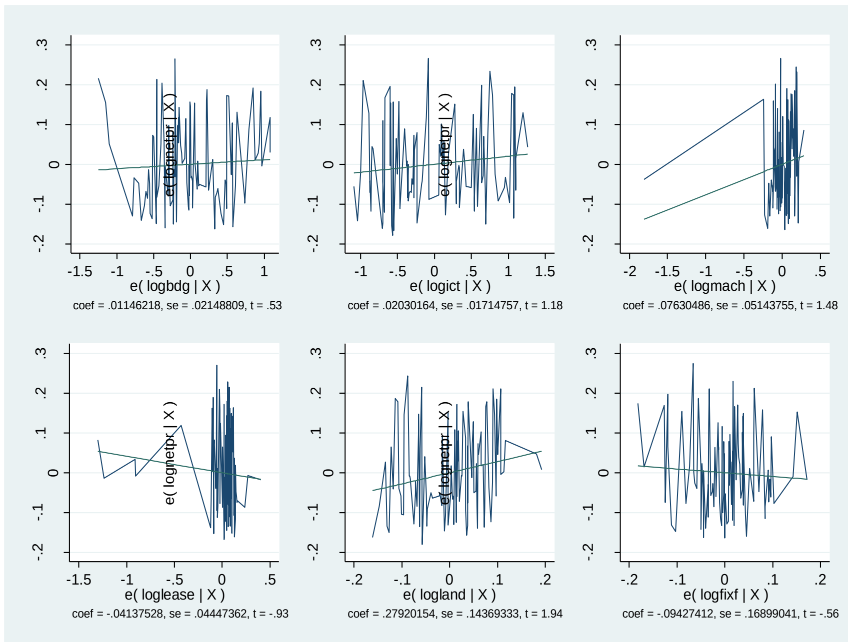



*Fig.1 - Regression plots of the effect of Noncurrent assets investment on Net profit*

Table 1 and Fig. 1 showed the effect of BDG, ICT, MACH, LEASE, LAND and FIXF on NETPR. 1% increase in BDG reduces NETPR by 0.011%, it shows that there is a positive significant effect of BDG on NETPR (β= .0114622 t = 0.004 < 0.05). 1% increase in ICT increases NETPR by 0.020%, it shows that there is a positive significant effect of ICT on NETPR (β= .0203016, t = 0.000 < 0.05). 1% increase in MACH increases NETPR by 0.076%, it shows that there is a positive significant effect of MACH on NETPR (β = .0763049, t = 0.001 < 0.05). Contrarily 1% increase in LEASE reduces NETPR by 0.041%, it shows that there is a negative significant effect of LEASE on NETPR (β = -.0413753, t = 0.011 < 0.05).1% increase in LAND increases NETPR by 0.279 %, it shows that there is a positive significant effect of LAND on NETPR (β = .2792015, t = 0.005 < 0.05).1% increase in FIXF reduces NETPR by 0.049%, it shows that there is a positive significant effect of FIXF on NETPR( β = -.0942741, t = 0.000 < 0.05).

Given the coefficient of determination ($R^2$) as 0.6768 which is 68% supported by high value of adjusted $R^2$as 64%, it presumes that the independent variables incorporated into this model have been able to explain the effect of E-HRM to 64 %. That is, there is a significant effect of independent variables (E-RECRUIT, E-TRAIN, E-COMP, E-BENEF, E-SELECT and E-EVAL) on dependent variable E-HRM. The F Probability statistic also confirms the significance of this model. The adjusted $R^2$of 0.6377 indicates that about 64 % of total variation in the dependent variable is accounted for by the explanatory variables at level of 0.05 level of significance.

Table 2: Effect of Noncurrent assets investment on Net profit using Random effect model

| Dependent Variable | Independent Variables | Coefficient | Standard Error | T | P>/T/ | (95% conf. Interval) |
|---|---|---|---|---|---|---|
| LOGNETPR | LOGBDG | .0052578 | .0214545 | 4.25 | 0.001 | -.0367922 .0473078 |
| | LOGICT | .0195288 | .0169202 | 5.12 | 0.000 | -.0136342 .0526918 |
| | LOGMACH | .0719033 | .0514583 | 3.59 | 0.009 | -.0289531 .1727598 |
| | LOGLEASE | .0434922 | .0762714 | 3.79 | 0.007 | -.1309993 .0394872 |
| | LOGLAND | .1678305 | .0210335 | 3.81 | 0.005 | -.1028935 .5549898 |
| | LOGFIXF | .0499863 | .1796275 | 5.30 | 0.000 | -.302077 .4020496 |
| | CONSTANT | 13.838 | 3.013088 | 8.59 | 0.000 | 7.932452 19.74354 |
| R-sq: within = 0.0774 between = 0.0594 overall = 0.0714 | | | sigma_u \| .02734533 sigma_e \| .1003095 rho \| .0691750 (fraction of variance due to u_i) | | Wald chi2 (6) =2.96 Wald chi2(6) = 7.37 | |

*Source: Researcher's Computation (2018)*

Random effect needs to be tested because of the doubt that may arise with pooled result. Table 3 showed the effect of BDG, ICT, MACH, LEASE, LAND and FIXF on NETPR. 1% increase in BDG reduces NETPR by 0.005%, it shows that there is a positive significant effect of BDG on NETPR (β= .0052578 t = 0.001 < 0.05). 1% increase in ICT increases NETPR by 0.019%, it shows that there is a positive significant effect of ICT on NETPR (β= .0195288, t = 0.000 < 0.05). 1% increase in MACH increases NETPR by 0.071%, it shows that there is a positive significant effect of MACH on NETPR (β = .0719033, t = 0.009 < 0.05).1% increase in LEASE increases NETPR by 0.043%, it shows that there is a positive significant effect of LEASE on NETPR (β = .0434922, t = 0.007 < 0.05).1% increase in LAND increases NETPR by 0.167%, it shows that there is a positive significant effect of LAND on NETPR (β = .1678305, t = 0.005 < 0.05).1% increase in FIXF increases NETPR by 0.049%, it shows that there is a positive significant effect of FIXF on NETPR( β = .0499863, t = 0.000 < 0.05).

Table 3: Effect of Noncurrent assets investment on Net profit using Fixed effect model

| Dependent Variable | Independent Variables | Coefficient | Standard Error | T | P>/T/ | (95% conf. Interval) |
|---|---|---|---|---|---|---|
| LOGNETPR | LOGBDG | -.0120366 | .0219562 | -2.98 | 0.034 | -.0556988 .0316257 |
| | LOGICT | .0171874 | .0168494 | 5.22 | 0.000 | -.0163196 .0506943 |
| | LOGMACH | .0748649 | .0144186 | 4.32 | 0.003 | -.0297371 .1794669 |
| | LOGLEASE | .0655386 | .0526006 | 4.91 | 0.001 | -.1338697 .0363124 |
| | LOGLAND | -.2218357 | .2842970 | 3.00 | 0.011 | -.7871915 .3435201 |
| | LOGFIXF | .0125883 | .2329301 | 2.31 | 0.023 | .0743813 |

| Dependent Variable | Independent Variables | Coefficient | Standard Error | T | P>/T/ | (95% conf. Interval) |
|---|---|---|---|---|---|---|
| | | | | | | 1.000795 |
| | CONSTANT | 15.63698 | 3.844094 | 4.07 | 0.000 | 7.992576 23.28138 |
| R-sq: within = 0.1268 between = 0.4996 overall = 0.0024 | | Prob > F = 0.0081 | | sigma_u \| .07470355 sigma_e \| .10030955 rho \| .35675724 (fraction of variance due to u_i) | | |

*Source: Researcher's Computation (2018)*

The result in Table 4 showed the effect of BDG, ICT, MACH, LEASE, LAND and FIXF on NETPR. 1% increase in BDG reduces NETPR by 0.012%, it shows that there is a negative significant effect of BDG on NETPR (β= -.0120366 t = 0.034 <0.05). 1% increase in ICT increases NETPR by 0.0171%, it shows that there is a positive significant effect of ICT on NETPR (β= .0748649 t=0.003<0.05).1% increase in MACH increases NETPR by 0.074%, it shows that there is a positive significant effect of MACH on NETPR (β = .0748649 t = 0.003 < 0.05).1% increase in LEASE increases NETPR by 0.065%, it shows that there is a positive significant effect of LEASE on NETPR (β = .0655386 t= 0.001 < 0.05).1% increase in LAND increases NETPR by 0.22%, it shows that there is a negative significant effect of LAND on NETPR (β = -.2218357 t = 0.011 < 0.05).1% increase in FIXF increases NETPR by 0.0125%, it shows that there is a positive significant effect of FIXF on NETPR(β= .0125883 t=0.023<0.05).

Table 4: Hausman test on the Effect of Noncurrent assets investment on Net profit

| **Dependent variables** | **Independent variables** | **Coefficient** (b) | **Coefficient (B)** | **(b-B) Difference** | **Sqrt (diag (v-b-v-B)) S.E** |
|---|---|---|---|---|---|
| | LOGBDG | .0052578 | -.0120366 | .0172943 | - |
| | LOGICT | .0195288 | .0171874 | .0023415 | .0015461 |
| | LOGMACH | .0719033 | .0748649 | -.0029616 | - |
| LOGNETPR | LOGLEASE | -.0457561 | -.0487786 | .0030226 | .0077884 |
| | LOGLAND | .2260482 | -.2218357 | .4478839 | - |
| | LOGFIXF | .0499863 | .5375883 | -.487602 | - |
| b = consistent under Ho and Ha; | B = inconsistent under Ha, efficient under Ho | | Test: Ho: difference in coefficients not systematic chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B) = - 7.14 Prob>chi2 = 0.3077 | | |

*Source: Researcher's Computation (2018)*

To decide between fixed or random effects, Hausman test was conducted where the null hypothesis is that the preferred model is random affects vs. the alternative the fixed effects (Green, 2008). It basically tests whether the unique errors (*ui*) are correlated with the regressors, the null hypothesis is they are not. If Chi2< 0 is greater than 0.05 (i.e. significant), random effects should be considered, therefore the null hypothesis is accepted.


*Fig. 2 - Panel Analysis plots on the effect of Noncurrent Assets on Net profit*

Table-4. The Relationship between Noncurrent Assets and Net Profit

| | LOGNETPR | LOGBDG | LOGICT | LOGMACH | LOGLEASE | LOGLAND | LOGFIXF |
|---|---|---|---|---|---|---|---|
| LOGNETPR | 1.0000 | | | | | | |
| LOGBDG | 0.6150* | 1.0000 | | | | | |
| LOGICT | 0.9248* | -0.1823 | 1.0000 | | | | |
| LOGMACH | 0.7399* | 0.0611 | -0.0943 | 1.0000 | | | |
| LOGLEASE | 0.5458* | 0.0086 | 0.0290 | 0.0070 | 1.0000 | | |
| LOGLAND | 0.6940* | -0.1168 | 0.1520 | 0.0337 | 0.1773 | 1.0000 | |
| LOGFIXF | 0.4460 | 0.0108 | 0.0358 | 0.1411 | -0.1190 | 0.3231* | 1.0000 |

***. Correlation is significant at the 0.01 level (2-tailed)*
**. Correlation is significant at the 0.05 level (2-tailed).*
*Source: Researcher's Computation (2018)*

The table 4 shows the relationship between Noncurrent assets and Net Profit of sampled Nigerian commercial banks. The result in table 4 shows that investment in building (BDG) has positive relationship with net profit (NETPR) with coefficient 0.6150*. This result implies that an increase in Investment in building contributes to increase in net profit. Investment in computer (ICT) has positive relationship with net profit with coefficient of 0.9248*. This result implies that an increase in Investment in computer (ICT) leads to increase in net profit. In the same vein, Plant and machinery (MACH) also has positive correlation with net profit, coefficient 0.7399*. This result implies that the increase in Plant and machinery (MACH) Enhances net profit.

Investment in leasehold premises (LEASEH) also has positive significant relationship with net profit with coefficient of 0.5458*. Furthermore, the result also shows that land (LAND) also has positive correlation with net profit, coefficient 0.8992. This result implies that the increase in land (LAND) influences increase in net profit. Fixture and Fitting (FIXF) also influence increase in net profit in that FIXF has a positive correlation with return on investment with a coefficient of 0.4460. The table also revealed that all the predictor variables have positive relationship with net profit.

**5. Summary and Conclusion**

This study examined the effect of noncurrent assets on profitability of sampled Nigerian commercial banks. Secondary data were used in this study. The data was obtained from annual reports accounts of ten (10) Nigerian commercial Bank purposefully selected from 2006 to 2017. Panel Data analysis technique was used to analyse the effect of independent variables on dependent variable. Results showed that there is a positive significant effect of BDG, ICT, MACH on NETPR ($\beta$= .0052578; .0195288; .0719033 t = 0.001, 0.000; 0.009 < 0.05). ($\beta$= .0195288, t = 0.000 < 0.05). LEASE, LAND, and FIXF also had positive significant effect of LEASE on NETPR ($\beta$ = .0434922; .1678305; .0499863 t = 0.007; 0.005; 0.000 < 0.05).

Investment in building, computer, and land had positive significant relationship with net profits. Similarly, lease exhibited negative relationship with NETPR indicating that the usage and not ownership has effect on return on investment. In the same vein, plant and machinery,

also has positive correlation with Net profit. This result implies that the increase in machinery also leads to increase in return on investment as indicated by Olatunji and Adegbite (2014) Investment in leasehold premises also has positive significant relationship with return on investment with the value of 0.5458*. Fixture and fitting also leads to increase in net profit that is there is a positive correlation with Net profit of Nigerian banks. The higher the level of investment in noncurrent assets, the higher will be the profit.

In conclusion, investments in noncurrent assets had positive significant impact on the Nigerian Banks' profitability. Noncurrent assets are used to generate revenue for the benefits of shareholders.

It is recommended that banks should establish efficient noncurrent asset management and optimization program in the bank in order to improve their profitability. This program should be designed to eliminate or reduce the effect of carry cost for assets that are no longer needed or used in the bank. Banks should also improve the investments in noncurrent assets in terms of ICT so as to boost their profitability.

**References**

Olatunji T. E. & Adegbite, T.A. 2014: Investment in Fixed Assets and Firm Profitability: Empirical Evidence from the Nigerian Banking Sector. Asian Journal of Social Sciences and Management Studies ISSN: 2313-7401 Vol. 1, No. 3, 78-82, 2014

Beneish, M., C. Lee & R. Tarpley, 2001. Contextual fundamental analysis in the prediction of extreme returns. Review of Accounting Studies, 2/3: 165-191.

Berger, A.N. & R. DeYoung, 1997. Problem loans and cost efficiency in commercial banks. Journal of Banking & Finance, 21: 849-870.

Eriotis, N.P., A.Z. Frangouli & Z.V. Neokosmides, 2000. Profit margin and capital structure: An empirical relationship. The Journal of Applied Business Research, 18(285): 1 – 3.

Gautam, K., 2008. Important tips for stock market investors outlook money. November 24 Rediff Indian Abroad. Available from www.rediff.com [Accessed 20th February, 2011].

Ibam 2007 How to Evaluate a Company before Investing, 2007. Stock Exchange News Sat. Available from freemanskrikesblogspot.com/…/how-toevaluate-company-be [Accessed 20th March, 2011].

Khalid, A.C., 2012. The impact of asset quality on profitability of private banks in India: A case study of JK, ICICI, HDFC & YES Banks Journal of African Macroeconomic Review of Accounting Studies, 2(1): 127-143.

Okwo, I.M., D.O. Ugwunta & A.U. Nweze, 2012. Investment in fixed assets and firm profitability: Evidence from the Nigerian brewery industry. European Journal of Business and Management, 4(20). Available from www.iiste.org.

Sayeed, M.A. & M.S. Hogue, 2009. Impact of assets and liability management on profitability: A study of public vs private Commercial Bank in Bangladesh. Available from www.wbicconpro.com/30%5B/%5D.pdf [Accessed 5th December, 2010].

Whisenant & Yohn, 2003. Asset liability management and commercial banks profitability in Ethiopia. Research Journal of Finance and Accounting, 4(10, 2013). Available from www.iiste.org ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online).

Zheng Sheng, X. Nuo & Zhi X, 1997. The research of the optimal allocation of assets structure and business performance. Res. J. Econ. Bus. ICT(8): 1-5.

*Abuja Journal of Economics & Allied Fields, Vol. 9(5), 2018*
*Print ISSN: 2672-4375; Online ISSN: 2672-4324*

**An Empirical Insight of Women-Owned Micro Bakery Enterprises in Metropolis of Kano State, Nigeria**

Amina Abubakar Isma`il

*Department of Economics Faculty of Social Sciences, Bayero University Kano, Nigeria*

**Abstract**

*The paper examines the characteristics of women entrepreneurship in Kano Metropolis of Nigeria with particular reference to home-based micro bakery (Gurasa) enterprises. A multistage sampling technique was employed to randomly select a sample of 236 respondents for the study. The result suggests that most of those engaging into the home-based micro bakery enterprises are women entrepreneurs. Using logit regression model, the study reveals that the main significant factors driving the probability of women entrepreneurship in the study area are marital status, education, business and membership of an association. Based on these findings, the paper suggests any policy measures aiming to promote women entrepreneurship through education such as mass literacy, vocational studies and short-term entrepreneurial courses are highly recommended. Specific training for women entrepreneurs that may include business and technical skills as well as soft skills to make home-based business entrepreneurs more productive and by extension contribute to overall economic development of Nigeria are also needed. In addition to these, policies that would encourage learning from the experience would also sparse the growth of women's' entrepreneurship.*

**Keywords:** Women entrepreneurship, micro bakery enterprises, home based business, Metropolis
**JEL Codes**: L26

## 1. Introduction

The role of women entrepreneurs in the creation of new enterprises has been scarcely studied in the entrepreneurship literature. This is because previous studies examining general entrepreneurship characteristics are leaned towards male ideal entrepreneurial activities as against all-inclusive universal entrepreneurship. This is evident in the study conducted by Brush and Cooper (2012) where it was established that studies on women entrepreneurs constitute less than 10% of all research in the field of entrepreneurship. Some of the reasons for this are pointed out by Galindo et al (2012). One reason is the arguments that women entrepreneurship attracted less attention in the previous literature because the economy of many countries has been dominated by men; a sign of a high level of androcentrism. Another reason is that, most of the theoretical literatures on entrepreneurship development including classical and neoclassical paradigms are characterized by inherent limitations. The underlying assumptions of these paradigms do not take into account the circumstances of women participation in the economy. The instrument used in the modelling exercise do not allow for analysis of the problem that women faces in the economy. There is also report of Global Entrepreneurship Monitor (GEM, 2014) which significantly backed the first argument and added that substantial evidence abound in many countries to suggests early-stage entrepreneurial activities are mostly performed by men, with no much differences in individual attributes like perceived opportunities and perceived capabilities.

Recent literature on entrepreneurship has avoided this problem by emphasizing on women entrepreneurship. The interest is attributed to the growing importance of women in social and economic setting of the society. It has been shown in several studies that the evolution of the society over the last few decades has not only provide natural setting for women participation in all spheres of life to participate in many socio-economic and cultural activities but has also necessitated the need to understand the diverse characteristics of women entrepreneurship. As argued by Ahl (2006), understanding the characteristics of women entrepreneurship is necessary because the attributes of women`s entrepreneurs who venture into business is significantly different from that of men. This means, a new research that do not only digress from current trend but capture more and richer aspect of women entrepreneurship is needed. Sarfaraz et al (2014) added the consensus among many scholars is that women can play a crucial role in entrepreneurial phenomena, and the share of their contribution to the economic and social development can only be understood if their inherent characteristics are uncovered. Understanding these characteristics would also enable government and other institutions to come up with policies that promote gender equality and gender blind support to bridge any challenge of growing presence of women in all social, political and economic settings.

During the last few decades, women entrepreneurship has also become topic of interest in most Sub-Saharan African countries including Nigeria. This interest is ascribed to the fact that women are regarded as social group in the society that are most susceptible to poverty. There is also strong awareness and understanding that women entrepreneurship represent strong potential sources of future economic growth and development. It is therefore believed that, starting own business constitute one of the major routes to advance status of womenfolk from both economic and social perspective (Ahmad, 2011). In 2012, GEM reported an estimated 126 million women starting or running a new business as at 2011, and almost 98 million were running established business. However, the report also acknowledged disproportionality in distribution of the female entrepreneurs across regions. For example, while the number of female entrepreneurs in Middle East and North African (MENA) countries was 4%, that of Sub-Saharan Africa was 27%.

Despite growing signs of women entrepreneurship in the Sub-Saharan African region, women are generally considered to be at the bottom of the poverty ladder in Nigeria (Iheduru, 2002). One of the reasons is that most of them do not have access to business entrepreneurial support either from the government or other stakeholders. Halkias et al (2012) reported of about 25 to 35 percent of registered businesses that are owned or managed by women in Nigeria, only a mere 10 to 15 percent have access to appropriate credit. A situation of this nature as observed by Iheduru (2002) can severely limit the ability of the womenfolk to develop and grow not only their own enterprises, but stimulate job creation and make positive contribution to economic development of Nigeria.

The goal of this paper is to provide a better understanding of the characteristics of women entrepreneurship in Kano Metropolis, Nigeria. More concretely, the study would want to contribute to the understanding of the role of women-owned enterprises in transforming women-owned home-based businesses into an engine of improving women wellbeing in the study area. Interestingly, much of the previous studies in Kano Metropolis have paid little attention to women-owned enterprises in the area. The attention of most of them is biased towards general entrepreneurial activities with male oriented entrepreneurship modelling as a serious area of interest. One of the motivations behind this paper is to bridge this gap by examining the characteristics of women entrepreneurs who engaged in micro bakery business-called in a native Hausa Language '*Gurasa*`, mostly owned by women in Kano Metropolis, Nigeria.

The paper is organized into six sections. After this introduction, the next section is devoted to conceptual review and analysis. In the third section, the paper presented in brief a review of related literature. The fourth section contains materials and method of the paper. The fifth section consists of empirical results and discussion. The last section is conclusion and recommendations.

## 2. Literature Review

### *2.1 Conceptual Review and Analysis*

It is very difficult to give a one single acceptable definition of entrepreneurship. This is because entrepreneurship is more often conceptualize as something that stimulates economic growth, create jobs, and provide opportunities for independence and self-realization. It is also a concept that is still evolving with new thoughts and meanings. Looking at the literature, it follows the word entrepreneurship in itself is derived from the French word 'enterprendre', meaning "to undertake". Although, Jean-Batiste Say is credited with the invention of the word "entrepreneur" to describe someone who unlock capital tied up in land and redirects it to 'change the future', the earliest conceptualization of what entrepreneurship embodied is attributed to Cantillon (1775) who sees entrepreneurship as a process of presently bearing the risk of buying at certain price and selling at uncertain prices in the future. This means an entrepreneur is a bearer of uncertainty. Following this, Knight (1921) also provide a better perspective of the uncertainty by introducing dimension of risk-taking as central characteristics of the entrepreneurship concept.

Another perspective of what entrepreneurship personified is given by subsequent founders of modern entrepreneurship. Starting from the pioneering study of Schumpeter (1934), where entrepreneurship is describe in relation to innovative aspect. An entrepreneur is considered in this perspective as innovator who implements change within markets through the carrying out of new combinations. Much later or after some decades, the Schumpeterian model of entrepreneurship is to receive scholarly backing from the work of Drucker (1985) and Aghion and Howitt (1992). For example, Drucker (1985) admitted innovation is the specific instrument of entrepreneurship. It is the act that endows resources with a new capacity to create wealth. The implication of this as observed by Drucker (1985) is that innovation creates a resource. Aghion and Howitt (1992) also supported the Schumpeterian model of entrepreneurship by emphasizing on investment for innovative research to introduce new product that make the old product obsolete.

Other ample conceptualization and analysis of what entrepreneurship embodied exist in the literature. For instance, Penrose (1963) perceives entrepreneurial activity as something that involves identifying opportunities within the economic system. Leibenstein (1979) conceptualizes entrepreneurship as "activities necessary to create or carry on an enterprise where not all markets are well established or clearly defined or in which relevant parts of the production function are not completely known. Kirzner (1979) sees entrepreneur as somebody that recognizes and acts upon market opportunities. For this the idea of entrepreneurship is linked to the role of entrepreneur in leading market to equilibrium. In this perspective, entrepreneurship means identifying disequilibrium that can only be corrected by alert entrepreneur who emphasize on the new business opportunities to move the economy towards equilibrium. Baumol (1990) conceptualizes entrepreneurs as creative and ingenious, and always searching for more appropriate means to increase their wealth, power, and prestige. They are people influenced by existing environment around them.

A more recent trend in the analysis of entrepreneurship is looking at it from the context of gender issue. The argument especially in the gender and entrepreneurship literature is that, the concept of entrepreneurship in itself while pretending to be gender neutral comprises a gender sub-text which renders maleness invisible (Bruni *et al.*, 2005). As a result of changing perspective of entrepreneurship concept, women entrepreneurs are gradually becoming widely key component of today`s business enterprises. In the same vein, the ability of women entrepreneurs to initiate, organize and run a business enterprise is increasing being recognized in the literature. In conceptualizing women entrepreneurship, Bahamani-Oskooee *et al.*, (2012) described it as creating new employments for womenfolk and for others, and also chances of taking advantages of entrepreneurial opportunities to provides goods and services to satisfy necessities. The essence of women entrepreneurship is to bring economic and societal balance in the societal set up.

One of the factors enhancing women entrepreneurship activity is the social environment. A favourable social environment would facilitate the innovation process and the emergence of new women entrepreneurship. Generally speaking, there are two main reasons why women become entrepreneurs. Firstly, through necessity, and secondly through opportunity. In the majority of cases, it has been through necessity (self-employment) due to a lack of opportunities in the job market. The growing trend of female entrepreneurs in the economy can also be linked to increase experience and training among womenfolk has been increasing their capacity to identify and exploit new opportunities.

*2.2 Empirical Literature*

There is large body of literature on entrepreneurship especially on men dominated entrepreneurship. However, one of the major conflicting conclusions of the previous studies is that women entrepreneurs perform poorly than men entrepreneurs. It is for this reason, Cabera and Mauricio (2017) recently observed female or women entrepreneurship is emerging as a separate field of academic research in recent years.

Looking at the literature, it is evident that several empirical studies have sought to investigate major factors influencing women entrepreneurship. Studies such as Cabera and Mauricio (2017) conducted several reviewed of related literature on female entrepreneurship. The authors found factors affecting female entrepreneurship to vary across different stages. For example, at the internal level the factors include human capital, education and experience, with effects on the opportunity identification stage of the entrepreneurial process. They also reported that at the micro environment level, access to resources with effects on the opportunity recognition, acquiring resources and entrepreneurial performance stages, both with influence on quantitative and qualitative indicators of success are the major factors driving the female entrepreneurship activities. Moreno (2016) identified the characteristics of internally displaced women' entrepreneurships in Bogota. The results reveal exposure to violent episodes conditions the internally displaced women' entrepreneurship processes, making them different from the entrepreneurship of women in other social contexts.

Using stereotype threat theory, Gupta et al (2014) investigated gender differences in evaluating new business opportunity. The finding suggests men reported higher opportunity evaluation than women when no gender stereotypical information was presented, whereas men and women evaluated the business opportunity equally favourably when entrepreneurs were described using gender neutral attributes. Interestingly, the study also reported that the gender differences in opportunity evaluation were exacerbated when entrepreneurship was linked to masculine stereotypical information, and reversed in favour of women when entrepreneurship was linked to feminine stereotypical information. Adeola (2014) suggests personal needs for achievement, identity and independence are some of the major factors driving women entrepreneurship. The author further stated that the most successful entrepreneurs among womenfolk hold a strong commitment to quality products or service, human resources and their passion for entrepreneurship.

*Parvin et al (2012) identified* finds among various personal attributes, freedom of work and desire for higher social status significantly influenced women entrepreneurs to participate in micro-entrepreneurship. They also found family hardship also turns likely to be involved in micro-entrepreneurship. The authors also reveal that among various external factors affecting the entrepreneurship drive access to credit, access to entrepreneurship training, membership with development organizations, access to information and favorable infrastructure depicts inspiring factors in women participation in micro-entrepreneurship. Wu and Chu (2012) examined gender based differential treatment of business borrowers with view to see second-order gender effect. The findings detected a second-order gender effect in U.S. small business borrowing cost. It specifically found lenders charge female sole proprietorships an average of 73 basis points higher than male sole proprietorships. This is probably because as Robb and Watson (2012) argued the characteristics of women`s entrepreneurship is significantly different from that of men.

Ekpe (2011) analysed characteristics of women entrepreneurship. The study revealed that motivation, foresight and achievement were some of the vital characteristics' of women entrepreneurship. The author also revealed majority of entrepreneurs used as sample in the study are formally unemployed. This showed that they were new entrants into business which may be occasioned by unemployment situation. Klapper and Parker (2011) assessed impact of gender on new business creation. The authors observed the performance of women entrepreneurs is relatively not encouraging compared to their male entrepreneurs.

**3.1 Methodology**

The survey was conducted within Kano Metropolis, Nigeria. The metropolis is located between latitude $11^0 52`$N to $12^0$ 7`N of the equator and between longitudes $8^0$ 22.5`E to $8^0 47`$E and is 1549ft above sea level. For many centuries, Kano has been one of the largest commercial towns in Nigeria. This coupled with growing small, medium and large-scale industries as well as population explosion has led to migration of people from rural areas to the Metropolis (Kabuga, 2014).

The interest of this paper is on home-based micro bakery enterprises which are predominantly owned by women in Kano Metropolis. The enterprise involves the use of local technology (various equipment) in production. It employs labour largely in both production and marketing of the product which makes it labour intensive technique. The output of the women's micro bakery enterprises in Kano is called "*Gurasa*," locally made bread from plain flour. Women are the major producers of the product, but employ a large number of men in its commercial activity. Production activities are largely conducted at home. So, this makes the enterprises a home-based work. It is small scale in nature because, the size of the enterprises usually consists of family-based units ranging from 2 – 5 persons (i.e. the mother, and a number of family members in assistance); it requires small capital to start up. Although small in nature, it employs a large number of people of different age groups (ranging from children to adults) in marketing and distribution of the product across Kano Metropolis and beyond.

The population of the study consist of women micro bakery entrepreneurs and non-entrepreneurs within Kano Metropolis. Using multi-stage sampling technique, a total of 236 sample respondents were used in the analysis of this paper. The sample study areas are within Dala, Gwale and Kano Municipal Local Government Areas (LGAs). The places were well-known having centres for the production, distribution and marketing of '*Gurasa*' product. The data collected in these areas was aided by well-structured questionnaire administered by well-trained research assistants under the guidance of the researchers.

This study used logistic regression econometric technique that allow us to establish a relationship between a binary outcome variable and a group of predictor variables (Adamu & Kabuga, 2017; Muktar & Kabuga, 2015; Kabuga, 2013). This type of regression usually models the logit transformation probability as linear relationship with the predictor variables (Kabuga & Adamu, 2015). Using the logistic regression, this study used the probability of being women entrepreneur is specified as the value of the cumulative distribution function Z which is specified as a function of the explanatory variables.

The equation for this type of modelling is of the form:

$$p(i) = \frac{1}{1+e^{-Z(i)}} \text{ --------------------} \quad (1)$$

Where p(i) is a probability of engaging in micro bakery (*Gurasa*) enterprise by i$^{th}$ woman entrepreneur and Z(i) is a function of m explanatory variable ($X_i$) and is expressed as follows:

$$Z(i) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + ......+ \beta_m X_m \text{ - } \quad (2)$$

where Bo is the intercept and B1 is the slope parameter of the intercept in the model. The slopes tell how the log-odds in favour engaging in micro bakery (*Gurasa*) enterprise by woman entrepreneur changes as independent variables changes by a unit.

The stimulus index $Z_i$ also referred to as the log of the odds ratio in favor of engaging in micro bakery '*Gurasa*' enterprises. The odds ratio is defined as the ratio of the probability that a women entrepreneur engaged in '*Gurasa*' businesses (pi) to the probability that he/she will not (1-$P_i$)

But $$(1 - p_i) = \frac{1}{1+e^{z(i)}} \text{ ------------} \quad (3)$$

Thus, $$\left(\frac{p_i}{1-p_i}\right) = \frac{1+e^{Z(i)}}{1+e^{-z(i)}} = e^{Z(i)} \text{ ----} \ (4)$$

And

$$\frac{P(i)}{1-P(i)} = \frac{1+e^{Z(i)}}{1+e^{-z(i)}} = e^{\beta} + \sum_{i-1}^{m} \beta_i Y_i \text{ - } (5)$$

When the natural logarithms of the odds ratio of equation (5), it result in what is known as the logit model as indicated below.

$$In\left(\frac{P_{(i)}}{1-P_{(i)}}\right) = In\left[e^{\beta_o} + \sum_{i=1}^{m} \beta_i X_i\right] = Z_{(i)} \text{ - } (6)$$

If the disturbance term $U_i$ is taken into account, the logit model becomes:

$$Z_{(i)} = \beta_o + \sum \beta_i X_i + U_i \text{ --------} \ (7)$$

Following the studies conducted by Muktar and Kabuga (2015), Kabuga and Adamu (2015), and Kabuga (2013), the logit model to be used is to investigate the probability of engaging in micro bakery (*Gurasa*) enterprise by woman entrepreneur or not can be expressed as follows:

$$Y_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \upsilon_i$$
---------- (8)

**Table 3.1: Variables Measurement**

| Variables | Types | Description |
|---|---|---|
| $Y_i$ | Binary | 1 for women entrepreneurs (*Gurasa*), and 0 otherwise. |
| $X_1$ | Continuous | Age of business owner |
| $X_2$ | Categorical | 1 for married, and 0 otherwise |
| $X_3$ | Continuous | Years of schooling measured in numbers |
| $X_4$ | Continuous | Number of dependents |
| $X_5$ | Continuous | Years in business |
| $X_6$ | Continuous | Membership of association |

## 4. Results and Discussion

The empirical analysis employs data from the survey of about 236 sampled women entrepreneurs and non- entrepreneurs in Kano metropolis, Nigeria. The analysis started with descriptive statistics of the respondents, as can be seen in Table 2.

**Table 4.1: Descriptive Statistics of Socioeconomic Characteristics of Respondents**

| Variables | Mean | Standard Deviation |
|---|---|---|
| Age of entrepreneur in years | 37.435 | 12.301 |
| Years of schooling | 6.530 | 4.211 |
| Years of experience in the business | 7.432 | 0.672 |
| Number of people employed | 3.323 | 2.532 |
| Size of Start-up Capital | 6,531 | 3.295 |
| Daily income earned | 734 | 0.603 |
| Daily hours of work | 5.450 | 0.325 |

It reveals that on average; women entrepreneurs are 37 years old, meaning they are younger entrepreneurs. Therefore, they are still in their productive age. However, the result also suggests almost majority of the respondents have lower level of education, with most of them on average having at least 7 years of schooling, meaning their level of education is very low. This probably could one of the reasons behind the inability of these entrepreneurs to introduce innovation that will further transform this home-based micro bakery (*Gurasa*) business.

It is also reported that most of the women entrepreneurs in the '*Gurasa*' business have spent an average of 7 years in entrepreneurial activity. The implication of this is that, *Gurasa* micro bakery business has been providing women with self-employment within Kano Metropolis for many years. The result also reveals that women entrepreneurs start their businesses with notably lower capital. This is because on average most of them start with at least 6,531 Naira in Nigerian currency. The finding also shows that most of the women entrepreneurs earned some income from the home-based enterprises. On average, the result suggests the estimated income from the business is approximately around 700 Naira per day. The survey results also suggest on average the number of people employed by women home based enterprises is 3, with most of them spending an average of 5 hours in the production process.

It can be observed from Table 3 that about 83% of the respondents are entrepreneurs. The means significant number of respondents sampled in this study are entrepreneurs that engaged themselves in income-generating economic activities.

**Table 4.2: Classification of Respondents**

| **Respondents** | **Frequency** | **Percentage** |
|---|---|---|
| Entrepreneurs | 195 | 83 |
| Non-entrepreneurs | 41 | 17 |
| Total | 236 | 100 |

Sources: Authors computation, (2016)

Table 4 reported the estimates from the logit model employed in the empirical analysis. The goal is to find the characteristics of women entrepreneurship using home based enterprises especially micro bakery (*Gurasa*) businesses in Kano Metropolis, Nigeria. It is obvious from the results that marital status, the years spent for schooling by the entrepreneur, years spent by the entrepreneur in the business and membership of an association are strongly associated with the probability of engaging in home based micro bakery entrepreneurship among women in the area of study.

While age of entrepreneurs and the number of dependents are reported to be insignificant in explaining the probability of engaging in home based women micro bakery entrepreneurship.

**Table 4.3: Results of the Logit Model and Marginal Effect**

| Variables | logit Model | Marginal effect |
|---|---|---|
| Age of entrepreneur (years) | .316 | .0781 |
| | (.286) | (.071) |
| Marital Status | 1.490*** | .368 |
| | (.453) | (.112) |
| Years of schooling | 1.097*** | .271 |
| | (.404) | (.099) |
| Number of dependents | .251 | .062 |
| | (.554) | (.137) |
| Years of business | -.778*** | -.192 |
| | (.251) | (.062) |
| Membership of Association | .718*** | .177 |
| | (.223) | (.055) |
| Constant | 4.689*** | |
| | (1.328) | |

Number of obs = 236
LR chi2(6) = 55.26
Prob > chi2 = 0.0000
Pseudo R2 = 0.2682
Log likelihood = - 75.376103

*Source:* Authors computation from survey data (2016) using STATA 14. The figures in parenthesis are standard errors, and ***significant at 1%.

From Table 4, the result suggests that an age of entrepreneur is an important motivation for being an entrepreneur. Although, the result suggest probability of becoming an entrepreneur among women engaging in *Gurasa* business increases as age of the prospective entrepreneur increases, one must be cautious in explaining this result since the explanatory variable is statistically insignificant.

The result also suggests a direct relationship between marital status and possibility of a woman to become an entrepreneur. The marginal effect suggests that as the number of married women increases by at least one individual, all things being equal the probability of woman becoming entrepreneur increases by approximately 0.4%. The result can be interpreted to mean there is more likelihood that as a woman become married, she will engage in home-based micro bakery enterprise to provide self-employment to households and engage members of the family into income generation activities which will by extension improve living standard of the family.

It is also reported that better education increases the likelihood of the respondents becoming entrepreneurs. In fact, the finding of this study suggests that as the years spent by women in schooling increases, it is likely to also increase their probability of entrepreneur in Kano Metropolis. In particular, the marginal effect suggests after controlling for all other variables, the likelihood that, as women increase their years in school for at least one year, they are likely to increase their probability of engaging in entrepreneurship activities by approximately 0.3%.

The result also suggests positive relationship between the number of children and probability of becoming an entrepreneur. Although, the reported parameter is not statistically significant, the direct nature of the relationship is an indication that as the number of children increases, the respondents are drive to engage in entrepreneurship activity. Looking at the result in Table 4, it also reveals that there is a negative and significant relationship between years spent in the micro bakery (*Gurasa*) enterprises and possibility of remaining as entrepreneur. In fact, the marginal effect suggests as years spent entrepreneurial activity increases by at least one year, all things being equal the probability of a woman entrepreneur to continue the entrepreneurship activity decreases by 0.2%.

The finding of this study also implies that after holding all other factors constant, membership of an association can be a major driver promoting possibility of engaging in entrepreneurial activity among most of the women sampled. The marginal effect suggests that as additional woman become member of a given association, there is likelihood that respondent become an entrepreneur increase by at least 0.2%. The result estimated also indicates that remittances increasingly affect household expenditure behaviour per month in order to improve their households' welfare and reduce their poverty status. The marginal effect shows that one percent increase in household expenditure is positively influenced by the remittances received by at least 0.14%.

## 5. Conclusion and Recommendations

This paper examines women entrepreneurship in Kano Metropolis, Nigeria. The goal is to identify the characteristics of women entrepreneurship in the area of study. The findings present evidence that indicates marital status, the years spent for schooling by the entrepreneur, years spent by the entrepreneur in the business and membership of an association are strongly drivers associated with the probability of engaging in home based micro bakery entrepreneurship among women in the area of study.

While age of entrepreneurs and the number of dependents are reported to be insignificant in explaining the probability of engaging in home based women micro bakery entrepreneurship. Given the empirical analysis of this study, it is clear from the evidence presented and discussed throughout this paper that understanding certain characteristics of women entrepreneurs in Kano Metropolis, can assist scholars and policy makers in proposing policy measures to support women entrepreneurs, especially in a society like Kano where the influence of women entrepreneurship in promoting societal development is grossly underestimated.

Therefore, this paper suggests policy measures aiming to promote women entrepreneurship should place more emphasis on strengthening the overall women enterprises especially home-based business. They should also include loan guarantees for start-up capital. There is also need to provide specific training for women entrepreneurs that may include business and technical skills as well as soft skills to make home-based business entrepreneurs more productive and by extension contribute to overall economic development of Nigeria.

## Reference

Aghion, P, and Howitt, P. (1992). "A Model of Growth through Creative Destruction." Econometrica 60(2):323 - 351.

Ahl, H. (2006). Why research on women entrepreneurs needs new directions. Entrepreneurship: Theory and Practice, 30(5), 595–621.

Ahmad, S. Z. (2011). Evidence of the characteristics of women entrepreneurs in the Kingdom of Saudi Arabia: An empirical investigation. International Journal of Gender and Entrepreneurship, 3(2), 123–143.

AlMunajjed, M. (2010). Women's employment in Saudi Arabia: A major challenge. New York City: Booz & Company.

Amit, K, and Ketan, M. (2013) Women entrepreneurs. https://www.slideshare.net/Amit7613/women-entrepreneurs-27656407

Barnir, A. (2014). Gender differentials in antecedents of habitual entrepreneurship: impetus factors and human capital. Journal of developmental entrepreneurship 9(1), 23.

Baughn, C. C., Chua, B.-L. and Neupert, K.E. (2006). The normative context for women's participation in entrepreneurship: A multicountry study. Entrepreneurship: Theory & Practice 30(5): 687–708.

Baumol W. J. (1990). Entrepreneurship: Productive, unproductive and destructive. J Polit Econ 80:893–921

Brush, C. G., & Cooper, S. Y. (2012). Female entrepreneurship and economic development: An international perspective. Entrepreneurship & Regional Development, 24(1–2), 1–6.

Brush, C. G., & Cooper, S. Y. (2012). Female entrepreneurship and economic development: An international perspective. Entrepreneurship & Regional Development, 24(1–2), 1–6.

Brush, C. G., De Bruin, A., & Welter, F. (2009). A gender-aware framework for women's entrepreneurship. International Journal of Gender and Entrepreneurship, 1(1), 8–24.

Cabrera, E. M. Mauricio, D. (2017)," Factors affecting the success of women's entrepreneurship: a review of literature ", International Journal of Gender and Entrepreneurship, 9(1), 1-47

Cantillon, R. (1755). Essai Sur la Nature du Commerce en General, H. Higgs, ed. and trans. London: Macmillan, 1931.

Carter, N., Brush, C., Greene, P., Gatewood, E., & Hart, M. (2003). Women entrepreneurs who break through to equity financing: The influence of human, social and financial capital. Venture Capital: An International Journal of Entrepreneurial Finance, 5(1), 1–28.

Dautzenberg, K. (2012). Gender differences of business owners in technology-based firms. International Journal of Gender and entrepreneurship, 4(1), 79-98.

De Vita, L. a. (2013). Women entrepreneurs in and from developing countries: Evidences from the literature. European Management Journal. In press, Corrected Proff, disponible online

Diaz-Garcia, M & Brush, C. (2012). Gender and business ownership: questioning ''what'' and ''why''. International journal of entrepreneurship behavior and research, 4-27.

Ekpe, I. (2011). Women Entrepreneurs and Economic Development in Nigeria: Characteristics for Success. International Journal of Business and Social Science 2(1); 286-291

Elam, A., & Terjesen, S. (2010). Gendered institutions and cross-national patterns of business creation for men and women. European Journal of development research, 22(3), 331-348

Ezilda María Cabrera, David Mauricio, (2017) "Factors affecting the success of women's
entrepreneurship: a review of literature", International Journal of Gender and Entrepreneurship, Vol. 9Issue: 1, pp.31-65, doi: 10.1108/IJGE-01-2016-0001

Global Entrepreneurship Monitor (2010). 2010 Women's report.

Global Entrepreneurship Monitor (2012). 2011 Extended report: Entrepreneurs and entrepreneurial employees across the globe.

Gupta, V. A. (2014). Gender differences in evaluation of new business opportunity: A stereotype threat perspective. Journal of business Venturing, 29, 273-288.

Gupta, V. K., Turban, D. B., Wasti, S. A., & Sikdar, A. (2009). The role of gender stereotypes in perceptions of entrepreneurs and intentions to become an entrepreneur. Entrepreneurship Theory & Practice, 33(2), 397–417.

Halkias, D., Nwajiuba, C., Harkiolakis, N., Caracatsanis, S. M. (2011),"Challenges facing women entrepreneurs in Nigeria", Management Research Review, Vol. 34 Iss 2 pp. 221 – 235

Iheduru, N.G. (2002), "Women entrepreneurship and development: the gendering of microfinance in Nigeria", paper presented at the 8th International Interdisciplinary Congress on Women, July 21-26, Makerere University, Kampala-Uganda

Kabeisi, N. (2010). Gender factors and female entrepreneurship: International evidence and policy implications. Journal of International Entrepreneurship, 8.

Kirzner, I. M. (1973). Competition and Entrepreneurship. Chicago, Ill.: University of Chicago Press.

Klapper, L. F., Parker, S. C., (2011). Gender and the business environment for new firm creation. The World Bank Research Observer 26 (2), 237–257

Knight F (1921). Risk, uncertainty and profit. Houghton Mifflin Company, New York

Miguel-A´ ngel Galindo, Domingo Ribeiro, and Juan Jose´ Rubio (2012). Chapter 2: Women's Approach to Economics and Firms. In Galindo, M, and Ribeiro, D (ed) Women entrepreneurship and economics: New perspectives, Practices and Policies.

Mitchelmore, S., & Rowley, J. (2013). Entrepreneurial competecies of women entrepreneurs pursuing growth. Journal of small business and enterprise development 20(1), 125-142.

Mitchelmore, S., & Rowley, J. (2013). Entrepreneurial competencies of women entrepreneurs pursuing growth. Journal of small business and enterprise development, 20(1), 125-145

Oyewole O. A. and Isah P.(2012). Locally Fermented Foods in Nigeria and their Significance to National Economy: a Review. J. Rec. Adv. Agri.. 2012; 1(4): 92-102

Parvin, L., Rahman, M. W. & Jia, J., (2012). Determinates of women micro entrepreneurship: An empirical investigation in rural Bangladesh. International journal of Economics and Finance, 4(5); 254-260.

Powell, G. A. (2013) Linking family to business enrichment and support to entrepreneurial success: Do female and male entrepreneurs experience different outcome? Journal of business venturing, 28(2) 261-280.

Rehman, S. & Room, M. A. (2012). Gender and work-life balance: A phenomenological study of women entrepreneurs in Pakistan. Journal of Small Business and Enterprise Development,19(2), 2012; 209-228

Rey-Marti, A., Tur,A., Mas-Tur, A., (2015). Linking female entrepreneurs´ motivation to business survival. Journal of Business Research. Vol. 68, 810-814.

Robb, A. & Watson, J. (2012). Gender differences in firm performance: Evidence from new ventures in the United States. Journal of business venturing, 27(5), 544-558

The World Bank (2011). Women, Business and the Law: Removing Barriers to Economic Inclusion. Washington, DC: The International Bank for Reconstruction and Development.

Wu, Z. and Chu, J. H. (2012). Second-order gender effects: The case of U.S. small business borrowing cost. Entrepreneurship theory and practice, 36(3), 443-463.