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Contents

Does Audit Committee Characteristics Drive Financial Performance? A Case of Nigerian Service Firms

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Abstract

This study was carried out to assess whether audit committee characteristics drive financial performance of publicly quoted service firms in Nigeria. Audit committee characteristic was measured using audit committee size and independence, financial performance by return on equity and earnings per share, while control variable is natural logarithm of total assets. Data were obtained from the annual reports and accounts of sixteen (16) publicly quoted service firms during the period 2012-2019. Multivariate estimation technique was employed in the analysis of data and findings indicated that audit committee characteristics significantly and positively affect financial performance. Moreover, while financial performance measure of return on equity negatively affects the size of firm, earnings per share do not. In view of the findings, it is recommended that the audit committee members should be empowered to be more independent in order to ensure significant audit that can propel financial performance; this would enhance financial performance of publicly quoted companies.

Keywords: Audit, committee, characteristics; financial performance; Earnings per share; Returns on equity

Introduction

The issue of audit committee characteristics and financial performance has attracted robust empirical discuss in accounting literature; this stems from the fact that there is contention that audit committee characteristics significantly improve financial performance of companies in Nigeria, the world over. In the views of Yahaya, Mohamad and Noor (2020); Chukwu and Nwabochi (2019), audit committee plays a vital role in financial reporting as they are saddled with the responsibility of monitoring management in order to avert tweaking of earnings and other accounting numbers.

Alluding to the above views, Dauda (2019); Ifeanyichukwu and Ohaka (2019), Umobong, and Ibanichuka (2017) posit that audit committees characteristics are to facilitate monitoring activities over management and to ensure improved financial reporting. Kibiya, Ahmad and Amran (2016) see audit committee as appointed members of companies who take active roles in overseeing accounting and financial disclosure practices. According to Temple, Ofurum and Egbe (2016), audit committees are setup by the board with the objective of contributing to effective corporate governance and in ensuring reliable financial disclosure. In accounting literature, several measures have been used to measure audit committee characteristics –audit committee independence, audit committee size, audit committee expertise, among others. However, this study employed two metrics of audit committee characteristics - audit committee independence and size.

Noteworthy is the fact that numerous studies (Yahaya, *et al*, 2020; Ifeanyichukwu & Ohaka, 2019; Dauda, 2019; Nwabochi, 2019; Umobong & Ibanichuka, 2017) have established that audit committee characteristics affects financial performance of companies. Interestingly, there is still a lacuna in accounting literature on whether audit committee characteristics (audit committee independence and audit committee size) affect financial performance with the moderating role of size of firm. More worrisome is the fact that studies in this area had focused on the banking, manufacturing and other sectors with dearth of studies among service firms. Thus, this paper assessed if audit committee characteristics drive financial performance of service firms with moderating effect of size of firm.

Literature Review

In this section, conceptual issues (like audit committee characteristics, financial performance and size of firm), theoretical framework and conceptual model of the study were presented.

Audit Committee Characteristics

The concept of audit committee has been widely defined in accounting literature; audit committee refers to appointed members who take active roles in supervising accounting and financial disclosure practices of companies (Kibiya, *et al* 2016). Recent studies have revealed that audit committee characteristics positively and significantly affects financial performance (Yahaya, *et al,* 2020; Ifeanyichukwu & Ohaka, 2019; Dauda, 2019; and Nwabochi, 2019). Notwithstanding the evidence on audit committee characteristics and financial performance nexus, there has been outcry that audit committee characteristics have not been able to drive financial performance effectively and efficiently (Musa, Oloruntoba & Oba, 2014;

Ormin, Tuta & Shadrach, 2015; Nahla, Hasnah & Mazrah, 2019). Notably, the efficiency of audit committee is dependent on its characteristics (Ifeanyichukwu & Ohaka, 2019; Thoopsamut & Jaikengkit, 2009).

Extant literature has revealed that audit committee characteristics are largely determined by diverse characteristics like audit committee independence, size, diligence, financial expertise, (Yahaya, *et al*, , 2020; Nahla, *et al*, 2019; Chukwu & Nwabochi, 2019; Abdul Rauf, Johari, Sharifa & AbdRahman, 2012). In this paper, audit committee characteristics were gauged via audit committee independence and size, which have been used by extant studies (Yahaya, *et al*, 2020; Ifeanyichukwu & Ohaka, 2019; Dauda, 2019; Nwabochi, 2019; Umobong & Ibanichuka, 2017); more importantly, there is mixed results on the research subject.

Financial Performance

Financial performances are the benefits stemming from shares, functioning and operations, which are usually captured in financial statements of a firm. Financial performance can be measured with variables like profitability ratios (earnings per share, dividend per share, return on equity, return on asset, return on investment, return on capital employed etc.), or seemingly by market-based measures (Tobin's Q). According to Herly and Sisnuhadi (2011), a good performing firm is deemed to reinforce quality disclosure in its financial statements.

Generally, financial performance of a firm can be ascertained via the use of financial ratios which express link between variables disclosed in financial statements. Financial ratios are useful and can meaningfully be employed as financial performance measures when compared with other related meaningful information, either at present or a past similar measure(s) for the same entity or similar ones in the same industry (Kabayeh, Nu'aimat, & Dahmash, 2012). Al-Matari, Al-Swidi and Fadzil (2014) opine that financial performance forms the core of strategic management. Audit committee characteristics studies are highly dependent on accounting-based measures of performance; however, there are other studies that adopt market-based measurements.

Accounting-based measurement is generally considered as an effective dynamics of a firm's performance when compared to benchmark rate of return equal to the risk adjusted weighted average cost of capital. More importantly, shareholders are interested in performance metrics, particularly accounting-based measures (Al-Matarneh, 2009; Kapopoulos & Lazaretou, 2007; Wahla, Shah & Hussain, 2012). In this study, two (2) financial performance measures were employed – return on equity and earnings per share. Return on equity is the ratio of profit after tax to equity of a company in a particular accounting period while earnings per share, the profit after tax minus preference shares ranking for dividend for an accounting period.

Size of Firm

The size of firm is a characteristic that affects financial performance (Abdul Rauf, *et al,* 2012; Chalaki, Didar & Riahnezhad, 2012; Saheed, 2013; Beest, Braam & Boelens, 2009). The size of firm is determined by the natural logarithm of assets, natural logarithm of turnover among other measures (Saheed, 2013; Chalaki, *et al*, 2012), as it is acknowledged to have significant effect on financial performance since larger firms have more resources at their disposal and are able to employ the services of Big-4 audit firms. Chalaki, *et al* (2012) opined that larger firms are most probable to have an improved reporting system that enable them fast track all business and economic activities.

The reporting system of larger firms imparts improved internal control aimed at detecting and preventing earnings manipulation. Prior researches (see Saheed, 2013; Chalaki, *et al*, 2012; Thoopsamut & Jaikengkit, 2009) have established that size of firm moderates the relationship between audit committee characteristics and financial performance, hence the inclusion of size of firm as control variable in the study.

Theoretical Framework

This study is anchored on the agency paradigm by Berle and Means (1932). The agency paradigm provides that there are numerous parties connected to a firm with varied goals which are most likely to conflict with each other. The diverse parties to a contract or business are described as the principals (owners of wealth) and agents (management who runs the firm on behalf of the principals). According to Chowdhury (2004); and Jensen and Meckling (1976), since efficiency cannot be delineated from effectiveness, there is the tendency that information asymmetric must exist between the principals and agents.

In order to resolve the agency conflict, independent auditors are appointed by the principals to ascertain the true and fair view of the financial state of affairs of the firm; this is to assure them that the financial reporting process that produced the financial statement is true and fair and without manipulation or errors. The relevance of the agency paradigm to the current study is that audit committee is one of the agents of a firm; abetting them that the financial performance portrays a good image via an audit capable of influencing financial performance.

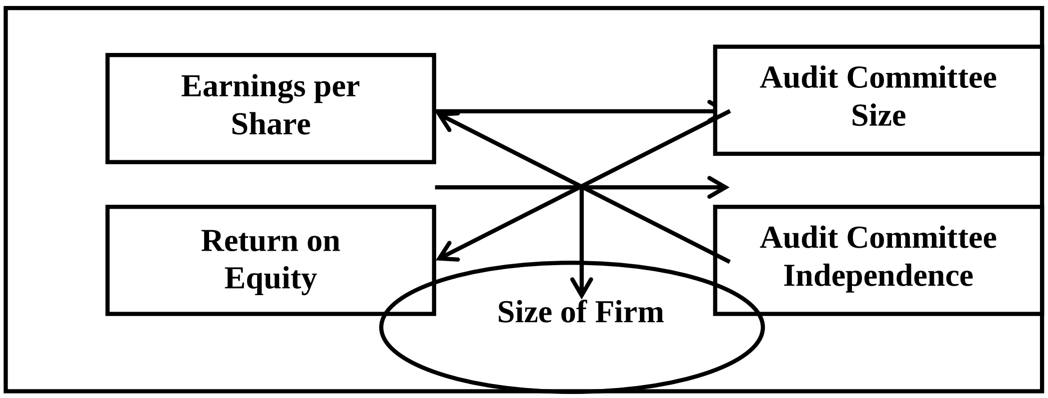

Fig. 1: Conceptual Model of Study

Methodology

This study assessed whether audit committee characteristics drive financial performance of service firms in Nigeria. *Ex-post facto* research design was employed. This design was adopted since the study sought to establish the variables that were connected with certain types of occurrence or behaviour by analysing past events of already existing conditions. The study population constitutes all service firms publicly quoted on the floor of Nigerian Stock Exchange (NSE). There are twenty (20) publicly quoted service firms on NSE as of 31st December, 2019; given the population of study, the purposive sampling technique was used by selecting sixteen (16) service firms. Secondary data were obtained and collated from the website of the sampled service firms annual reports and accounts during the period 2012-2019.

In this study, audit committee characteristics was measured using audit committee size and audit committee independence, while financial performance, earnings per share and returns on equity. In view of the dataset obtained in the study, multiple regression estimation technique was adopted and model given as:

$$finperf = f(auditcomsiz, auditcomind, size)\ldots\ldots\ldots\ eq.1$$
$$finperf_{it} = \beta_0 + \beta_1 auditcom_{it} + \beta_2 auditcomind_t + \mu_t \ldots eq.2$$

Equations1-2 are the implicit and explicit forms of the regression model; however, captures the dependent and independent variables of the study. Moreover, equation 3 was estimated to capture the control variable as follows:

$$finperf_{it} = \beta_0 + \beta_1 auditcomsiz_{it} + \beta_2 auditcomind_{it} + \beta_3 size_{it} + \mu_t \ldots\ldots\ldots\ eq.3$$

Where: *finperf*=financial performance (measured by earnings per share and returns on equity); *auditcomsiz*=audit committee size (number of audit committee in the board); *auditcomind*= audit committee independence (proportion of independent audit committee in the board); *size*=size of the firm (natural logarithm of total assets); β_0, $\beta_{1\ldots}\beta_2$ =regressors; μ_t=error term.

The empirical models of the study was adopted from the studies of Yahaya, Mohamad and Noor (2020); Ifeanyichukwu and Ohaka (2019) and Dauda (2019), by introducing a control variable – size of the firm. Prior studies (Saheed, 2013; Chalaki, Didar, & Riahnezhad, 2012; Thoopsamut & Jaikengkit, 2009) have established that size of firm moderates the relationship between audit committee characteristics and financial performance, hence the inclusion of size of firm as control variable. The statistical analysis was carried out via STATA 16.0.

Results

Table 1: Summary Descriptive Statistics for Audit Committee Characteristics Measures, Financial Performance and Size of Firm

	reto	eps	auditcomsiz	auditcomind	size
Mean	13.466	.16800	5.4250	14.287	4.3300
Median	12.4300	.23000	6.0000	10.000	4.4000
Maximum	102.700	2.6000	7.0000	26.670	5.2100
Minimum	-1257.2	-3.5500	3.0000	0	2.2600
Std. Dev.	1.30800	.67194	.89364	1.1234	.58136
Skewness	-1.68000	-1.8733	-1.9937	-1.0444	-1.8434
Kurtosis	3.33500	2.8080	2.4001	3.8369	3.3032
Observations	150	153	153	148	150

Source: Author's Computation, 2020 via STATA 13.0

Presented in Table 1 is the summary of descriptive statistics of audit committee characteristics (audit committee size and audit committee independence), financial performance (return on equity and earnings per share) and control variable (size of firm). The result showed that all variables had positive mean values, perhaps due to improvement in disclosure requirements of companies as a result of transition to International Financial Reporting Standards (IFRS). The standard deviations values (reto = 1.31; eps = .672, auditcomsiz = .894; auditcomind = 1.12; size=.582) are clear indications that the companies audit committee and financial performance measures are similar.

Furthermore, the dependent, independent and control variables displayed non-zero skewness. Also, all the variables are negatively skewed, while all variables have a normal distribution as shown by the kurtosis values, which is closer to three (3). This means that the data satisfies the normality conditions, hence suitable for performing correlation and regression statistical analyses.

Table 2: Correlation Matrix

	reto	**eps**	**auditcomsiz**	**auditcomind**	**size**
reto	1.0000				
eps	-.4852	1.0000			
auditcomsiz	.04540	.08420	1.0000		
auditcomind	.04550	.09910	.16160	1.0000	
size	.07930	-.04430	.55210	.20910	1.0000

Source: Author's Computation, 2020 via STATA 13.0

Presented in Table 2 is the correlation result for the audit committee characteristics (audit committee size and audit committee independence), financial performance (return on equity and earnings per share) and control variable (size of firm). The result showed that financial performance measure (earnings per share) negatively correlates with size of firm, while all other variables were positively correlated with audit committee characteristics variables and size of firm.

Interestingly, none of the Pearson correlation coefficients exceeded 0.8 as recommended by Okoro & Egbunike (2016); Van, Shahnaz & Nurasyikin (2008) cited in Okoro & Egbunike (2017). This implies the absence of multicollinearity among pairs of independent variables of the study; hence the dataset are good enough in performing multivariate regression.

Table 3: Multivariate Regression Results of Audit Committee Characteristics and Financial Performance Measures, and Size of Firm

Equation	***Obs.***	***Parms.***	***RMSE***	***R-Sq.***	***F***	***P***
reto	139	4	8.8570	0.730	16.14	0.0000
eps	139	4	.65446	0.710	14.98	0.0000
	Coef.	***Std. Error***	***T***	***P>/t/***	***[95% Conf.***	***Interval***
reto						
auditcomsiz	.55345	.35060	7.80	0.000	.84230	.94920
auditcomind	.61646	.76247	4.32	0.000	.73531	.96824
size	.68147	.48790	4.43	0.000	.91500	.27800
_cons	1.1355	1.9513	14.0	0.000	1.1640	1.8928
eps						
auditcomsiz	.11279	.07696	8.47	0.000	.03941	.26500
auditcomind	.00707	.00578	7.22	0.000	.00436	.01849
size	.16341	.11281	-5.45	0.000	.38651	.05968
cons	.07595	.46315	12.8	0.000	.99192	.84001

Source: Author's Computation, 2020 via STATA 13.0

Presented in Table 3 is the multivariate regression result of audit committee characteristics (audit committee size and audit committee independence), financial performance (return on equity and earnings per share) and control variable (size of firm). The R^2 0.730 (*reto)* and 0.710 (*eps)* showed that the independent and control variables explained about 73% and 71% of the systematic variations in the dependent variable (return on assets – *reto* and earnings per share - *eps)*. Thus, the model of audit committee characteristics and financial performance provides a good fit to the data.

In addition, while *reto* positively affects audit committee size, audit committee independence, and size of firm, *eps* negatively affects size of firm, except audit committee size and audit committee independence. Besides, f-values 16.14 (*reto)* and 14.98 (*eps)* with corresponding p-values of 0.000 and 0.000 are less than 0.05; this shows that there is significant connection between audit committee characteristics and financial performance of publicly quoted service companies in Nigeria.

Discussions of Findings

This research developed an empirical model for assessing the relationship between audit committee characteristics and financial reporting and to study the moderating effect of size of firm. Results show that audit committee characteristics measures (audit committee size and audit committee independence) affect financial performance (return on equity and earnings per share) and the relationship is positive. This implies that audit committee characteristics drive financial performance of publicly quoted service companies in Nigeria. Consequently, our empirical models have been shown to be strongly linked to financial performance, due to the explained variance of 73% and 71% (see Table 3). The research established that while financial performance measure of return on equity positively affects size of firm, earnings per share negatively does.

In addition, we examined the signs of correlation between dependent (financial performance) and independent (audit committee characteristics) variables. The results demonstrate that audit committee characteristics contribute positively to financial performance. The results corroborate in part with the studies of Yahaya, *et al* (2020); Ifeanyichukwu and Ohaka (2019); Dauda (2019); Nwabochi (2019), who posited that audit committee characteristics are of fundamental import to improving financial performance.

Conclusion and Recommendations

This study was carried out with the view to assessing whether audit committee characteristics drive financial performance of publicly quoted service firms in Nigeria. Audit committee characteristic was measured using audit committee size and audit committee independence, while financial performance, return on equity and earnings per share and control variable (size of firm). The data were obtained from the annual reports and accounts of sixteen (16) service firms during the period 2012-2019. The study found audit committee characteristics to significantly and positively affect financial performance; the significant and positive effect of audit committee characteristics on financial performance may be connected with the fact that audit committee of service firms do not lack independence in audit.

In view of the findings, it is recommended that the audit committee members should be empowered to be more independent in order to ensure significant audit that can propel financial performance. In addition, audit committee size should be increased in order to accommodate more experienced and professionals in the audit committee. Again, the audit committee should be accorded 'genuine' independence in order to ensure that they carryout out their independent examination of the financial performance of publicly quoted companies in Nigeria; these would enhance financial performance of publicly quoted companies.

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Appendix

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auditcomind	.61646	.76247	4.32	0.000	.73531	.96824
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Source: Author's Computation, 2020 via STATA 13.0

Effect of Business Ethics on Work Place Deviant Behavior in the Food and Beverages Company in Kaduna Metropolis

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Abstract

*This study examines the effect of business ethics on workplace deviant behavior in the food and beverages company in Kaduna metropolis***.** *The source for data collection was primary. The study adopted the survey research design. The sample size of the study was 297 computed using Krejcie and Morgan (1970) sample size formula. The method for data analysis was multiple regression. The findings of the study show that the impact of discipline on workplace deviant behavior of Food and Beverages Companies is negative and statistically significant effect on WDB. This can be confirmed by a coefficient value of -0.55 which is statistically significant at 1%. This implies that for every 1% decrease in DCP the WDB of Food and Beverage Companies will Increase by 0.55. The study concludes that discipline is found to have significant negative effect on Workplace Deviant Behaviour. The study recommends that firms, management and organizations should pay greater attention to significant variables such as the effect of discipline and trust in determining their optimal ethical issues in management by maintaining a minimal work place deviant behavior.*

Keywords: *Discipline, Ethics, Workplace, Deviant Behaviour*

Introduction

Employees' behaviour and attitudes towards work are essential for any organization to achieve its vision and objectives. These have further scale-up the importance of the area to managers and researchers, increased competitiveness and enhanced organisational efficient performance, and organisational images. Western researchers have highlighted the issue of workplace deviant behaviour with respect to property deviant which are more higher in the public sector compare to private sector (Alias, Rosdi, & Khan, 2017). In Asia, an analysis of the Industrial Law reports in Malaysia from the year 2000 to 2009 has simulated the presence of deviant attitudes among the employees of Malaysian public and private sectors (Hwa & Amin, 2016).

Business ethics provides a direction towards focusing on the purpose behind such challenges and the means in which they can be dealt with by the management. Furthermore, efficient business ethics attract investors due to high ethical values of the organization, consistent business ethical behavior helps in building a good reputation for the organization and competitive advantage. Business ethics face ethical lapses, unintentional misconduct, and complacency from employees when they observe serious misconduct (Khan, 2014).

The scandals and unethical conduct that have occurred in different companies in Nigeria such as Cadbury, Nestle and Nasco have brought to the understanding that some people deliberately break the law or engage in inappropriate behavior (Adenubi, 2000). Business ethics provides the understanding on organizational values and compliance of the system, in order to prevent people from engaging in unethical conduct. It requires training and constant vigilance and as such the food processing industry in Nigeria is not void of such approaches. Almost all industries in Nigeria have their business ethics and these in most cases are provided to employees to ensure smooth running and efficiency in business operations.

Most of the workplace deviant behaviour exhibited in beverages companies in Nigeria has not been given adequate attention in the literature. Hence, the study intent to make significant contributions in investigating the impact of business ethics on workplace deviant behaviour with respect to property deviant in the food processing industry in Kaduna metropolis, Nigeria. Hence, this study further investigate the relationship between organizational trust (OT), organizational justice (OJ) and organizational discipline (OD) on property deviant (PD) of food and beverages industry in Nigeria. The main objective of this study is to examine the effect of business ethics on workplace deviant behavior in the food and beverages company in Kaduna metropolis.

Conceptual Framework

Concept of Ethics

Shaw (2014) defines ethics as principles or values that guide behavior, within the organizational settings, these values are embodied in virtues such as honesty, compassion and loyalty (Velasquez 2006). Because ethics deal with distinctions between right and wrong (Ferrell, Fraedrich &Ferrel 2014), they are found on morality, which includes moral judgment, standards and rules of conduct

(Parboteeah & Cullen 2013). Moral Judgments may relate to decisions on fair, honest and competent pricing of products, while standards emphasize providing the appropriate service and product offerings of the expected quality and required quantity at the appropriate places and times.

Ethics in business refers to standards of right or wrong behavior when dealing with the company's various stakeholders including customers, employees and vendors. Ethics can be referred to as an unwritten codes or principles and values that govern decisions and actions within a company. In the business world, the organization's culture sets standards for determining the difference between good and bad decision making and behaviour. In the most basic terms, a definition for business ethics narrows down to knowing the difference between right and wrong and choosing to do what is right. The phrase 'business ethics' can be used to describe the actions of individuals within an organization, as well as the organization as a whole, (Marcoux, 2003).

According to Victor and Maurice (2012) discipline is the use of penalties to make people obey orders and live up to the game and that when people break the rules, they are brought to see the error for improving performance by applying some form of punishment. It is also a punitive actions or measures taken by an organization to correct workers. Siagian (2005) also defined discipline as a form of employee training that aims to improve and establish the knowledge, attitude and behavior of employees. Therefore, discipline is a punishment enforced by management to employees for wrong doing in an organization to ensure proper respect or obedience.

Tschannen-Moran and Hoy (2000) defined trust as one party's willingness to be vulnerable to another party based on the confidence that latter party is benevolent, reliable, competent, honest and open. Also, trust is the key component of successful working relationships between leaders and followers (individuals more general) that enables cooperation helps to manage differences, encourages information sharing and increases openness and mutual acceptance (Den hatong, 2003). Welch, Hinnantand and Moon (2005) see trust in public institutions as a means to which personnel honour are relate to administrative rules, standards, laws and regulations relating to provision of services and information so as to enhance proper code of conduct.

Concept of Workplace Deviance Behavior

Workplace deviance behavior or counterproductive work behaviour (CWB) has been conceptualized as that behaviours that are unproductive, damaging to organizational goals and harmful to the organization by directly affecting its functioning or property, or by hurting employees in a way that will reduce their effectiveness (Mann, 2012; Klotz & Buckley, 2013). Generally, CWB connotes behaviours that are harmful and directly affects organizational functioning or property by impacting on employees in a way that reduces their effectiveness (Roy, 2012). Other researchers have labeled CWB as antisocial organizational behaviour, organizational misbehavior, organizational deviance, employee withdrawal, dishonesty, dysfunctional behavior, counterproductive behaviour (Everton, 2007).

Spreitzer and Sonenshien (2004) identified positive deviant workplace as non-compliance with dysfunctional directives and criticizing incompetent superiors. These dimensions of positive deviant workplace behavior are expected to benefit the organization (Appelbaum and Matousek, 2007). Positive deviant behavior must be praiseworthy and must focus on actions with honorable intentions, irrespective of the outcomes. This positive deviant workplace behavior can be classified as a pro-social type of behavior: organizational citizenship behaviors, whistle blowing, corporate social responsibility and creativity/innovation. Apart from the contributions of positive deviant workplace behavior, this research however, focuses on the negative deviant workplace behavior. This is because the negative deviant workplace behavior aspect may be very disadvantageous to organization and further reducing individual performance.

Empirical Reviews of Related Literature

Sule-Dan (2015) conducted a study on ethics which investigate the role of discipline on organization effectiveness in the public sector with a specific reference to Nigerian Custom Service. The study source of data collection was primary data with the use of questionnaire. The sample population of the study was 136. The study used frequency, percentage and chi-square for testing the hypothesis. The study found that organizational discipline has a positive significant impact on organization effectiveness in Nigerian Custom Service (NCS). The study's limitation is based on the fact that it adopted a lesser technical tool of analysis.

Mulyanto (2015) examined the influence of discipline, working environment, culture of organization and competence on workers performance through motivation, job satisfaction in Regional Development Planning Board Indonesia. The researcher used primary data and questionnaire were distributed, a sample population of 34 employees was used for this study, the study used analysis instrument such as validity test, reliability, linear regression analysis, t-test, f-test coefficient determination to analyze the influence of several independent variables on one dependent variable. The findings show that the use of discipline, working environment, culture of organization and competence variables are not effective. The study focused more on working condition as a major factor in ethic instead of the morality of employee activities.

Mensah, Delle and Nmai (2015) conducted a study on ethical climate as a predictor of counterproductive work behavior and turnover intension and also investigated the extent to which level of education mediates the relationship amongst ethical climate and counterproductive work behaviours. Predictive co relational research design was used in which data were gathered from 276 respondents from the Ghanaian service sector via reliable questionnaires. The hypotheses were tested with hierarchical multiple regression and standard regression tests. The study found that ethical climate did not significantly predict counterproductive work behaviours, but the relationship between ethical climate and counterproductive work behaviours was partially mediated by level of education. It was observed that ethical climate significantly and negatively predicted turnover intentions. The study concluded that there are significant implications for the creation of positive ethical climate in Ghanaian organizations. The study recommended that Future researchers should consider investigating the extent to which ethical leadership and organizational culture mediate or moderate the relationship between ethical climate and workplace behaviours in Ghanaian organizations.

Olalekan, Omotayo, Olubasayo and Adenike (2015) assessed workplace deviant behaviors and its implication on organizational performance in Nigeria. The study further examine the scope, causes, consequences and managerial strategic approach to various forms of attitudes and behaviors portrayed deliberately by employees at the workplace and why employees’ engage in the unethical acts. The study extensively reviewed current literatures on existing body of empirically based studies of the construct. The findings of the study showed that workplace deviant behaviors had adverse effects on job performance; as such effort must be emphasized to prevent workplace deviance. The study conducted an extensive empirical review of previous scholars and focused more on performance.

Haruna, Joseph, Samson and Gabriel (2016) conducted a research on the causes and effects of sexual harassment on the performance of female employees in Kogi State, Nigeria. The study appraised the causes and effects of sexual harassment and the extent to which it affects employee productivity. Questionnaire was the instrument for data collection and data collected was analyzed using simple percentage, while hypothesis were tested with the aid of SPSS. Result showed that women at the lower level are mostly harassed and that affect their performance in the organization. However, the research focused on sexual harassment which is a form of one of the four categories of workplace deviance, while the present study assessed the effects of business ethics on the four categories of workplace deviance behavior. The study focused on a single variable in workplace deviance to provide a decisive conclusion which will be insufficient.

Peikani and Shamshiri (2016) evaluated the relationship between organizational trust which has to do with ethics and employee productivity, mediating role, organizational citizenship behavior in Isfahan social security Iran. Qualitative approach was used; questionnaires were distributed among 234 employees which was the sample of the study. The total population of the study was 580, and regression analysis was used. The result showed that organizational trust on employee productivity with the mediating role of organizational citizenship behavior is positively significant. The study centered on only the social security organization of Isfahan in Iran, if organizations in other sectors were used, the result could be affected. The study was conducted outside Nigeria which provides a variation of location.

Anthony (2017) studied the effect of discipline management on employee performance in county education office of Turkana County in Kenya. The main objective of the study was to investigate the effect of disciplinary management on employee performance in Kenya. Primary data was used with the help of questionnaire using a sample of 171 employees. Also, quantitative and qualitative data were used and were analyzed using multiple linear regression model to determine the effects of discipline management on employee performance in an organization. The findings of the study revealed that disciplinary management led to promotion of employees. This study provides evidence from firm-specific about business ethics. The study used linear regression which is more of a one on one variable than multiple regression.

Theoretical Review

Affective Events Theory (AET)

Affective event theory was developed by Howard and Cropanzano (1996) to explain how emotions and moods influence job performance and job satisfaction. The theory propounds that the proximal causes of effective reactions are organizational events. This indicates that people often react emotionally to things that happen to them in work settings (Weis & Cropanzano, 1996). The theory explains the occurrences of positive and negative events during the workday that can affect an employee's emotions and job satisfaction. AET does not consider any outside influences but how the work environment emotionally affects employees. The theory increases the understanding of association between employees and the way they react to things that happen to them at work. AET advocates that influence or attitude on the job is an essential element of job attitudes and an essential predictor of some job dealings (Weis, 2002).

Moods or emotions at workplace generally fall into positive (good) category and negative (bad) category. The positive moods are individual feelings that are favorable to the attainment of organizational goals, while the negative moods are those that are perceived to be detrimental to the achievement of organizational goals (Larsen & Dickson, 2004).

Social Strain Theory

The social strain typology theory was propounded by Robert (1938). The theory propounds that social structure may influence individuals to commit crimes. Strain refers to the differences between culturally defined goals and the institutionalized means available to achieve these goals; these strains can insinuate social structures within the society that compels individuals to commit offence. Robert (1938) proposes a typology of deviance that is based on employee's motivation to comply to organizational cultural goals and workers believes on how to attain the goals. The theory also posit that there are four types of deviance; conformity, innovation, retreatism, ritualism and rebellion. Robert (1938) also explains that employees can turn to deviance in response to their perceived inequality, unfair treatment, conflict of interest, work related stress through work overload and poor remuneration among others which may result in employees sabotaging organizational property, stealing, late coming to work, working slowly deliberately and taking unnecessary breaks.

This study is underpinned by the Affective event theory, because the theory explains the occurrences of positive and negative events during the workday that can affect an employee's emotions and job satisfaction and it does not consider any outside influences, but how the work environment emotionally affects employees.

Methodology

The study adopted the use of survey research. This means that questionnaires will be given out to elicit information from the population and sample of the study. The purpose of this tactics is to simplify from a representative sample to a whole population.

The population of the study will comprise of all the permanent staff of Honeywell Flour mills Nigeria, Northern Noodles and Nigeria Bottling Company as at 2nd April, 2019**.** The total population is one thousand, three hundred and seventy-eight staff 1378 from the Human Resource Management. The Kerjcie and Morgan (1970) Sample size determination table is used to determine the sample of this study. The total population is 1378 as obtained from the HR department in food processing companies namely; Nigerian Bottling Company, Northern Noodles, Honeywell and flour mills in Kaduna metropolis. Sample size formula for arriving at a finite population is;

$$S = \frac{\mathrm{x}^2\mathrm{NP}(1-\mathrm{P})}{\mathrm{d}^2(\mathrm{N}-1)+\mathrm{x}^2\mathrm{P}(1-\mathrm{P})}$$

$$S = \frac{1.96^2 1378 \times 0.5(1-0.5)}{0.05^2(1378-1)+1.96^2 0.5(1-0.5)} = 297$$

Where;
S = required sample size
X = z value (e.g. 1.96 for 95% confidence level)
N = population size
P = population proportion (expressed in decimal) (assumed to be 0.5) 50%
d = degree of accuracy (5%) expressed as a portion (0.05); it is margin of error.

Therefore, the sample size of the study is 297

The source of data for this study is the primary source. The method to be used for collecting data is the modified version of the Bennet and Robinson (2000). The use of 5-point scale Likert will be used for the collection of data from the respondents. The tool for analysis in this study is multiple regression, where by the regression is based on models on each dependent to be analyzed in relation to the singular independent variable.

The model is captured from the study of Olalekan, Omotayo, Olubusayo, and Adenike (2015) on workplace deviance behavior, but modified by the researcher as:

$$WDB = f(BUSET) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 1$$

The dependent variable production deviance is a function of the independent variable, which is business ethics.
In equation form is represented as follows:

$$WDB_{:}\ \alpha + \beta_1\ JTC + \beta_2 DCP + \beta_3\ TRS + e_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2$$

Where:
BUSET = Business ethics
WDB= Workplace deviance behavior
JTC= justice
DCP = discipline
TRS = trust
e= Standard Error of Estimate
α= Constant or Intercept
β_1– β_3= Coefficient of independent Variable

Discussion of the Study

This section explains the analysis of the collected data from the use of descriptive statistics, correlation matrix and regression analysis to describe the nature, relationship and impact the independent variables have on the dependent variable.

Descriptive Statistics

The descriptive statistics of the data collected for the study is presented and discussed in this section. Workplace deviant behaviour (WDB) has a minimum value of 1 and 5 as the maximum value, this indicates that 1 is the lowest value in the data set, while 5 is the highest value in the data set which signifies that there is no serious outlier issues in the data set. The average value of the WDB is 3.01 with standard deviation of 1.297, signifies that the data deviate from both side of the mean value by 1.297 approximately. This implies that there is a bit dispersion of the data from the mean, because of the value of standard deviation which is close to the mean. The kurtosis value of -1.113 also suggests that majority of the observations are lower than mean, as such the data meet the Gaussians distribution assumption. Similarly, the coefficient of Skewness -0.38 implies that the data is negatively skewed, and thus, the data did not meet the symmetrical distribution assumption.

Discipline (DCP) has no elements of outliers' issues in the data set, because the minimum and maximum values in the data set are 1 and 5 respectively. On average, the DCP in the sample Food and Beverages Companies is 3.05 with standard deviation of 1.28. That is, the deviation from the mean is about 1.28 at best. The value of Skewness 0.011 implies that the data is positively skewed, and therefore does not conform to the symmetrical distribution requirement. Moreover, the value of Kurtosis -1.065 also indicates that the DCP data meets the Gaussians distribution assumption.

Trust (TRS) is 2.93 with standard deviation of 1.297, implying that the deviation from the mean is 1.30 in the sample Food and Beverages Companies, with minimum and maximum values of 1 and 5 respectively, which did not indicate the sign of outlier issues and will not cause any problem to the inferential statistics. The skewness value 0.051 indicates that the data is positively skewed, that is, the data did not meet the symmetrical distribution requirement. Similarly, the kurtosis of 1.094 implies that the Gaussians distribution is met.

Correlation Results

In this section, the result of the Pearson Correlation Coefficients of the variables of the study is presented. The correlation matrix is used to determine the degree of association between independent variables and the dependent variable. It is also used to identify whether there is a relationship between independent variables themselves, and to detect the possibility of Multicolinearity amongst the explanatory variables. This is necessary so that a broader picture than we could have got when regressed separately against performance would be obtained.

Discipline (DCP) has a strong negative relationship with workplace deviant behaviour (WDB) for the value of -0.579; Trust (TRS) has a weak negative relationship with workplace deviant behaviour (WDB) with the value of -0.284.

Regression Results

In this section, the regression results of the models of the study are presented and interpreted. The hypotheses formulated for the study are also tested from the results as presented.

Impact of Discipline on Workplace Deviant Behaviour of Food and Beverages Companies

The impact of DCP on WDB of Food and Beverages Companies is found to be significant and statically has a negative effect on WDB. This can be confirmed by a coefficient value -0.55, which is statistically significant at 1%. This implies that for every 1% decrease in DCP the WDB of Food and Beverage Companies will Increase by 0.55. In line with this, it provides evidence to fail to reject the null hypothesis; which states that DCP has no significant impact on WDBF of Food and Beverage Companies. The result is statistically significant at 99% confidence level. The findings are in line with Kuye and Sulaimon (2011), Ndabahaliye (2013) and Rehman, Khalid and Khan (2012).

Impact of Trust on Workplace Deviant Behaviour of Food and Beverage Companies

The impact of TRS on WDB of Food and Beverage Companies is found to be significant and statistically has a negative effect on WDB. This can be confirmed by coefficient value of -0.125 with a p-value of 0.024. This implies that for every 1% increase in TRS, the WDB of Food and Beverage Companies will increase by 0.125. This provides evidence of rejecting the null hypothesis, which states that TRS has no significant impact on WDB of Food and Beverage Companies. The findings are in line with Nwosu, Obidike and Okezie (2015) and Donatus (2011).

Cumulative result shows that the coefficient of determination (R^2) has a value of 0.350. This indicates that the independent variables (DCP and TRS) were able to explain the variation in WDB of Food and Beverage Companies to the extent of 35% only, while the remaining 65% are explained by other factors not captured in the model. The adjusted R^2 has a value 0.343 (34.3%). This implies that DCP and

TRS cumulatively play a significant role in explaining WDB of the Food and Beverage Companies. Following the results obtained from those eligible to fill the questionnaire on the demographic characteristics of the respondents. The regression result reveals fitness of the model for having F-statistics of 55.741 and a p-value of 0.0000. The implication of this result is that the overall impact of the explanatory variables on the dependent variable is significant at 1% level, with 99% level of confidence. Lastly, the study concludes that the business ethics plays a significant role in explaining the workplace deviant behaviour of Food and Beverage Companies following the result gathered from respondents upon questionnaire returns.

Conclusion and Recommendations

The choice of examine business ethics issues is one of the most important decisions of Food and Beverage Companies. The basic question is whether there exists an optimal ethical management that minimizes the issues of workplace deviant behavior of Food and Beverage Companies. The impact of TRS on WDB of Food and Beverage Companies is found to be significant and statistically has a negative effect on workplace deviant behaviour. This implies that for every 1% increase in TRS, the WDB of Food and Beverage Companies will decrease by -0.125. The impact of DCP on WDB of Food and Beverages Companies is found to be significant and statically has a negative effect on WDB. This implies that for every 1% decrease in DCP the WDB of Food and Beverage Companies will Increase by -0.55.

Based on the findings obtained from the results, the following recommendations were made: firms, management and organizations should pay greater attention to significant variables such as the effect of discipline and trust in determining their optimal ethical issues in management by maintaining a minimal work place deviant behavior. Food and Beverages companies should trust or show how they trust their employee in doing their job in the organization and trust them to work effectively and efficiently. This should be done true means of delegation of employees in carrying out task and which as a result will indicate the level of trust and confidence the organization have towards their employees. Companies should enforce disciplinary committee to checkmate employee attitudes and actions in the workplace in order to curb workplace deviant behavior. This should be done be thorugh creating awareness programs that will educate employees about the penalty for such deviant behaviours.

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Appendix I

Table 4.1: Descriptive Statistics of the Variables

Variables	**Min**	**Max**	**Mean**	**SD**	**Skewness**	**Kurtosis**
WDB	1	5	3.01	1.297	-0.38	-1.113
DCP	1	5	3.05	1.280	0.011	-1.065
TRS	1	5	2.93	1.297	0.051	-1.094

Source: SPSS 2020 output

Table 4.2 Correlation Matrix of the Dependent and Independent Variables of the first model

Variables	WDB	DCP	TRS
WDB	1		
DCP	-0.579	1	
TRS	-0.284	0.295	1

Source: SPSS 2020 output

Table 4.3 Summary of Regression Result

Variable	**Co-efficient**	**t-statistics**	**p-value**
Co-efficient	0.971	5.100	0.000
DCP	-0.550	11.164	0.000
TRS	-0.125	2.269	0.024
R^2	0.350		
Adjusted R^2	0.343		
F-stat	55.741		
F-sig			0.000
Durbin Watson	1.854		

Source: SPSS 2020 output

Alternative Sources of Internally Generated Revenue and its Usefulness to the Finance and Development of University of Maiduguri, Nigeria

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Abstract

The paper examines the alternative sources of revenue or resource mobilisation from internally generated revenue (IGR), statutory allocation and utilisation for sustainable development to the university management. The study employs descriptive survey design (mean and standard deviation) and Pearson Product Moment Correlation. The results revealed that business ventures owned by university management are among the main sources of revenue, the proceeds include servicing staff welfare, maintenance of university facilities and remodelling of university environment. The finding revealed that there is no significant relationship between revenue generated in university and the development. The paper therefore recommended that, government should support all universities with funding to strengthening revenue base usefulness.

Keywords: *Development, Internally Generated Revenue, Resource Mobilization, University Management.*

Introduction

The economic theory that says human wants are unlimited, but the means of satisfying them are limited" has remained an undisputed fact. This has brought to the fore, the fundamental issue that recent government funding subvention are grossly inadequate to satisfy the needs of the contemporary Nigerian Universities. The fundamental role of educational system in Nigerian universities had linked the resources of university into moral depression to meet the ever-changing development and financial needs of university into economic recession. This linkage is rationally expected to accelerate growth and development of university especially from the economic perspective, the major challenges university are facing today is the lack of adequate funding to develop the university system. This is necessary, because it is critical in attaining, maintaining and improving the quality of education, pertinent to improve the needs of funding in the university management (University Finance Department, 2018).

Indeed, the financial challenge fronting university education system in Nigeria is due to underfunding which could be linked to undue reliance on government funds by university administrators (Erhagbe, 2014). Government funding Federal University Education in Nigeria had been statutorily within the exclusive purview of the Federal Government, this is with a view of well-educated and equipped manpower for individual and indeed Nigerian university to develop. However, the economic recession of the 80’s which resulted to Structural Adjustment Programme (SAP), and other unfriendly policies coupled with ever increasing number of universities in the face of dwindling resources, made funding a major source of worry to every university in Nigeria. Coupled with the security challenges in North-East which drastically reduced the performance of staff in terms of generating internally revenue for university management. El-Rufai (2001-2008) stated that Nigeria spent an average of 40% of its budget on education in 2015 compared to 2020 budget on education, in 2019 Nigeria has about 117 universities-owned by the federal government, states as well as privately owned. The Federal government ways of funding or the funding of universities had undergone into personnel cost, overhead cost, direct teaching laboratory cost, research grants and capital grants.

Indeed, most undeveloped amenities in public university such as interactive boards and video conferencing services, which are taken for granted in many more developed foreign institutions of learning are either unavailable or in short supply to Nigerian universities today. Ogbogu (2011) stated in his study that the academic staff did not attend workshops and conferences, and that there was a drastic reduction in the award of research grants and fellowships, all due to lack of funds in the university today. Such inadequacy of funding can link to the depression in the country’s economy, as well as the high level of corruption in the country. Notwithstanding the obvious and enormous financial resources accruing to the country, the educational system is confronted with extreme inadequacy of infrastructure and facilities for teaching and research which have remained a clog in the wheel of active administration of Nigerian Universities (Aina, 2002). The condition put the management team of universities under undue stress (Nwadiani & foegbu, 2005), and as a result they are incapacitated in transforming the universities for effective teaching, research and community services. Similarly, the management team could barely embark on capital project or other tangible development of their institutions (Universities); a situation which in turn has unfavourably affected capacity building and overall development.

A critical overview of the concept of internally generated revenue is proportionally to the statutory allocation and utilization of resources. However, this will shade more light on the shortcomings and also the dire need to augment the ever-increasing inadequate statutory grants through other sources with a view to develop university system and enhance the attainment of quality education. This can only be attained via resource mobilization and optimal utilization. This underscores the optimal utilization of grants, which must be complemented with Internally Generated Revenue for efficient and qualitative university education system. The concern here is about bridging the funding gap, the utilisation of the meagre IGR and developing ways and strategies for harnessing un-tapped huge IGR based universities sources of funding Federal University Education, State Government, private, partnership with private sector and linkages with other universities donations. To accomplish this study, the research is separated into five sections namely: section one is the introduction, section two takes up the literature review, section three presents the methodology, section four deals with results and discussions and section five concludes the study.

Literature Underpinning

Internally Generated Revenue

Ventureonline.com (2019) defined IGR as the creation of either tangible or intangible asset within the confines of one entity, e.g., IGR are those funds that are realised through the effort or operation of the entity itself i.e., the fund was not borrowed or realised through external means. However, this definition agrees in substance with that of wikinvest.com (2019) which states that internally generated revenue means funds not constituting the proceeds of any loan, debt issuance, equity issuance, assets sales, insurance recovery or indebtedness.

On the other hand, internally generated revenue is any income earned within an entity or an organization that has not been budgeted for and/or released by the funding of the federal government. It can also be defined as any other revenue generated locally by the university that is virtually earned and expended by the university independent of statutory allocations, it is often times un-budgeted. A very important aspect to be excluded from the IGR is students' Registration fees/charges. There has been long debate over this at various levels. Registration fees/charges are service costs. This is because virtually all the fees/charges received from students shall be used to give them the charges for which they paid the fees/charge. For example, when students paid for ID cards, the money will be used to produce the ID cards.

Internally Generated Revenue University Perspectives

Not so much was known of internally generated revenue (IGR) according to the Nigerian Higher Educational circle about two decades ago in the era when there were few universities in the country, and the oil revenue was massively available. The Federal Government provided all the funding for the operation and capital development needs of the universities (Luke N. Onuaha, 2013). Then came the recent phenomenal growth in the number of universities from 32 in 1998 to 114 in May 2012 and in 2020 we have 170 Universities. Again, given the massive economic disasters facing the government, made it worse by the recent global financial crises that bedevilling the developing nations, the challenges of insufficient funding of the universities has become critically revealing.

The continued dwindling resources of government, since the early 1980’s have put much strain on the dwindling funding of education (especially tertiary) thus, one of the problems facing higher education is that of gross under-funding. The problem of under-funding and over-reliance on government funds remains a clog in the wheel for the governance of higher education in Nigeria. This has brought about the issue of bridging the funding gap through the internally generated revenue (IGR). Coupled with the policy of universities to generate 25% of their funding, its a sine-qua non for diversification and higher IGR (Ajiyi & Abubakar 2011).

Kpolovie and Esezi (2013) emphasize that over the years the Nigerian governments’ budgetary allocations for education have left much to be desired. According to the authors the allocation trend is abysmally retrogressive; a trend that has the tendency to destroy all that is positive in education. Abayomi (2013) affirmed that the highest budgetary amount appropriated to education and by inference the tertiary institutions was 10% in 2013. The Federal Government of Nigeria (2012) worried about the incessant complaints of poor funding of public institutions of learning advised university managers through the National Universities Commission (NUC) to explore various ways of generating ten percent (10%) of their expected revenue from within and outside their institutions towards solving their finance related problems rather than depend almost entirely on subsidizations by Government. Several institutions of learning especially the higher institutions are already capitalizing on the Federal Government directive. Some university managers have devised means of generating extra revenue towards meeting the developmental needs of their institutions. Indeed, evidence abound of such revenue drive and the most obvious are the commercial ventures.

Table 1: Profile of University of Maiduguri

IGR	2006	2007	2008	2009	2010	2011-12	2013-14	2015-16
Direct Subvention:	298,180.00	576,364.00	393,409.00	281,976.00	393,852.00	Nil	Nil	Nil
Capital Subvention:	2,093,090.00	3,193,886.00	3,890,944.00	3,741,920.00	6,260,024.00	Nil	Nil	Nil
Recurrent Subvention:	2,391,270.00	3,770,250.00	4,284,353.00	4,023,896.00	6,653,876.00	Nil	Nil	Nil
Serviceable Income IGR:	14,111.00	7,050.00	(13,298.00)	Nil	Nil	Nil	Nil	Nil
Commercial Ventures:	134,968	155,576	192,364	256,593	261,716	Nil	Nil	Nil
Grant:	194,958	136,296	110,283	171,819	296,200	Nil	Nil	Nil
Student Registration:	498,632	538693	649,177	924,315	935,110	Nil	Nil	Nil
Total:	842,669	837,415	938,526	1,352,727	1,493,026	Nil	Nil	Nil

Source: University Annual Report, 2016.

Table 2: Staff Cost and Admin Expenditure Pattern

	2006	2007	2008	2009	2010	2011-12	2013-14	2015-16
Staff Income:	2,250,684	2,819,756	3,829,165	3,660,134	6,247,518%	Nil	Nil	Nil
Admin Expenditure:	503,859	907,722	1,000,739	1,123,874	1,151,502%	Nil	Nil	Nil
Total:	2,754,543	3,727,478	4,829,904	4,784,008	7,399,020%	Nil	Nil	Nil

Source: Financial Audit, 2016.

Income and Expenditure

A careful overview of income and expenditure patterns revealed in table 2: in 2006 whereas the total receipt for the year stood at N2,391,270.00, the total expenditure pattern indicated a net of N2,754,543.00, thereby creating a funding gap of (N363,277.00) representing 13.12%. In 2007, a total receipt of N3, 770,250.00 was recovered for the year as subvention, while expenditure stood at N3, 727,478.00, thus leaving a net and positive balance of N42, 772.00. In 2008 whereas a total subvention of N4, 284,353.00 was recorded for the year being reviewed, a study of the expenditure pattern indicated a total expenditure of N4, 829,904.00. This leaves a deficit balance and funding gap to the tune of (N545, 551.00).

In 2009, the total of N4,023,896.00 was received as against the expenditure of the sum of N4, 784,008.00 this created a vacuum or funding gap to the tune of (N760, 112.00). In, 2010 a critical overview of the financial records indicated a net income receipt of the sum of N6, 653,876.00, whereas the expenditure pattern indicated the total sum of N7, 399,020.00. This inevitably leaves a funding gap of the tune of (N745, 144.00) only.

Table 3: Income and Expenditure

Year	**Income**	**Expenditure**	**Balance**	**Total**
2006	2,391,270.00	2,754,543.00	(363,277.00)	(363,277.00)
2007	3,770,250.00	3,727,478.00	42,772.00	(320,505.00)
2008	4,284,353.00	4,829,904.00	(545,551.00)	(866,056.00)
2009	4,023,896.00	4,784,008.00	(760,112.00)	(1,626,168.00)
2010	6,653,876.00	7,399,020.00	(745,144.00)	(2,371,312.00)
2011	Nill	Nil	Nil	Nil
2012	Nil	Nil	Nil	Nil
2013	Nil	Nil	Nil	Nil
2014	Nil	Nil	Nil	Nil
2015	Nil	Nil	Nil	Nil
2016	Nil	Nil	Nil	Nil
Total	21,073,645.00	23,494,953.00	(2,371,312.00)	(5,547,318.00)

Sources: Financial Audit, 2016.

An aggregated analysis viewed from the receipt perspective revealed a funding gap of (N5, 547,318.00). Whereas, taken as a percentage of the total expenditure profile, the analysis revealed a funding gap of (N5, 547,318.00) or 26.32%. Whereas taken as a percentage of the total expenditure profile, the analysis revealed a funding gap of 23.61%.

The fundamental question here is how should this phenomenal (funding gap) be addressed? This brings to the fore, the principal element of serviceable income or Internally Generated Revenue (IGR). This plays a very important role in augmenting the regular subvention to bridge the funding gap and indeed help the University in meeting up the ever-increasing costs associated with the daily, weekly, monthly, quarterly and annual needs.

Table 4: Internally Generated Revenue from Business Ventures

Year	Amount
2006	842,669.00
2007	837,415.00
2008	938,526.00
2009	1,352,727.00
2010	1,493,026.00
2011	Nil
2012	Nil
2013	Nil
2014	Nil
2015	Nil
2016	Nil

Sources: Financial Audit, 2016.

From the sums generated over the period under review (2006 to 2016), it can be clearly seen that the quantum of revenues generated constitute reasonable sums that have immensely contributed to the smooth running and indeed overall development of the University.

In light of the above, the need for significance internally generated revenue (IGR) in the development of the University can never be overemphasized.

Problem of Internal Revenue Generation and Accountability

Most IGR schemes in the universities are not market oriented, in terms of pricing and costing rather than use the contemporary or prevailing market trends, the policy of economic rent is being used, this has resulted in less-than-optimal revenue that would have been generated. The policy should be normative not positive or status-quo. In most government policies pronouncements, there are always well-articulated statements, but the attitudes and approach of those entrusted with the task of internally generated revenue generation speaks otherwise. The issue of accountability and audit also pose serious threat to the internally generated revenue generation.

Most of internally generated revenue schemes in most universities are on ad-hoc basis. That is, when the university is in dire need, it will create a way or avenue which will be abandoned half way. Cultural and social beliefs which prevent an individual to be rigid and un-compromising in dealings with people, as regards to IGR policies and cultural and social beliefs do not allow other IGR ventures to be undertaken.

Erhagbe (2014) states that IGR is the creation of tangible and intangible funds within the confines of one's entity. It is a combination of all non-governmental monetary accruals to the institution and may involve diverse strategies. This means that the funds used in effectively transforming the institution's landscape were not borrowed or realized through direct Government intervention.

Wangenge-Ouma and Cloete (2008) and Okojie (2013) have observed that some tertiary institutions have done reasonably well in their drive for substantial IGR and have used it to positively change the landscape of the institutions while some were yet to catch up with the vision. Education is the supreme instrument for national development, socio-economic, scientific and technological advancement. However, Nigeria a country with a laudable constitutional provision to ensure Government participation in financing education has never allocated up to 20% of its annual budget to education since 1960. Records from the Central Bank of Nigeria (2012) shows that the highest annual budget allocation to the education sector was 17.59% and this was in 1997. Every other allocation made to the sector from 1960 to 2013 had been below 14%. This implies that on the average Nigeria spent 5.7% yearly from 1960 to 2013 on education which is grossly below the benchmark of 26% of the annual budgetary allocation to education (UNESCO, 2019).

Limitations of Internally Generated Revenue

Undue interference and waivers by the management and government, non-marketing policy statements, competitors against university's infant vulnerable ventures, non-patronage and official backing of most ventures by the management and campus community and virtual absence of administrative can inject funds to usually capital intensive, but profitable ventures.

Defination of terms

Personnel Cost: This is a release of fund on monthly basis by the Federal Government to universities for the purpose of paying staff salaries and other allowances. These releases come in very late and at times the full Budgetary amounts are not released.

Overhead Cost: This fund or subvention sent on monthly basis by the Federal Government to the Federal universities for the purpose of smooth running of the universities is limited. As the name implies "overhead" it is meant to pay for social amenities on campus, office administration and general maintenances including local travels etc.

Direct Teaching and Laboratory Costs: This fund is also released on monthly basis and is meant for the payment of teaching and other laboratory maintenances in the universities.

Research Grant: This is a release from the Federal Government to the universities with the sole aim of financing researches in the universities; this is with a view to boosting the morale of the lecturers to undertake research. It also comes on a piece meal basis and mostly delayed.

Capital Grant: As the name implies, is a release meant to financing capital projects in the Federal universities. This is released most times on quarterly basis. It is also mostly delayed. It is also the subvention that has been bedevilled by lack of full budgetary releases to all universities (Adeniyi 2008 and Okojie 2010).

Private Sector: Private sector participation in funding university education plays a critical role in stabilizing the sector world-wide. In America, Europe and Asian countries it plays a significant role in the development of education. The generosity of Nigerian people on philanthropic giving to the universities as compared to that in Europe and America is also often constrained by endemic poverty with apology to very few in the likes of late Bashorun Abiola, Alhaji Aminu Dantata, Ishaq Rabiu, Rochas Okorocha, Late Bank Anthony Mobolaji, Alhaji Aliko Dangote, shettima Ali Monguno, T.Y. Danjuma and Zanna Dujima of Borno Alhaji Bukar Mandara that give to educational sector in addition to their high profile donations with varying degree of motives. The paper calls on all well-meaning citizens to support education (Ajiyi and Abubakar 2011).

Partnership with Private Sector: This usually comes through individuals, trust, foundations, companies/corporations, National and Foreign aids. This is an arrangement where private individuals and other reputable organizations collaborate with Government/Universities via funding, assistance, scholarship and technical partnership such as the World Bank project to promote science and technology and minimize risk in disaster management. Goethe University partnership with University of Maiduguri and GTZ technical computer, Build-Operate and Transfer (BOT) is a process whereby individuals, organizations and corporations donate, build-operate and transfer veritable assets. Example of Build-Operate and Transfer in Unimaid is the Shettima Ali Monguno Hostels and that Jeyama (Ajiyi and Abubakar 2011).

Linkages with other Universities: Linkages with other universities within and outside the country provide a veritable tool to finance world class researches and development. These days linkages are so rampant and most at times deviates from the purpose to which they are entered into. Linkages bring about quality education as academic staff is made to collaborate with their counterparts in other world class Universities.

Donation: Donations to universities come in different ways and manners some such as direct and indirect donation, this plays a significant role in funding some of the universities in Nigeria. This is because of the advent of present political dispensation; politicians are eager to donate to universities with the motive of receiving either a recognition or patronage. The ways through which universities could be able to increase this is through establishing a competent development office staffed with competent personnel to be able to aggressively cajole the political class in donating to the cause of universities. Alumni chapters too are now waking up to look back to their Alma Mata for funding in various ways.

Budgeting and Problem of Periodic Subvention: In public, private and even individual life, one has to have a profile of an expected income and also an anticipated expenditure for a specific period to be able to have a well organised life. The theory says "if you fail to plan, you are simply planning to fail" is an undisputed fact. For government, planning is very important as it shows where the government is gearing its efforts to budgeting is a clearly predetermined income and expenditure pattern, carefully drafted to meet organisational goals aspiration against the backdrop of an anticipated revenue/income. It can also be seen as the estimate of the expected or anticipated revenue or income and expenditure of the government for a given period, usually a year. Funding to the universities in Nigeria also comes in the budgetary allocation to the educational sub-sector for the year. Budget entails the classification of an expected expenditure pattern into capital and recurrent votes. Capital votes are those funds specifically dedicated to capital expenditures for a year or determined period, while recurrent votes, are those funds stating non-capital expenditure for a specified period usually a year, such as overhead, assets/running cost, transport and travelling, imp rest and stationeries.

Problem of Periodic Subvention: Most funds and grants to the Federal universities in Nigeria are on monthly basis. Some are on quarterly basis. Sometimes, funds might be needed for the execution of some projects, but at that time, they might not be available this led to the following: - Geometric reduction in expenditure on vital elements such as operating expenses of units., Mismanagement or misallocation of the available funds and Abandoned projects.

Agencies that Send Subvention to Universities: Tertiary Education Trust Fund (TETFUND), Petroleum Technology Development Fund (PTDF). Industrial Training Fund (ITF) and Federal Ministry of Finance (Consolidated Revenue Fund). Avenues for Internally Generated Revenue Generation: Car Wash, Poultry, Veterinary Services, Catering Services, Filling Station, Commercial Guest House/Hotels, Car and Ambulance hire services, Printing Press, Table/Pure Water, Landscape Services, Community Pharmacy, Agriculture, Bakery, Consulting Services, Internet Centre, Workshop and Seminars and Conferences and University Guess House.

Research Methodology

The paper uses descriptive survey design and Pearson Product Moment Correlation. The sample size comprises of 102 respondents' the questionnaires were administered to University business ventures to source information for the study. The instrument comprises of well-structured questionnaires and face to face interview. The paper uses both secondary and primary data to sources information from the business ventures and IGR generated in the university.

Results and Discussion

Descriptive and parametric statistics were employed. The procedure of analysing the data includes mean (X) and standard deviation (SD) are the major tools employed to analyse the results collected and Pearson Product Moment Correlation was employed to test the result of the hypothesis.

Table 5: Mean Analysis of the Sources of IGR University Perspectives

Source of IGR	Means Score	Standard Deviation	E-Value	Sign.
Business Venture	3.98	0.87	46.56	0.000
Servicing Staff from University	2.96	1.06	21.06	0.000
Manufacturing and Processing	2.64	0.94	9.46	0.000
Remodelling of University environment	2.53	0.92	6.02	0.040

$P<0.05$.

Table: 5 shows the mean value and standard deviation value and major sources of revenue from university i.e., business ventures (mean =3.98, SD=0.87), servicing staff welfare with the (mean =2.96, SD=1.06) manufacturing and processing (mean =2.64, SD = 0.94) remodelling of university environment (mean=2.53, SD=0.92). This revealed that business ventures, maintenance of university facilities and staff welfare were the major sources of IGR so far in the university.

Table 6: Mean and Standard Deviation

Sources of IGR	Mean Score	Standard Deviation	Sign.
Business Venture	1.41	.70	NS
Welfare of University Staff	3.54	1.00	Sig.
Capital Project in University	2.83	1.31	Sig.
Conference Attended by none academic staff	1.34	0.72	NS
Remodelling of University Environment	2.63	1.79	Sig.
Interest on Salary paid	3.83	1.22	Sig.
E-libraries networking access	2.66	1.26	Sig.
Tran-sahara research development centre	3.39	1.13	Sig
Students Registration	2.19	1.13	NS
Electricity to business ventures	2.66	0.95	Sig.
Hotel Business	2.98	1.36	Sig.

P<0.05.

Table 7: Pearson (r') Analysis of IGR from University Management

Source of IGR	N	Pearson	r	Sign.	Decision
IGR	102				
University Management	102		.190	.000	Significant

P<0.05.

Table: 7 results shows that Pearson r' of 0.189 is significant at P<0.05 alpha level. Therefore, the null hypothesis states that there is no significant relationship between the IGR and development in the university.

The results indicate that the major sources and utilization of internally generated revenue according to the 102 questionnaires administered to the business owners, funds are generated through commercial ventures; like rental of shops, running of hotels, guest houses, petrol stations bakery and manufacture of table water. The findings correlate with those carried out by Adeniyi (2008) and Okojie (2010). Teaching and learning require an enabling environment which calls for adequate funding for the maintenance of university facilities as well as addressing staff and student welfare matters, developmental issues and research.

It is observed that IGR should be reinforced by the government precedence in order to support university management. The results of the study indicated that there was need for internally generated revenue to achieve its targets and goals in the management of university. The continuous gross underfunding of the educational system, particularly the universities is one of the seemingly intractable problems facing the university education with inadequate infrastructure (Erhagbe, 2014). Therefore, there should be no half measures in pursuing IGR and its implementation. In today's knowledge driven society and especially in Nigeria, where budgetary allocation to Education is grossly inadequate IGR will tend to close the gap and so promote the quality, productivity and efficiency of higher educational institutions. Moreover, business ventures if harnessed properly could open a new vista of internally generated revenue to the management of the university.

Moreover, if university leadership style decided to address the problem of infrastructure, the problem of underfunding of the institutions of higher learning, it would tap from the intangible resources that accrue from commercial ventures, papers work and consultancy services, manufacturing and fabrication of tools and other sources of IGR, in order to achieve tangible and visible transformation in the infrastructural scenery of the institutions. This will further translate to meaningful achievement of the trifocal roles of the university management such as teaching, research and community amenities.

Conclusion and Recommendations

Internally generated revenue plays a critical role in the development of the University, as it goes a long way in bridging the funding gap, and thus; continuous sustenance of the universities in Nigeria. Owing to the inevitability of generating additional fund to supplement the statutory allocation, the following recommendations ought to be strictly pursued. The university management should pronounce a policy statement about internally generated revenue generation. All moribund ventures should be resuscitated for an optimal internally generated revenue generation. People with proven integrity should be employed or engaged to manage the ventures, under close supervision of resource mobilization/ investment unit.

A reward and motivation machinery should be set in motion to motivate staff of the ventures for proper and optimal revenue generation. New frontiers of internally generated revenue generation should be encouraged by the universities via investment unit. Universities need to build adequate reserve capacity both in the budgets of operating units and through endowment account, i.e., ABU, U.I and Ile-Ife where staff contribute to the university endowment account. Under no account should a permanent and pensionable staff be engaged under the ventures. The internal audit unit should be strengthening to perform its duties and functions. All leakages in internally generated revenue should be blocked. Protectionist policies should be properly set to protect all ventures from undue competition from the outside. Resource mobilisation/investment unit should be resuscitated, strengthened, well-funded and given full autonomy.

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Impact of Service Quality on Customer Retention of Listed Food and Beverages Companies in Kaduna State

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Abstract

*This study examines the effect of service quality on customer retention of listed food and beverages companies in Kaduna State. The main objective of this study is to examine the effect of service quality on customer retention of listed food and beverages companies in Kaduna State***.** *The study used an explanatory research design also known as Causal research. It is the investigation of (research into) cause-and-effect relationships. The Kerjcie and Morgan (1970) sample size determination table was used to determine the sample of this study which was 343. The source of data collection for the study is primary. The method for data analysis and technique was multiple regression. The findings of the study show that service quality is positive and significantly associated with the customer retention. It reveals that outcome quality has a t-value of 3.349, coefficient value of 0.471 and a significance value of 0.002. The study concludes that service quality has been established to influence the customer retention of listed food and beverages company, Kaduna. The study recommends that the management should also give equal opportunity to all employees irrespective of service quality, so as to enhance effectiveness in the organizational performance and customer retention.*

Keywords: *Service Quality, Outcome Quality and Customer Retention*

Introduction

Service quality and customer retention have long been recognized as playing a crucial role for success and survival in today's competitive market (Ibojo, 2015). Service quality entails constant anticipation of what customers expect from the service provider. Organizations are seeking ways to forge and maintain an on-going relationship with their customers in order to protect their long-term interest. Retention of existing customer is cheaper than attracting new ones. This simply means that building loyalty through long-term customer relationships is important. Quality in a service business has become a measure of the extent to which the service provided meets the customer's expectations. Companies have found that in order to increase profits and market share, they should pay much attention to the quality of services they provide to their customers (Kemp &Rotmans, 2005).

Service quality plays a vital role in every organization of a nation; it decides growth and survival of the organization in this hugely competitive market in the modern era. Service quality has been revealed as a key factor in search for sustainable competitive advantage, differentiation and excellence in the service sector (Iniesta & Sánchez 2002). According to Heskett (2002) the service quality is considered essential for the success and survival in a competitive environment and this influence the consumer behavior in a decision-making process, and also the level of relationship between customer and company and can impact customer's loyalty.

In terms of attitude and behavior, retention appears as a brand preference or emotional commitment. Therefore, it is measured with the intention of buying, rejection of better alternatives, price tolerance, and intention of recommending the product or service to others. Retention behavior can take on several forms, but is usually viewed as future intention to repurchase products and services or continue a working relationship (Dick &Basu, 2009). Most often, when people are satisfied with a product/service they tend to make repeat purchase of that product or service rendered. Service quality in beverage industry is relatively more challenging to measure than in other service industries, in which system and work processes consist of distinct but inter-related tasks.

Against this background this study intends to examine the effect of service quality on customer retention of listed food and beverages companies in Kaduna State. Also to determine the impact of interactive quality on customer retention of listed Nigerian food and beverages companies in Kaduna State. Finally to invetsigate the impact of outcome quality on customer retention of listed Nigerian food and beverages companies in Kaduna State. This paper will provide the understanding of studies in the field of service quality and gives an overview of concepts related to the study which include customer satisfaction and customer retention by different scholars and researchers as well as their relationships and others.

Conceptual Review

Concept of Service Quality

Service quality is composed by the act of interactions between customers and employees, in which employees try to seek an advantage to influence customers' perceptions and the image of the carriers (Gursoy, 2005). Service quality conceptualization incorporates procedure related to service delivery and service outcome (Parasuraman, 2008). Service quality is the customers' attitude or global judgment of a company's service over time (Lam & Zhang, 1999). Rahaman, Abdullah and Rahman (2011) define Service quality "as an approach to manage business processes in order to ensure full satisfaction of the customers which will help to increase competitiveness and effectiveness of the industry".

The service quality as a global judgment or attitude relates to the superiority of a service (Zeithaml & Bitner, 2003). Providing a high level of service quality is very important for service providers to compete with other peers. Rahaman, Abdullah and Rahman (2011) define service quality as the difference between consumers' perceptions of services and their expectations about such services offered by a firm. Yoo and Bai (2013) view service quality as components of product which is perceived by a customer. In the literature, the most common concepts are service quality and customers' satisfaction.

Concept of Customer Retention

Customer retention can be defined in two distinct ways. First, retention is an attitude. Different feelings create an individual's overall attachment to a product, service, or organization. These feelings define the individual's (purely cognitive) degree of loyalty. The second definition of retention is behavioral. Examples of retention behaviour include continuing to purchase services from the same supplier, increasing the scale and or scope of a relationship, or the act of recommendation (Wilkins, Merrilees, & Herington, 2007).

Customer retention is a consumer who intends to repurchase from the same service firms, to keep an optimistic attitude towards the service firm, and to willingly refer the service to others (Kandampully & Suhartanto, 2000). Instead, retention of customers is providing truthful and productive feedback, they combine the volume of their category purchases with the firm, they never mistreat firm employees, and they enthusiastically provide referral to their relatives and friends (Shoemaker & Bowen, 2003). Dick and Basu (2009) indicated that level of customer lretention is measured by examining the frequency of purchases or the amount of brand switching. However, this steady customer may be originated from the situational factors (i.e. price) but not always influenced by psychological factor.

Theoretical Framework

Hierarchical Service Quality Theory (HSQM)

Brady and Cronin (2001) proposed a new hierarchical theory by developing previous models. They tried to develop SERVQUAL dimensions by refining its dimensions to what should be reliable, responsive, empathic, assured, and tangible. Brady and Cronin believed that SERVQUAL dimensions need to be specifically defined. Because of the theoretically strong support for multidimensional and multilevel of service quality, they suggested three sub-dimensions for each dimension; attitude, behavior, and expertise for interaction quality dimension, ambient condition, design, and social factors for environment quality, and waiting time, tangibles, and valence for outcome quality dimension.

By specifying these factors, they determined what should be reliable, responsiveness, and empathy as suggested in SERVQUAL theory. This theory developed a new way of measuring service quality by having strong literature support and combining several theories. This theory has the ability to have other dimensions and sub-dimensions related to specific service industries. Some researchers adopted hierarchical theory and developed it by modifying dimensions or/and sub – dimensions based on specific service industries e.g. in health care, (Akter, D'Ambra & Ray, 2010) mobile, health and phone service subscribers and hairdresser (Pollack, 2009). To date, this theory is the most suitable and applicable theory for service quality measurement. It is on this premise that the study seeks to adopt this model for its variables.

Social Exchange Theory

Social exchange theory grew out of the intersection of economics, psychology and sociology. It was developed to understand the social behavior of humans in economic undertakings (Homans, 1961). Exchange theory is based on the premise that human behavior or social interaction is an exchange of activity, tangible and intangible (Homans, 1961). Exchange not only permeates the market but also the non-economic realm (Blau, 1964).

Blau (1964) states that SET assume that exchange parties intend to obtain benefits from their relationships that would not be achievable on their own. Benefits can also include non-economic rewards derived from increasing their partner's utility (Andaleeb & Saad, 1995). This is perhaps the most widely articulated aspect of social exchange. Emerson (1976) referred to productive exchanges where the actors in the exchange relationship work together to produce an end product or outcome that is shared and valued by both parties.

Empirical Review of Related Studies

Caruana (2000) study on the service loyalty examined the effects of service quality and the mediating role of customer satisfaction. The study aimed to distinguish between service quality and customer satisfaction by using a meditational model that links service quality and service loyalty via customer satisfaction. The service quality model by Parasuraman, Zeithaml and Berry (1985) SERVQUAL model was used for the study. The study was conducted on 1000 individuals of banking customers in Europe. The results revealed that customer satisfaction does play a mediating role in the effect of service quality on service loyalty. The study recommended that further study should be conducted on service quality, loyalty and customer satisfaction in the banking industry.

Bowen and Chen (2001) assessed the relationship between customer loyalty and customer satisfaction. The study aimed to develop and implement a method for hotels to identify attributes that will increase customer loyalty. The study was conducted by using a mail survey in their methodology sent to 564 hotels guests in USA. The study found that the relationship between customer satisfaction and customer loyalty was non-linear and therefore, the non-linearity found in the study was reported based on the empirical findings from the study. Therefore, the study concluded that this non-linearity could be as a result of multi co linearity and heteroscedasticity amongst the variables. The study also recommended that to get the linearity amongst the variables, further study should conduct a unit root test to avoid the effect of linearity.

Brian (2005) conducted a research on a new examination of service loyalty by identifying the antecedents and outcomes of an attitudinal loyalty framework. The study aimed to gain a better understanding of the formation of customer loyalty and the effects that loyalty has on customer outcome behaviors. The loyalty measurement model and subsequent structural research model are tested on a sample of 2,187 consumers from such wide-ranging service industries as movie theatres, dry cleaners, sporting events, hair salons/barber shops, auto repair and physicians. Finding of the study suggests that overall perceptions of service quality, satisfaction, value, and trust all significantly drive customers' attitudinal loyalty. Findings also indicate that identification, exclusive consideration, advocacy strength of preference and share of wallet behaviors are direct outcomes of service loyalty. Furthermore, it recommended that gender, age, and income are demographic variables that moderate the relationships between loyalty and its antecedents. Likewise, the level of complexity, justice, and risk inherent in the service delivery also moderate the strength of the relationships between the antecedents to loyalty and loyalty.

Evangelos and Graham (2007) examined a study on cultural influences on service quality and customer satisfaction in Greek insurance. The study aimed to examine the impact of culture on service quality and customer satisfaction. The study used an instrument developed for measuring service quality in Greek Insurance for the purpose of measuring individuals, hypotheses on all 25 possible relationships between culture dimensions and service quality are determined and tested. The study sample consisted of 252 individuals. The study found that from the 25 hypothesized relationships between the culture dimensions and service quality, 23 are confirmed and the remaining two are directionally supported. The research also found that, the expected association between quality dimensions importance and their relationships strength with customer satisfaction is only directionally supported in their findings. The study recommended that further study should be conducted using different sub-cultures in varying market segments in other to determine quality investment priorities.

A study conducted by Rita (2008) on the impact of satisfaction and image on loyalty in Alpine ski resorts. The study aimed to investigate the relationship between customer satisfaction and loyalty. The study developed a causal relationship model of customer satisfaction and image in other to predict customer loyalty. The sample consisted in the study results show that ski resorts with highest satisfaction ratings and highest image ratings have the highest loyalty scores in the resorts. The results showed that the ski resorts with highest satisfaction rating and image rating have the highest loyalty scores. The study recommended that researcher should view this study and use it as a yardstick in conducting studies in the area of satisfaction and imaging.

A study by Ahmad and Kyriaki (2009) investigated the effects of individual dimensions of service quality in creating and enhancing customer loyalty via customer satisfaction. The study also investigated the direct and indirect impacts of customer expertise on customer loyalty using sample which consists of 200 bank clients in Greece. Self-administered questionnaire was used to collect the required data. Findings revealed that reliability, tangibility and empathy are positively related to customer satisfaction, which in turn is positively related to loyalty. While, expertise is negatively related to loyalty and it positively moderates the link between satisfaction and loyalty. The study recommended that further research should be conducted in the direction of service quality, customer loyal and satisfaction.

Study by Ilias and Panagiotis (2010) aimed to investigate main factors that lead to customer loyalty in mobile telephone sector in Greece, namely service quality and customer satisfaction. In addition, the authors investigate the mediation impact of customer satisfaction on service quality and customer loyalty. The study used an explanatory research approach in order to examine and explain the cause-and-effect relationships between service quality, customer satisfaction and loyalty.The study sample consisted of residential non-business mobile phone users in Greece amounting 205 individuals. Survey research was conducted using a self-administered questionnaire. Findings of the study revealed that service quality dimensions: customer service, pricing structure and billing system are the more significant positive influence on customer satisfaction, which in its turn has a significant positive impact on customer loyalty. The study also found that mediation role of customer satisfaction on service quality and customer loyalty relationship was confirmed. The study recommended that operators in matured markets such as Greece should try to understand what the drivers of customer loyalty are.

Lu, Wei and Zhang (2010) conducted a research on understanding customer satisfaction and loyalty in an empirical study of mobile instant messages in China. The study investigated the factors affecting customer satisfaction and loyalty of Mobile Instant Message (MIM) in China. Also, the study focused on the effects of trust, perceived service quality, and customer value on customer satisfaction using a structure equation model and a questionnaire survey was also used to collect data on mobile phone users' perceptions of mobile instant message. The results of their study showed that trust, perceived service quality, perceived customer value, including functional value and emotional value; contribute to generating customer satisfaction with Mobile Instant Message. Also, the findings showed that trust, customer satisfaction and switching cost directly enhance customer loyalty. The study recommended that customers perceive value should always be considered in other to enhance mobile instant messages in china.

A study carried out by Ogunnaike and Ogbari (2011) in Nigeria on the impact of customer service on customer satisfaction; Empirical Evidences from Nigerian Banking Industry. The study investigated performance of service that creates true customers: customers who buy more and who influence others to buy. Two hypotheses were formulated in the study and multiple regression and correlation statistical techniques employed to test the hypotheses. Findings of the study discovered that there is a relationship between customer service and customer satisfaction. The results also show that there is a relationship between gender and customer service. The study recommended that the banks should focus more on their customers rather than on the products and services, which they sell because customers are the true business of every company.

Study by Chris, Elliot and Burton (2012) on the modeling of customer satisfaction and loyalty using survey data against data mining. The study examined the nature of this association in retail banking, an issue that has not been tested empirically, using survey methodology to examine bank customers' attitudes, perceptions, and behavior with sample of 200 respondents. The study found non-linear relationship between customer satisfaction and customer loyalty. The study also found that predictors of loyalty were associated with customers' intentions to remain with their bank. The results also indicated that market conditions such as switching costs, benefits and recent consumer behavior add explanatory power. The study also contrasted a full model explaining 56.9 percent of the variation in loyalty with a model based only on variables known to banks, which explained only 8.4 percent. The study recommended that the models of the study can by banks to profile customers who are likely to remain loyal, allowing practitioners to implement proactive marketing action to reward such loyalty.

Another study by Chodzaza and Gombachika (2013) was conducted in Malawi on the quality, customer satisfaction and loyalty among industrial customers of a public electricity utility. The study examined the relationship between service quality, customer satisfaction and loyalty among industrial customers of the public electricity utility organization in Malawi by using models of correlation and regression analysis. The population of the study consisted of 286 industrial customers of the pubic electricity utility organization in the southern region of Malawi: data were collected from 92 respondents, as a sample using a questionnaire. The finding showed that the service quality is poor, irrespective of demographic characteristics of the industrial customer, and this simply leads to customer dissatisfaction and disloyal. The study recommended that public electricity utility must direct its resources in order to satisfy its industrial consumers.

Rahim (2016) examined the perceived service quality and customer loyalty: the mediating effect of passenger satisfaction in the Nigerian Airline Industry. The author examines the relationship among service quality, customer satisfaction and loyalty in the Nigerian airline industry using cross-sectional survey research design in order to collect the primary data on structured questionnaire. Convenience sampling was adopted to draw a sample of 800 respondents. The data collected were analyzed using correlation and multiple regression analysis. The findings of this study largely support the hypothesized relationships proposed in the conceptual framework. The results specifically revealed that perceived service quality is positively related to both passengers' satisfaction and loyalty. The relationship between passenger satisfaction and loyalty towards the airlines was also found to be positive. The mediating effect of customer satisfaction between perceived service quality and customer loyalty is also found to be positive and partially supported. The research concluded that perceived service quality does influence passenger satisfaction, and by extension, loyalty to the airlines. Thus, improvement of service quality is an adjuvant factor to sustainable differentiation and competitiveness in the airline industry. The study also recommended that airline operators develop and implement market-oriented service strategies to identify customers' needs and expectations in order to serve them better. The study further recommended that airline operators should measure service quality regularly to assure that they are keep meeting passengers' expectations, and consider customizing their products and services (as needed) to enhance customer satisfaction and loyalty.

Methodology

The study used an explanatory research design also known as Causal research. It is the investigation of (research into) cause-and-effect relationships. The Kerjcie and Morgan (1970) sample size determination table will be used to determine the sample of this study. Sample size formula for arriving at a finite population is;

$$S = \frac{\mathrm{x}^2\mathrm{NP}(1-\mathrm{P})}{\mathrm{d}^2(\mathrm{N}-1)+\mathrm{x}^2\mathrm{P}(1-\mathrm{P})}$$

Where;
S = required sample size
X = z value (e.g. 1.96 for 95% confidence level)

N = population size

P = population proportion (expressed in decimal) (assumed to be 0.5) 50%

.d = degree of accuracy (5%) expressed as a portion (0.5); it is margin of error.

$$\mathbf{S} = \frac{1.96^2 \text{ x } 3195 \text{ x } 0.5(1-0.5)}{0.05^2(3195-1)+1.96^2 0.5(1-0.5)}$$

$$\mathbf{S} = \frac{3.841 \text{ x } 3195 \text{ x } 0.5(1-0.5)}{0.0025(3195-1)+3.841 \text{ x } 0.5(1-0.5)}$$

$$\mathbf{S} = \frac{6135.9975\ (1-0.5)}{6.78-0.0025+1.9205(1-0.5)}$$

$$\mathbf{S} = \frac{6135.9975-3067.99875}{7.9875+1.9205-0.96025}$$

$$\mathbf{S} = \frac{3067.99875}{7.895+0.96025}$$

$$\mathbf{S} = \frac{3067.99875}{8.94525}$$

S = 342.9751823593527

Sample size is approximately 343 retailed customers

The source of data for this study is the primary sources. Primary source was used which involves the use of questionnaire**.** The questionnaire for data collection was a combination of the modified versions of the questionnaire on service quality, Harsandaldeep and Hermeen (2012) questionnaire on customer retention, while Anand and Selvaraj (2012) questionnaire on customer satisfaction. The technique of analysis used in the study is the correlation and regression analysis, simply because correlation analysis was used to explain the relationship between the mediating, dependent and independent variables in terms of association. The study intends to use models for this study and they are as follows:

The model is captured from (Brady & Cronin, 2001) study on Hierarchical service quality model but modified by the researcher to include; the dependent variable customer retention is a function of the independent variable which is service quality.

In equation form is represented as follows:

$CUSR_{:}\ \alpha + B_1\ INTV\_Q + B_2\ PHYE\_Q + B_3\ OUTC\_Q + E_i$

Where:

CUSR = customer retention

INTV_Q = interactive quality

PHYE_Q = physical environmental quality

OUTC_Q = outcome quality

E= Standard Error of Estimate
α= Constant or Intercept
$B_1 - B_3$= Coefficient of independent Variables

Data Presentation and Analysis

This section tries to analyze the collected data from the respondents of the study. This section discusses the descriptive statistics, correlation matrix and the regression analysis, in order to test the hypotheses of the study.

Descriptive Statistics

The descriptive statistics of the data collected for the study is presented and discussed in this section. The descriptive statistics shows that our measure of customer retention (CUSR) has a minimum value of 1 and 5 as the maximum value, this indicates that 1 is the lowest value in the data set, while 5 is the highest value in the data set, which signifies that there is no serious outlier issues in the data set. The average value of the CUSR is 2.69 with standard deviation of 1.447, signifies that the data deviate from both side of the mean value by 1.447 approximately. This implies that there is a bit dispersion of the data from the mean, because of the value of standard deviation which is close to the mean.

The results from the table also indicate that the minimum and maximum values of the transparency on interactive quality (INTVQ) are 1 and 5 respectively; this indicates non-existence of outliers' issues from the data set. The mean value of 2.98 and standard deviation of 1.438 in the data implies that there is dispersion from the mean value by approximately 1.44. The results from the table also indicate that the minimum and maximum values of the transparency outcome quality (OUTCQ) are 1 and 5 respectively; this indicates non-existence of outliers' issues from the data set. The mean value of 2.97 and standard deviation of 1.459 in the data implies that there is dispersion from the mean value by approximately 1.47.

Correlation Matrix

In this aspect, the result of the Pearson correlation Coefficients of the variables of the study is presented that the correlation matrix is used to determine the degree of association between independent variables and the dependent variable. It is also used identify whether there is a relationship between independent variables themselves, to detect the possibility of multicolinearity amongst the explanatory variables. This is necessary so that a broader picture than we could have got when regressed separately against performance would be obtained.

Customer retention (CUSR) has a weak positive relationship with transparency interactive quality (INTVQ) as denoted by the value 0.051. Interactive quality (INTVQ) has a moderate positive relationship with customer retention (CUSR) with the value of 0.479. Outcome quality (OUTCQ) has a moderate positive relationship with customer retention (CUSR) and value of 0.479; (OUTCQ) has a moderate negative relationship with (INTVQ) with value of -0.301.

Summary of Regression Results

Service Quality and Customer Retention

The result shows that three explanatory variables have significant impact on customer retention at 1% and 5% levels of significance. Cumulatively, the R^2 (0.308) which is the combined coefficient of determination indicates the extent to which the independent variables explain the total variation in the dependent variable and the remaining 69% is explained by the other factors not captured by the model of this study. Thus, it signifies that 31% of the total variation in customer loyalty is by INTVQand OUTCQ. The F-statistics of 6.079, which is significant at one percent level indicates that the joint coefficients of the study are fit.

Discussion of Findings

This section shows the analysis carried out with a view to testing the hypotheses formulated in chapter one.

Interactive Quality and Customer Retention

Interactive Quality is found to have positively and significantly impacted on the customer retention at five percent level of significance. This signifies that interactive quality is positively and significantly impacting on the customer retention. Therefore, interactive quality can improve customer retention. With this, the null hypothesis is therefore rejected and the alternate hypothesis is accepted.

Outcome Quality and Customer Retention.

Outcome Quality is found to be statistically positive and significantly associated with the customer retention. This evidence shows that outcome quality is positive and significantly influencing customer retention.

Conclusion and Recommendations

Service quality remains a significant organizational challenge, managers must learn how to engage their employees in service managerial skills needed in a multicultural work environment. Supervisors and managers must be prepared to teach themselves and others within their organizations to value multi-dynamic environment and the differences in both associates and customers, so that everyone is treated with dignity. It has been observed that interactive quality has impact in the customer retention of listed food and Beverages Company, because in the course of interaction helps the organization to understand the needs and prioritization of customer and then can be able to create product in the customer will buy and appreciate. Outcome quality has been established to influence the customer retention of listed food and Beverages company, because the outcome of a product determines how customer will appreciate the product or may respond to the quality and effectiveness of the product. The study recommends that the management of the companies should develop policies on how to neutralizes the dominance of one interactive quality against the other and also adopt best International practices in service quality in an organization. In addition, the management should also give equal opportunity to enable them feel the need to improve in their services, in order for all employee irrespective of outcome quality to enhance effectiveness in the organizational performance, which may resulted into creating customer retention.

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Appendix I

Table 4.1: Descriptive Statistics of the Variables

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CUSR	343	1	5	2.69	1.443
INTVQ	343	1	5	2.98	1.438
OUTCQ	343	1	5	2.97	1.459
Valid N (listwise)	343				

Source, Field, 2020

Table 4.2 Correlation Matrix

		CUSR	INTVQ	OUTCQ
CUSR	Pearson Correlation	1		
INTVQ	Pearson Correlation	.051	1	
OUTCQ	Pearson Correlation	.479	-.301	1

Source, Field, 2020

Table 4.3 Summary of Regression Result

Variables	**Co-efficient**	**t-values**	**p-values**
Coefficient	1.233	1.434	0.159
INTVQ	0.239	1.739	0.090
OUTCQ	0.471	3.349	0.002
R^2	0.308		
Adjusted R^2	0.257		
F-stat	6.079		
F-sig			0.002

Source, Field, 2020

Service Charges and Telecommunication Companies in Gombe State, Nigeria: The role of Nigerian Communication Commission

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Abstract

Telecommunication industry in today's world has become a requisite tool in the entire globalization process of becoming a global village. This study investigated the extent of regulatory role of Nigeria Communication Commission's on the service charges in telecommunication firms operating in Gombe State, Nigeria. The study adopted survey research design. The study is descriptive as well as hypothetical in nature. The study is a Non-contrived which is a natural setting in which work progress with minimal interference with a population of 172,871,094 subscribers from the four available networks (Airtel Network, Glo Nigeria, 9mobile and MTN Nigeria) in the State, while the sample size is 384. The hypotheses formulated were tested using multivariate analyses. The study concluded that, there is significant relationship between the variables and recommended as; the need to improve and sustain activities of the telecommunication firms in Gombe statem, in terms of monitoring and enforcement in their service charges. The regulatory bodies of the telecommunication firm in Gombe state should be pro-active in ensuring that the call charges for all firms are the same to maintain fair promotion of products.

***Keywords**: Communication, Regulation, Service Charges, Telecommunication*

Introduction

The world today is a global village given that telecommunication or communication industry at large has become a requisite tool in the entire globalization process. The roles of Telecommunication firms nowadays have become highly essential in the life of all and sundry. In Nigeria, development in this vital sector has been very phenomenal and the usage of Telecommunication (GSM) has become very prominent with noticeable effect on several economic aspects in spite it poor services and other related challenges over looked by the regulatory authority. It is however important to investigate the impact of this latest regulatory body on service charges of telecommunication firms in Nigeria. One will believe that, charges are so enormous that many customers cannot justify why they always get their air time deducted at any given time. It is obvious that telecommunication market is booming, while the business seems to consistently grow with the company return on investment increase in Nigeria, where consumers are concerned on the efficiency and effectiveness of service delivery which has been frustrating them.

From time old age, information and communication has always formed the foundation of human existence (Stone, 2018). This point has driven humans to incessantly seek ways to improve the system of information and the flow of communication of such information to one another, irrespective of distance and on a real time basis (Ndukwe, 2003; Croft, 2004). The detonation in technology which piloted the information age has become the basis for defining power in the contemporary world. Stone (2018) posits that, it is a regarded fact that no modern economy can survive without central information technology and telecommunication set-up.

The regulation of infrastructure industries, such as telecommunications sector, has been affected by substantial development over the years, which shows desirability of the so-called enticement regulation procedures by the regulatory authority. Telecommunication globally has brought about radical changes on how people interact, communicate, learn, understand, work and even transactions in a commercial sector, and the impact of telecommunication sector is evidently feasible in virtually all the countries which Nigeria is inclusive.

Everything has a history which telecommunication sector is not exceptional, Olawale (2008) narrated that, Wireless Telegraphy Act of 1961 and the Rules of 1969, were major laws for guiding the sector in Nigeria since Independence in 1960. However, the law was reviewed in 1966, 1968, and 1991, thereafter the establishment of decree 75 of 1992 that established the Nigerian Communications Commission.

The telecommunication industry in Nigerian has to a certain extent toed the path of progress of the world telecommunication industry (Adi, 2015; Bongo, 2015), this has shown where state monopoly was liberated, and also the competition was weak but has grown stronger in competition as well as increasing service revolution among others. A number of scholars have attested to the relevance of telecommunication services in national economy (Danbatta, 2017, Okada & Hatta, 1999). To Blahut (2010) communication industry has been acknowledged among scholars as an imperative device for nation's economic growth also has anotable role for the modernization of other sectors.

The success story of the industry in Nigeria has generated new entrant to the industry, considering the intense competition in the industry. Nigeria, today is the fastest growing telecommunication market in Africa (Ndukwe, 2005), with that, policies and programs to see to it progress through the regulatory agencies is paramount. In this current global dispensation, telecommunication and or ICT remain the priority for advancement.

Telecommunication is a network with different firms leaning on it for effective communication to meet the shareholders needs and satisfy its customers. Ndukwe further orchestrated that, telecommunication is the enabler of wide based of social and economic growth and therefore, services should be available and reasonable to masses. Communication, regardless of the type and method is one of the key factors that influence the success of every firm. Globally, it has been from one era to the other as the world changes with development in general technologies. The point that Nigeria is among the world's fastest moving telecommunication industry, which serve as the major pusher of telecommunication companies in within and outside the country by financing the industry (Danbatta, 2017). It is evident that, the industry has been booming in recent times, leading to enormous investments by both private and public sector, hence the need to properly understand the service charges on customers.

Service provider are always operating in a competitive environment and customers on the other hand are looking for accessible and affordable network that meet with their demand, even though there are other factors that may influence consumers to patronize a particular service provider, but it differs among individuals, such as monopolistic network in the particular environment, price of the services, data packages, amongst others. However, some lament the frustration by the network providers as worrisome (Ajibola, 2012), giving the unnecessary call charges, standing charges and by service providers, which is the basis for this study.

Nigeria, according to NCC (2017) is among the largest telecommunication markets, with an estimated subscriber of about 149.2 million. Given the fact that, the customers are constantly at the pace of speed and the industry offered a significant investment on return (Ukwueze, 2011-2012).

In Nigeria, telecommunication sector has been liberalized and most of the traditionally publicly owned incumbent monopolies have been privatized or cease to exist. Consequently, National Regulatory Authorities (NRA) in the name of National Communication Commission (NCC) was established to take over the affairs and proceed to thrive in the competitive markets, control, guide and supervise the relationship among the existing and new entrants, who at first relied on services among other responsibilities. Telecommunication industry, regardless of the call charges and standing charges by network providers, it is a key area where rivalry among competitors tend to demystify how to effectively offer the best network services to their consumers, but little has been done to the end users as unnecessary standing charges kept on flowing from all angles (Ellig, 2006).

Statement of the Problem

Customers' satisfaction is fundamental to every organization or firm. When end users do not see reasons for patronage, and continuously and consistently using your product or services the firm may be likely heading to doom or to some large extent may not stay long in its operation. Enormous issues and challenges (standing charges, call charges, network interruption and even the terrify plans and so on) on how those network service providers meet the demand of its customers remains unanswered especially in Gombe State where the research was conducted and such problems continue to persevere in country and in the among the young countries in which it has been severely affecting the general services of the telecommunication industry. To address some huge deficit or challenges in the sector for service users, remedial measures, rules and regulations have been put in place by the regulatory agencies of various countries across the globe, in Nigeria, Nigerian Communication Commission (NCC) is responsible and saddled with activities. In spite of the policies and rules by NCC to network service providers in Nigeria, it seems that it continually falling on the deaf ears of the operators.

The current advancement of telecommunication sector in Nigeria, its been echoed by extreme customer enlargement which makes the operators to introduce new service charges and other related services like tariff which does not always favour the consumers, hence the need for proper monitoring and enforcement by the regulatory agency. Customer criticisms in the communication sector in the country recount to the rate of charges and excellence of services provided by the service providers. Some of the major issues relating to service charges include amongst others; unexplainable charges or credit deductions, wrong charges, numerous billing and charging against untendered service, for example, text messages sent that was not received by the receiver. However, other issues connecting to quality of services which failure to get your line recharged as a result of not working recharge card or poor system; call setup inability including interruption service, fractious talk, dropped calls, and other wireless lines. Similarly, some of the common complaints include unnecessary and or deceptive advert, scam messages, inferior tools used by telecommunication firms or their proxies; closeness of the masts to residential areas or offices and pollution power supplies.

Impediments to service charges by network providers remain a serious and growing concern especially in Gombe State. The dramatic manifestation of some strange service charges and the increasing integration of same on the un-soliciting charges have turns into myriad forms of economic challenges since communication has become priority. There are four network providers in Gombe state these are, Glo network Nigeria, Airtel Network, Etisalat (9mobile), and MTN. This study intends to investigate the extent to which service charges by these network service providers impact under the regulatory agency in Nigeria. Since limited studies were carried out in the field. For example, Ellig (2006) conducted similar study but was limited to cost and consequences of Federal telecommunication regulations. In the same vain, Bongo (2015) carried out similar research, but was limited to competitiveness of the industry. The objective of this study is to examine the impact of monitoring and enforcement on the standing charges of the telecommunication firms in Gombe State, to assess the impact of promotion of fair competition by the regulatory body on the call charges by the telecommunication firms in Gombe State. Lastly to determine the impact of protection approach by the regulatory agency on the network interruption of the telecommunication firms in Gombe State. Thus, the following hypotheses are formulated:

H_1: there is no positive relationship between monitoring and enforcement with service charges in the telecommunication industry in Gombe state;

H_2: there is no significant relationship between promotion of fair competition in the telecommunication industry and service charges in Gombe state;

H_3: there is no significant relationship between protection approach by regulatory body of the telecommunication industry and service charges in Gombe State.

Literature Review

Nigeria Communication Commission (NCC) as a Regulatory Agency

Nigeria Communication Commission (NCC) is the sole regulator of the telecommunication sector in Nigeria which has been powered by the NCC Act of 2003. Nigeria Communication Commission (NCC) is the sole regulator of the telecommunications sector and is vested to ensure the 'protection and promotion of the interest of consumers against unfair practices including, but even though not limited to issues of tariffs and charges, efficiency and effectiveness of communication services, materials and facilities'(Nwakanma, Udunwa, Anyiam, Ukwunna, & Obasi, 2018; Jacob-obi, 2018). However, the regulatory body also has the responsibility of handling fair competition in the industry and fortification of communication services and service providers from misapplication of power, while Economides (2004) opined that regulators assist in unfair practices by other service or facilities provider or equipment suppliers' that are relevant in the telecommunication industry even as it costs both the consumers and the regulatory body huge amount.

Regulatory agency is playing a significant imperative role in the growth of the Nigerian telecommunications sector at large. The advancement in Technological system is one aspect that mobile communication is key and can be seen from services rendered by the service providers. In spite of the evolving issues of high tariff, drop calls and unnecessary charges in the sector by the service providers, still competition among the new entrant including the incumbent telecommunications service providers in Nigeria. Even though, with the current regulatory era, consumers may be apt to benefit, in terms of low charges and boosted value, but seems the other way round as this study is keen to investigate and when the existing service providers are subject to the forces of the market. Though, industry specified guidance is in place, regulatory establishments have some significant role in imposing functional rules, where they not implemented and by offering important counsel regarding and encouraging for the efficient ways to remained in the same system of maintaining the rules.

After the inception of the NITEL in 1985, the telecommunications industry has seen a significant development. However, the country is waging far below expectation if compared with even some near African nations, not to talk of the developed countries like USA, Germany and UK (NBS, 2015). Even though, Nigeria has since deregulated the industry just to solve some issues and observe some challenges. It was the result the deregulation that necessitated the establishment of Nigerian Communications Commission (NCC) in 1992, Decree 75, saddled with the responsibility are amongst other things; providing enabling environment for the regulation and offering of telecommunication services, also through that, new entrant (private) into the market were allowed and fair completion were promoted.

In 1993 when the Nigeria Communication Commission were inaugurated, in its Quarterly report of 2013, that there are guidelines that have been in place since its inception individual/companies/investors which were later given a mandate to do some technical works in the industry such as repairing and other maintenance of network links. Furthermore, new tariff is being guided by some principles, one has to apply through the licensed and is registered with the NCC, also all proposed tariff by the licensed operator must be presented to the commission for approval, the price of the tariff under request should be in line with price tagged by the commission, among other regulation concerning the services offered by the operators in the industry. According to Ellig (2006) Afonso and Scaglioni (2006) the most important point in the process is the time frame after the approval, the commission demanded that, tariffs approved should be declared within sixty days (60) after the approval has been delivered and approved by the commission or such approval have to be revoked and in a situation where the operator have interest in the services, he/she has to re-apply from the commission. However, Mawoli (2009) and Okonji (2013) stated that all operators in the telecommunication industry will sign a Memorandum of Understanding (MOU) which will state all ethics and principles concerning the product offered and the tariff are in terms with commission’s rules. However, if the operator(s) tempered with the terms of engagement before or after the submission, the applicant has to re-apply for the approval.

Telecommunication in Nigeria

Telecommunications nowadays is significant to the nation’s economy, it serves as ladder that stimulates the advancement of other sectors, especially in education to health, transportation agriculture, banking to tourism to mention but few (Afonso & Scaglioni, 2006). However, it is crucial in periods of emergencies or natural adversities which will harness the situation. Similarly, according to Ellig (2006) it substantially decreases the rate of risks and severities of journey and rural-urban movement.

Similarly, telecommunication industry has long been recognized across the globe as an imperative instrument for socio/economic progress of a country and plays an extraordinary part in development and transformation of numerous sectors of the economy through connectivity, as this has been proven in (Nwakanma, Udunwa, Anyiam, Ukwunna, & Obasi, 2018).Some people often see telecommunication sector as the most lucrative industry now across the globe (Freeman, 2005). In Nigeria for example, there are over 100 million households who have telephones and 50% of total households in the country have Internet access and there are some over 170 million mobile subscribers (NCC, 2018). With that, it is enough reason to understand that, the industry need to be checkmated on their operational activities. Freeman (2005) assert that telecommunication is the "transmission of signals over long distance, these include; telegraph, radio, or television. From the above definition, the author also relates it to as electrical communication inclusive. Even though it looks like descriptive statement, but to some extent broader dimension. However, many said that, telecommunication is concerned with voice telephony and the one offering the service is the local telecommunication company, thus, this study holds a wider understanding of the concept. Telecommunication comprises the "electrical communication at a distance of voice, data, and image information", for example, TV.

The official website of the commission indicates that, the Nigerian Communications Commission (NCC) there were one hundred and seventy-two million eight hundred seventy-one and ninety-four (172,871,094) on the go customers on the telecommunication networks in the country as at 2018 December, in November 2018 there was a contradiction with 169,104,830 customers recorded. This was disclosed by the NCC during their end of the Month Subscriber/Operator, the information was published on NCC website on the 27th march, 2019. The regulatory commission (NCC) reports that the active subscribers increased by 3,766,264 (Onuegbu, 2018).

Accordingly, individual networks records obtained from the reports on the commissions site stated that, MTN Nigeria had 67,133,009 subscribers in December 2018, with a growth of 158,017 from the 66,974,992 it recorded in November 2018. While Glo Nigeria, the number has increased in December with

1,982,109, Airtel Nigeria had 44,180,484 subscribers as at under review, which showed an increase of 1,061,330 users, from the 43,119,154 it recorded in 2018 November. While, 9mobile had 15,917,015 subscribers in 2018 December, having an increase of 555,344 subscribers, against 15,361,671 in November 2018.

Service Charges

Charges on the services rendered by the telecommunication companies is no doubt play a role in motivating customers to either switch or remain where they are with certain service provider. Recently, the Nigerian Communication Commission (NCC) has intensify its mandate to educate telecommunication consumers on the service charges (Jerome, 2003), this is more of consumer awareness outreach which enlighten the effort, care and concern of the regulatory body on the side of the consumers.

The essence of service charge is to qualify the service provider to generate all actual value of expenses not just for services in its present nature, but also envisaging any rational way or modification in the future (Philpott & Hicks, 1994). The basic of service charges relied in taking the perception of both the owner and the lessee. Most often, all side views the prominence of service charges in a different way, and to their best interest. Edward and Krendel (2007), show that the owner will want to recover all expenditure from the lessee. The lessee sometimes will ensure that the recoverable things are limited to the indispensable services for the assets. Martin (1981) opined that, service charges is the "cost to a customer in indemnifying service provider against real and potential expenses on the shielding, maintenance and replacement of the equipment and other infrastructure.

Sometime in 2001, under the then Olusegun Obasanjo administration, when GSM was introduced in Nigeria, customers were paying high tariffs for the utilization of the available services (Mawoli, 2009). Also, customers for those service providers had little or no choice to somewhat due to few service operators, scope of coverage and lack of considerable evidence about the telecommunication services, therefore, consumers have no option than to agree to the service as it was (Nwakanma, Udunwa, Anyiam, Ukwunna, & Obasi, 2018 and Jacob-obi, 2018). However, as the time goes on and with the entrance of more network providers into the market, it seems that now customers' have better knowledge of what is happening with the service charges in the telecommunication industry especially the tariff and other service charges, as such it makes the subscribers to look for better services and value for the amount paid. According to Freeman (2005) telecommunication consumers (customers) to some extent are fade up with some challenges they faced from service providers, these include among other challenges are; too much charges on drop calls, weak networks, nonchalant attitude from customer cares, unnecessary text massages, poor service value, and unsustainable advertisement. This makes subscribers to change or switch to other available networks.

Monitoring/Enforcement and Service Charges

One of the important or foundamental point in the activities of telecommunication is voice call and is the most efficient and frequent dimensions in getting it back from the receiver, but the standing charges may and is making many consumers to a rethink of staying with the particular network provider, hence the need for proper monitoring or enforcement of laying rules and regulation. Therefore, anything less and above stipulated charges set by the regulatory body on the service may either affect the entire process or the end users. Considering the current economic situation bedeviling the country (Nigeria), it is significant for the study to understand the extent at which this call charges can influence the general activities of telecommunication industry in the country (Brown, 1999).
While monitoring and or enforcement in determining call charges for a switched call according to Brown (1999), dimensions that can influence the prices are the place and location/destination of the customer that is called, the timing of the call in question and finally the system that the call was initiated. In particular, calls which are established through dialing system are frequently charges at a lesser rate than charged calls through the manual machinist (Brown, 1999).

Promotion of Fair competition and Service Charges

Enormous telecommunication competition persists in country and even in some countries in such a way that ruthlessly affected the performance and development of the economy, which makes it to offer poor service of all categories. Telecommunication industry is known to lucrative that lead to or believed to be highly competitive (Adi, 2015). Norton (1992) claims that telecommunication sector has reduced the cost getting information and as well the variable costs of competing among the rivalries.

The liberalization of the sector ushered in the first Global System for Mobile Communication (GSM) operator and the award of the first Digital Mobile License

(DML) in 2001. Since then, according to Lola (2016) the industry has observed an exceptional growth in terms of investments and development, which shows over $29 Billion from 2001 to 2018. The sector has witnessed new entrant which make the competition so stiff in the market, with a number of customer base across all networks. Innovative and initiatives approach of the operators in the industry has enriched consumer experience by restraining difficulties to accessing alternative services of another network. In spite the recent reforms in the industry to address the challenges of infrastructural decay, which has been seen as the primary step, with the good record of success of comparable strategies in a developed country, still competition remains an issue especially in respect to call charges. Two crucial components of these reforms according to Roller and Waverman (2001) are privatization and rivalry among operators. The much argued aspect of it is that, private sector professional and turnover intention has allowed the private sector operate infrastructure industries more efficient than the public sector. Thus, it does not really apply where competition does not follow privatization, particularly when the regulatory authority is not up its responsibilities. For that reason, the stakeholders are seeing competition as one of the tools that will or could make the telecommunication sector stronger and compete at the global level.

Protectionism and Service charges

The sole responsibility of the regulatory authority is to protect the interest of the telecommunication consumers (Ukwueze, 2012).Some studies like that of Paul (2011) viewed that since its inception, telecommunications sector has been seen by many including government agencies and Department as a “natural monopoly sector”, by that, the provision of services by telecommunications industry was believed to be more organize, efficient and cost effective if controlled by an operator, instead of multiple operators inflicting extensive and expensive network infrastructures at high cost to the physical area and economy at large. However, governments thence afterward have taken the responsibility of providing telecommunications services through their Public Switched Telecommunications Networks (“PSTNs”), trusting the service would be better with that approach, however, the multipurpose service is believed to be stronger where the heavy network infrastructure costs were managed by the public instead of the private owners where the service operators are being guided generally by government policy objectives. Even though the paper was a mere opinion that it was not empirically proven to the effect of it assertion. This study will empirically observe the extent of the regulation operation has impacted on the industry with multiplicity network providers against the opinion of Paul above regarding network interruption.

Penalties and Tariff Plans

Tariffs are vital in defining access to the service area and extending same. The essential argument to contemplate is how to connect socio-cultural believe with the economic issues of the service providers so as to link and understand the tariff charged are on same page with the socio-economic realities of the country like Nigeria of today. In its effort to ensure this objective is achieved, the NCC Act has since established guidelines for determining tariffs, see tables below. However, considering the competitiveness in the industry, the tariffs do fluctuate among the network providers, though, the general tariffs regime in the country has been closely monitored by the NCC, approval and certificates of service provider some guide, regulations and cost of tariffs to be charged. In this study, tariffs of the service providers under study are tabulated. According to Nigerian Communication Acts of 2003 which state that, the Nigeria Communication commission is responsible for the approval of tariffs and any other charges as it may concern, this is cited in section 108 of the ACT 2003 of NCA.

Telecommunication service providers in Nigeria differs when it comes to method and what they charge for the services rendered to the consumers which is called "Tariff plan." Tariff plans billing systems are mostly different even though is provided by telecommunication network operators which also specify the charges that will be paidby the subscribers of their networks. In this study one of the fundamental questions raised is the impact of regulatory body in the tariff plans of network providers in the country. According to Paul (2011), end users have been jumping from one network to the other looking for the cheaper or reliable network, this is because many of the tariff plans are usually fixed at rate, irrespective of whether the call was at peak times or not while some are on peak and off-peak charges.

When asked by a GSM subscriber according to the study of Paul (2011), was trying to ask if the present subscriber prices charged is really reasonable, even though in the report of NCC at it monthly report of 2015, that the prices as of then were not justifiable considering the competition in the sector, seemingly, the prices are been fixed and determined by the current forces in the market and in that report, it claimed that, it is not their duty to determine the prices considering the free interplay in the industry. This has contradicted their present role in justifying the current prices in the market, where even the present Minister opined that, Data and other related charges are being controlled and managed by the commission. Hence, gives this study an edge to investigate the role of the regulatory authority on the service charges in the telecommunication services.

Empirical Studies

This segment presents the review of the related literature in the field so as to establish a fact and or foundation for the investigation of the regulatory impact of service charges on the telecommunication firms in Gombe metropolis. The empirical studies included previous related studies conducted in various places in Nigeria and beyond.

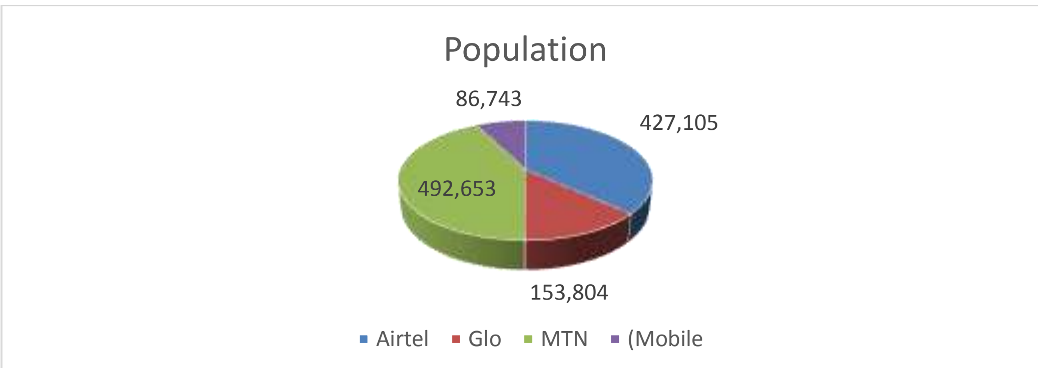
Lola (2016) investigated the effects of telecommunication infrastructural development on the Nigerian economy at large and examined the growth implication. The study used Secondary data and data generated was later analyzed using econometrics statistical tool. In the econometrics tool adopted, model was specified and Ordinary Least Square (OLS) approach was used in estimating the results. Similarly, the results of the study showed that telecommunication have influenced the economy development by aggregating the market access and decreased the channeling cost, which to some extent inflicted the service operators cost. In furtherance of that, the results of the study showed how GSM has empowered Nigerians to do their businesses easily leading to the higher performance, employment generation among teaming youth and prevalence through increase in income generating capacity and business expansion; improving the standard of living; has increased the economic level of the country at large and kindle the economy to reach the anticipated macroeconomic policy level. In this study, it shows that, GSM has direct relationship with the performance of business and invariably boost the economic level of both individual and society. Therefore, this study will complement the above assertion after making vital recommendations on the impact of regulatory body on service charges in the industry.

Ellig (2006) conducted similar research on the United State of America (USA), with the aim of investigating the cost implication of regulatory body in the telecommunication sector in the State. It specifically centered on the regulatory variable aspect of system. According to the study, rules and principle determines which service are charged above the normal price, which services are priced below normal cost, and the subscribers will be charged too much in order to subsidize others. Some of the indicators used by the study include 911 services within the state on the economic activities such as inflation rate, health and hospital factors. The study observed that, all the variables adopted in measuring the major issue have been impacting significantly to some extent. Therefore, the study concluded and recommended that, the government at the center should achieve the entire telecommunication allocations for minimum charges to community through final revenue system. This can reduce the social price by sponsoring the transmissions with same charges on internal call bills, related to the government subscriber line price.

The FCC has made choice to strategize out the unbundled network component level, the study observed that, if upheld, it should as well considerably decrease the amount of price reallocated through regulation and motivate infrastructural level rivalry in internal call service rate. Some government regulations policies succeed positive results, but not very effectively (Lola, 2016). The study understands that, adopting multiple services programme could increase the number of subscription of telephone but it will cost into billions of naira it said.
Afonso and Scaglioni (2006) conducted to assess the performance of "National Regulatory Authorities "among the sixteen (16) European Union nations concerning economic policies in telecommunications industry. By establishing a supposed Composite Regulatory Performance Pointer for regulatory parts such as efficiency of the commission, effectiveness of the dispute settlement system and general market access conditions. The results indicated that inadequacies could be positive and good developments is likely among the countries and the study concluded that, regulatory authority should consider the easiest application of a dissimilar type of regulatory involvements (Woln, 2000).

Methodology

This study is a cross sectional approach, the data was gathered at once and is a positivist, because research design in a positivist setting covers decisions leading to success (Sekaran, 2003), as such the structure was the survey research by seeking the opinion of many respondents. The study is descriptive as well as hypothetical in nature. The study is a Non-contrived which is a natural setting in which work progress with minimal interference while study is conducted. The population of this study comprises of the entire network subscribers of the available networks (Airtel Network, Glo Nigeria, 9mobile and MTN Nigeria) in Gombe metropolis. The entire population in Nigeria is 172,871,094 active subscribers on the telecommunication networks as at December 2019, as against 169,104,830 recorded in November 2018 (NCC, 2018). However, this study has been narrowed down to Gombe State therefore, the specific population for this study is the entire network subscribers in Gombe state, which is 1,160,305 (Airtel 427,105, 9Mobile 86,743, Glo Nigeria 153,804 and MTN 492,653).



The size of this study was 384 participants. This is in line with Krejcie and Morgan (1970), who maintained that, if the estimated population is more than and or above one million suggested to adopt 384 size (See appendix i). Stratified sampling technique was adopted in categories of the network providers first, so that they all have equal chance of participation. This is in line with the work of Singh and Masuku (2014), stratified sampling were employed to categorize the population of the study from a stratum for the population. However, purposive sampling technique has been used in selecting the subscribers as well as staff of the network providers, this is due to their relevance to the investigation as a respondent, and this has been backed by Singh and Masuku (2014) and Ilker and kabiru (2017) who opined that, sampling design is centred on the verdict of the scholar, as to who will provide the best information to succeed for the objectives, where the work need to focus on specified group with the particular view to have the needed information and the willingness to share same. Also Dolores (2007) further affirmed that purposive sampling is a type of sampling in which a person or events are deliberately selected for the important information they can provide that cannot be gotten as well from other choices.

A five-point Likert scale questionnaire with closed ended questions was used to solicit responses from respondents. The study used descriptive statistical analysis approach to analyse the sample characteristics, thereafter, the hypotheses formulated earlier were tested using multivariate analyses with the aid of Statistical Package for Social Sciences (SPSS) version 23.

Result and Discussion

Out of range values

This study conducted an out of range values (ORV) test. This is to determine whether the coded values were entered correctly or a human error was committed during data entry. There was a double entry of figure which was corrected and presented in Table 1.

Table 1: Out of Range Values

	N	Minimum	Maximum	Mean	Std. Deviation
Q1	384	1.00	2.00	1.3616	.48182
Q2	384	1.00	4.00	2.1977	.86628
Q3	384	1.00	5.00	1.4294	.77374
Q4	384	1.00	4.00	3.0227	.67574
ME1	384	1.00	5.00	4.1299	1.02251
ME2	384	1.00	5.00	4.0791	.91977
ME3	384	1.00	5.00	4.3503	.86037
ME4	384	1.00	5.00	4.2486	.90786
ME5	384	1.00	5.00	4.2655	.91241
PFC1	384	1.00	5.00	4.2429	.82073
PFC2	384	2.00	5.00	4.2147	.75318
PFC3	384	2.00	5.00	4.2203	.77021
PFC4	384	2.00	5.00	4.1582	.79619
PFC5	384	1.00	5.00	4.2373	.83949
PA1	384	1.00	5.00	3.9548	.86484
PA2	384	1.00	5.00	4.1469	.81248
PA3	384	1.00	5.00	4.0904	.81378
PA4	384	1.00	5.00	4.0000	1.01130
PA5	384	1.00	5.00	4.1130	1.13753
SC1	384	1.00	5.00	4.4068	.77133
SC2	384	1.00	5.00	4.1921	.83757
SC3	384	1.00	5.00	4.0565	.86417
SC4	384	1.00	5.00	4.0847	.99923
SC5	384	1.00	5.00	2.8103	1.19426
Valid N (listwise)	384				

Source: SPSS 22.0

From Table 1, the minimum value of the entered data is 1, while maximum scale is 5. No value was found to be higher than 5. Therefore, indicating that all the coded data were correctly entered.

2. Missing values (MV)

Table 2: Missing value

	N	Mean	Std. Deviation	Missing		No. of Extremes[a]	
				Count	Percent	Low	High
Q1	384	1.3616	.48182	0	.0	0	0
Q2	384	2.1977	.86628	0	.0	0	0
Q3	384	1.4294	.77374	0	.0	0	7
Q4	384	3.0227	.67574	0	.0	.	.
ME1	384	2.2090	1.23230	0	.0	0	0
ME2	384	2.1299	1.27032	0	.0	0	0
ME3	384	4.1299	1.02251	0	.0	15	0
ME4	384	4.0791	.91977	0	.0	11	0
ME5	384	4.3503	.86037	0	.0	8	0
PFC1	384	4.2486	.90786	0	.0	9	0
PFC2	384	4.2655	.91241	0	.0	13	0
PFC3	384	4.2429	.82073	0	.0	5	0
PFC4	384	4.2147	.75318	0	.0	4	0
PFC5	384	4.2203	.77021	0	.0	5	0
PA1	384	4.1582	.79619	0	.0	4	0
PA2	384	4.2373	.83949	0	.0	8	0
PA3	384	3.9548	.86484	0	.0	0	0
PA4	384	4.1469	.81248	0	.0	3	0
PA5	384	4.0904	.81378	0	.0	6	0
SC1	384	4.0000	1.01130	0	.0	0	0
SC2	384	4.1130	1.13753	0	.0	20	0
SC3	384	4.4068	.77133	0	.0	4	0
SC4	384	4.1921	.83757	0	.0	8	0
SC5	384	4.0565	.86417	0	.0	0	0

Source: SPSS 22.0

This research conducted a missing value test, to determine if the missing values are bias to the result. Table 2 shows that there is no serious missing value, since it indicated that the percentage of missing is 0.0%.

3. Normality Test

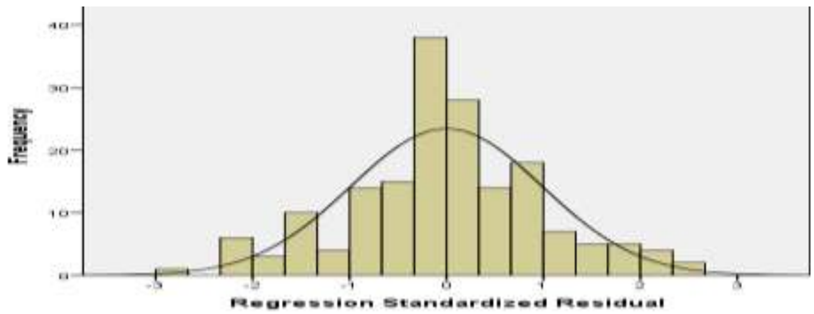


Figure 1: Normality Test

Figure 1 shows a histogram that was used to test for the normality of the data. The diagram shows that the bell-shaped are evenly skewed to the right and to the left. Therefore, it is normally distributed, and appropriate for the estimation of parametric test.

Reliability Test

Table 3: Test of Reliability

S/N	Questionnaire Constructs	Cronbach Alpha Reliability Result	Number of Items	Remark
1	Monitoring and enforcement	0.796	5	Reliable
2	Promotion of fair competition	0.788	5	Reliable
3	Protection approach	0.750	5	Reliable
4	Service charges	0.718	5	Reliable
5	Overall	0.764	5	Reliable

Source: SPSS 22.0 Output

PER

Table 3 shows the result of the Cronbach for each construct used for this study. Cronbach Alpha enables the researcher to test for the suitability and fitness of the instruments for data collection. The result in table 3 shows that the value of the Cronbach Alpha for each construct are 0.796, 0.788, 0.750, 0.718 and 0.764. This implies that the instrument is reliable.

Descriptive Statistical Analysis

This sub-section comprises the descriptive statistics which present the results of the characteristics of the respondents such as the Gender, Age group, the marital status and types of network.

Table 4: Age Range of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 20years	125	32.6	32.6	32.6
	21 - 30 years	172	44.8	44.8	77.3
	31- 40 years	63	16.4	16.4	93.8
	40 years and above	24	6.3	6.3	100.0
	Total	384	100.0	100.0	

Sources: Survey 2019

Table 4 shows the frequency and percentage of the respondents' age group. The result shows that 125 of the respondents which has a percentage of 32.6% are less than 20 years old. Also, 172 respondents representing 44.8% are found to be between the age ranges of 21-30 years. 63 of the respondents representing 16.4% are between the age ranges of 31-40 years. Finally, 24 respondents representing 6.3% are 40 years and above.

Table 5: Marital Status of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	135	35.2	35.2	35.2
	Married	249	64.8	64.8	100.0
	Total	384	100.0	100.0	

Sources: Survey 2020

Table 5 shows the result frequency of respondents based on their marital status. It revealed that 135 of the respondents representing 35.2% are singles. While, 249 respondents representing 64.8% are married.

Table 6: Gender of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	132	34.4	34.4	34.4
	Female	252	65.6	65.6	100.0
	Total	384	100.0	100.0	

Sources: Survey 2020

Table 6 shows the result frequency of respondents based on their gender inclination. It revealed that 132 of the respondents representing 34.4% are male. While, 252 respondents representing 65.6% are female.

Table 7: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SC	384	1.80	5.00	4.1582	.58606
EM	384	1.80	5.00	4.2147	.68756
PFM	384	2.00	5.00	4.2147	.58583
PA	384	1.40	5.00	4.0610	.66256
Valid N (listwise)	384				

		SC	EM	PFC	PA
SC	Pearson Correlation	1	.786**	.786**	.737**
	Sig. (2-tailed)		.000	.000	.000
	N	177	177	177	177
EM	Pearson Correlation	.786**	1	.716**	.528**
	Sig. (2-tailed)	.000		.000	.000
	N	177	177	177	177
PFC	Pearson Correlation	.786**	.716**	1	.597**
	Sig. (2-tailed)	.000	.000		.000
	N	177	177	177	177
PA	Pearson Correlation	.737**	.528**	.597**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	177	177	177	177

Source: SPSS 22.0 Output

The results indicate that the mean scores of the latent variables range between 3.9126 and 4.2147 on a 5-point Likert scale, while the standard deviation ranges between 0.585 and 0.687. The standard deviation is small relative to their respective means, implying that the statistical mean providesa good fit of the observed data (Field, 2009). Therefore, confirming that the study sample is an accurate reflection of the population.

Table 9, reveals that monitoring and enforcement correlates with service charge ($r=0.786$, $p\leq.05$). Promotion of fair competition correlates to service charge by ($r=0.786$, $p\leq0.05$). Protection approach and service charge are correlated by ($r=0.737$, $p\leq0.05$), implying a strong correlation between the dependent and independent variables.

Table 10: Regression Results
Dependent Variable: SC

	Model	
	Coefficient	**P-value**
constant	0.176	0.234
EM	0.319	0.000
PFC	0.230	0.000
PA	0.203	0.000
R^2	0.821	
N	384	
F*	194.391	0.000
Durbin-Watson	1.953	
VIF	2.139, 2.603, 2.298 and 2.431	

Table 10 shows that the coefficients are positive and statistically significant at 1% level. Also *R*-Squared which shows the proportion of the total sample variation in the dependent variable that is explained by the independent variable is 0.821 shows that 82.1% contribution of monitoring and enforcement, promotion of fair competition and protection approach to service charge. The result also indicated that there is no auto-correlation since the Durbin-Watson value is approximately 2. The F-statistic has a value of 194.391 and p-value of 0.000. It means that there is strong linear dependency of the coefficients jointly, thus, the model is a good fit statistically.

The variance inflation factor for the predictors is used to test if there is a strong linear association among them. The result of the multicollinearity shows that there is no multicollinearity among the independent variables, since the values of the VIF are less than 4 which is the benchmark.

Test of Hypotheses

Hypothesis 1: There is no significant relationship between monitoring and enforcement and the service charges of the telecommunication firms in Gombe State. The result in table 10 shows that the relationship is positive and statistically significant ($\beta = 0.319$, $p<0.05$), thus hypothesis 1 was supported. This means that there is a significant relationship between monitoring and enforcement and the service charges of the telecommunication firms in Gombe State.

Hypothesis 2: There is no significant relationship between promotion of fair competition by the regulatory body and the service charges by the telecommunication firms in Gombe State. The result in table 10 indicates that the relationship is positive statistically significant ($\beta = 0.230$, $p<0.05$) thus hypothesis 2 was supported. This indicates that positive change in promotion of fair competition influences is associated with a positive change in call charges by telecommunication firms in Gombe state. Therefore, there is a significant relationship between promotion of fair competition by the regulatory body and the call charges by the telecommunication firms in Gombe State.

Hypothesis 3: There is no significant relationship between protection approach by the regulatory agency and the service charges by the telecommunication firms in Gombe State. The result in table 10 indicates that the relationship is statistically significant ($\beta = 0.203$, $p<0.05$) thus hypothesis 3 was supported. This means that a change in protection approach influences is associated with a change in the service charges. Hence, there is a significant relationship between protection approach by the regulatory agency and the service charges by the telecommunication firms in Gombe State.

Conclusion and Recommendations

The main objective of this study is to evaluate customer perception toward Nigerian communication commission regulation of service charges by telecommunication firms. Specifically, the study examined the effects of monitoring and enforcement, promotion of fair competition and protection approach on service charges by the telecommunication firms in Gombe State. It was established that monitoring and enforcement has a significant effect on service charge in Gombe state. This means that effective and efficient monitoring and enforcement by the network providers will result to a cost effective service charge in Gombe state. It was also found that that promotion of fair competition has a significant effect on service charge in Gombe state. Promotion of fair competition by the regulatory body reflects the ability of the telecommunication firms to engage in promotional activities that will lead to reduced call charges for customers. Similarly, the study established that protection approach has a significant effect on the service charge in Gombe state. This implies that, effective consumer protection in terms of telecommunication firms will lead to significant reductions in service charges which will encourage consumers to continue to patronize the telecommunication sector. Based on the findings of this study, the following recommendations are made:

1. There is need to improve and sustain activities of the telecommunication firms in Gombe state in terms of monitoring and enforcement in their service charges. There should be strict monitoring and effective enforcement of the activities of the telecommunication firm. This will encourage customers remain loyal and satisfied.
2. The promotion of fair protection was found to have a significant relationship to call charges by the telecommunication firms in Gombe State. Here the regulatory bodies of the telecommunication firm in Gombe state should be pro-active in ensuring that the call charges for all firms are the same to maintain fair promotion of products. Where is there is unbalanced fair promotion, customers suffer through exploitation by exorbitant charges.
3. Protection of the customer should be utmost importance in the telecommunication firms. This is because a well-protected customer from high service charges will result to significantly satisfied customers. The regulatory bodies should always and regularly ensure customers are not exploited.

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Modeling and Forecasting Inflation in Nigeria using Autoregressive Integrated Moving Average Technique

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Abstract

This paper applies the Autoregressive Integrated Moving Average (ARIMA) methodology of Box-Jenkins (1976) to model and forecast inflation rate in Nigeria, using monthly time series dataset for the period from 2009:1 to 2018:12.The dataset has been subjected to test for unit root using the Augmented Dickey- Fuller (1981), as well as the Zivot and Andrews unit root test which accounts for structural break. The data has been established to be integrated of order1, that is I(1) in both tests, with the break date identified in 2017:01, which necessitates the use of sub sample from 2009:1 to 2016:01 and the entire sample to make comparison and determine the best model that fits the data. The study finds that the ARIMA (2, 1, 13) model using the sub sample data; which considers the structural break date is the parsimonious model as it has passed all the diagnostic tests and thus utilized to predict the future values of the rate of inflation for the period from 2018:7 to 2018:12.The forecast values are not much different from the actual values of the inflation. The study thus recommends the use of ARIMA modeling in forecasting inflation rate in Nigeria, so as to aid policy makers in designing policy measures to cushion the effects of inflation on the living conditions of Nigerians.

Keywords*: Structural Breaks, Inflation, ARIMA models*

Introduction

Inflation which is commonly referred to as the persistent increase in the overall level of prices of goods and services has some effects on the economy (Nathaniel & Emmanuel, 2018). On the positive side, it tends to increase the revenue of investors as the profit level tends to increase, lenders equally tend to benefit. There is also the likely benefit of increased investments. On the negative aspect of it, inflation reduces the incomes of savers and the people with fixed income (such as salary owners) suffer. It also causes instability in the balance of payments position of the country (Kelukume & Salami, 2014). Therefore, there is the need to have price stability which can be attained through the use of monetary policy to achieve a stable and sustainable economic growth. A very difficult macroeconomic concern facing economies and central banks is the effective and efficient monitoring as well the ability to forecast with precision future values of inflation. Nigeria as in most developing countries there exist wide gaps between formulation of policy, its implementation and its target goals. The lag between policy objectives and achievements is because of policy inconsistencies that result from the problem of monetary authorities to accurately predict future trends in the general price level.

Inflation is a vital indicator used to evaluate the performance of monetary policy instruments and thus serves as key indicator showing the trends in the movement of other important macroeconomic variables. The understanding of performance and trends of other macroeconomic indicators helps in determining future inflations and therefore serves as a nominal measure for determining value of goods and services (Moser, Rumler & Scharler, 2004). Therefore, a better and clear knowledge of inflation predicting methods is necessary for the ability of monetary policy in monitoring and evaluating the movement of macroeconomic variables as well as in ensuring stable and continuous growth of the economy.

A number of studies have been conducted in Nigeria, that tried to model and forecast future values of inflation (Kelukume & Salami, 2014; Feridun & Adebiyi ,2005;Ikoku & Okany, 2017) among others. However, to the best knowledge of the author none of the previous studies have tested for the existence of structural breaks in the inflation variable while predicting its future value, even though they have sample size greater than 50 and that failure to test for structural breaks when modeling and forecasting a time series variable with more than 50 observations could lead to misleading results (Meyler, Kenny & Quinn, 1998).The objective of this paper is to model and predict future values of inflation in Nigeria taking into cognizance the existence of structural breaks in the data. In addition, this study differs from the previous studies, as it uses most recent data in modeling and forecasting of inflation rate in Nigeria coupled with conflicting findings from previous studies, it also compares the performance of models without and with structural breaks to determine an optimal model.

This paper is structured as follows; following this introduction, section two is the review of theoretical and empirical literature, section three deals with the methodology of the ARIMA model for estimation and forecast, section four presents the results and discusses the findings and section five concludes and gives recommendations.

Theoretical and Empirical Literature

The main objective of monetary policy in a developing country like Nigeria as in most developed and developing countries is the achievement of stable prices and adequate expansion of production that could serve as a stimulus of economic growth and development (Kelukume & Salami, 2014). Generally, there are diverse views among economists as to the main factors that drive inflation and ways of its management. While, the monetarists such as Friedman (1956, 1960 and 1971) contend that inflation results when money supply is greater than the quantity of output produced in the economy, the structuralist economists contends that inflation could result in the long run in a developing country from such factors as conflicts which could affect the relative elasticity of food supply, lack of enough foreign exchange, protective measures such as the use of quota and other import restrictive measures and other structural defects in an economy (Thirwell, 1974; Aghevei & Khan 1977).

Given the divergent views, on the main factors that cause inflation, it is becoming hard to predict accurately future values inflation in developed economies as well as in emerging and developing countries. Callen and Dongkoo (1999) analyze and predict inflation in India with the use of quarterly dataset from 1982Q2 to 1998Q2 using Johansen (1988) cointegration approach period from 1997Q2 to 1998Q2 were predicted moderately well. In a study of 14 emerging market economies inflation forecasts Duncan and Martinez- Garcia (2018) apply the random walk model developed by Atkeson and Ohanian (2001) and Bayesian Vector Autoregressive model on a quarterly data from 1980Q1 to 2016Q4, finding indicates that the random walk model produce better result than the Bayesian vector autoregressive model.

Wanjoya and Waitiitu (2016) used data from the monthly values of Consumer Price Index (CPI) obtained from the database of Central Bank of Rwanda measured in Rwandan currency covering the period from 1995:2 to 2015:12 comprising a total of 251 observations. The data from 1995:2 to 2013:12 were used to fit in the parsimonious model, while observations from 2014:1 to 2015:12 were used to assess the predicting power of the model. ARIMA (4, 1, 6) has been found to be parsimonious model to predict the future values of the consumer price index as a measure of inflation. Nyoni (2018) model and forecast Zimbabwe's inflation using monthly time series data set from 2009:7 to 2018:7 and applied the Autoregressive and Generalized Autoregressive Conditional hetroskedasticity models and it has been found that generalized autoregressive conditional heteroscedasticity has a more predicting power of future inflation rate than the autoregressive model. Similarly, Fwarga, Orwa and Arthiany (2017) model the rates of inflation in Kenya using monthly datasets from 1990:1 to 2015:12 by applying the Generalized Conditional Heteroscedasticity (GARCH) and Exponential Generalized Autoregressive Conditional Heteroscedasticity (EGARCH) models find the EGARCH models as the best model to forecast inflation rates in Kenya. Nyoni and Nathaniel (2018) also apply Autoregressive Moving Average (ARMA), Autoregressive Integrated Moving Average (ARIMA) and Generalized Conditional Heteroscedasticity (GARCH) models in modeling and forecasting annual inflation rates using annual data from 1960 to 2015, the study finds that ARMA (1,0, 2) is the optimal and best model to predict future inflation and the study predicts that inflation is likely to rise to 17 percent at the end of year 2021. Similarly, Fwarga, Orwa and Arthiany (2017) model the rates of inflation in Kenya using monthly datasets from 1990:1 to 2015:12 by applying the Generalized Conditional Heteroscedasticity (GARCH) and Exponential Generalized Autoregressive Conditional Heteroscedasticity (EGARCH) models find the EGARCH models as the best model to forecast inflation rates in Kenya. Nyoni and Nathaniel (2018) also apply Autoregressive Moving Average (ARMA), Autoregressive Integrated Moving Average (ARIMA) and generalized conditional heteroscedasticity (GARCH) models in modeling and forecasting annual inflation rates using annual data from 1960 to 2015.The study finds that ARMA (1,0,2) is the optimal and best model to predict future inflation and the study predicts that inflation is likely to rise to 17 percent at the end of year 2021. Ngailo, Luvanda and Massawe (2014) apply GARCH model to analyze and forecast future value of inflation rate in Tanzania using monthly data from 1997M1 to 2012M12, they found that GARCH (1,1) is the appropriate model in forecasting inflation in Tanzania. Molebatsi and Raboloko (2016) apply GARCH and ARIMA forecasting techniques on Botswana monthly consumer price index for the period from 2005M1 to 2014M12 and finds that the general autoregressive conditional heteroscedasticity model (GARCH) performs better than the ARIMA model.

Feridun and Adebiyi (2005) examine the influence of monetary aggregates in explaining inflation in Nigeria, using Mean Absolute Percentage Error to forecast inflation in addition to the use of Autoregressive Integrated Moving Average methods using monthly time series data from 1986:1 to 1998:4 and the results revealed that monetary aggregates such as money supply and interest rates are important in forecasting inflation in Nigeria. Chukwuemeka, Emmanuel and Michael (2013), apply periodogram and fourier series to model inflation rate in Nigeria, using composite monthly inflation series from 2003:1 to 2011:12. The Fourier series is applied in fitting and forecasting the inflation rate for the next thirteen months and the forecast values compares favourably with the real values. Ikoku and Okany (2017) also apply Autoregressive Integrated Moving Average method using inflation rate from January 2009 till December, 2014 and the study find ARIMA (3, 1, 1) is the parsimonious model to forecast inflation rates in Nigeria when compared with autoregressive AR(1) model. Adubisi, David, James, Awa and Terna (2018) use Autoregressive Integrated Moving Average (ARIMA) to analyze and predict 12 month all year average inflation in Nigeria, using monthly time series data from 2006:1 to 2017:12 and the study found that ARIMA (1 2 1) is the parsimonious model that has passed all the diagnostic tests and use in forecasting the inflation from January, 2017 to December, 2017.

David and Raymond (2016) employ Autoregressive Integrated Moving Average (ARIMA) also known as Box and Jenkins (1976) modeling technique to analyze and predict yearly Consumer Price Index (CPI), on a time series dataset for Nigeria from 1950 to 2014. The results from the study found that ARIMA (3, 1, 0) is the best fitting model to describe CPI data series in Nigeria. Based on the estimated model, the future annual CPI in Nigeria for a period of 6 years from 2015 to 2020 was predicted. The forecasts showed a steady increase in the annual values of CPI in Nigeria. However, the results have shown that ARIMA (0, 1, 0) and ARIMA (0, 1, 13) have been suitable for modeling urban and rural inflation rates in Nigeria.

Osuolale, Ayanniyi, Adesina and Mathew (2017) also apply ARIMA models to forecast Nigeria's inflation rates for the periods 2006 to 2015. They identified that ARIMA (0, 1, 1) as been the best model to forecast inflation rates from 2016 to 2018. Norbert, Similarly, Zardi (2017) model and forecast inflation in Tunisia using various forecasting techniques of Vector Autoregressive (VAR), Bayesian vector autoregressive method , dynamic factor models, and forecast combination methods on a quarterly data from 2000Q1 to 2015Q4. Finding from the study indicates that forecast that utilized combination of methods leads to decline in forecast errors when compared to individual forecast models such as Autoregressive Integrated Moving Average method (ARIMA) and Vector Autoregressive (VAR) method.

Bokhari and Feridun (2006) also model and forecast inflation time series dataset for the period from 1991 to 2004 in Nigeria applied the Vector Autoregressive (VAR) method and Autoregressive Integrated Moving Average Method (ARIMA), findings from the study indicates that forecast from the ARIMA model super cedes that of the vector autoregressive method. Doguwa and Alade (2013) analyze and predict inflation in Nigeria, for the monthly dataset from July 2001 to September, 2013 of the consumer price index using the Seasonal Autoregressive Integrated Moving Average Method (SARIMA) and Seasonal Autoregressive Integrated Moving Average Method (SARIMAX) finding from the study reveals that SARIMA model is better in forecasting core inflation in Nigeria than SARIMAX model.

Methodology

This paper forecasts core inflation in Nigeria using the Autoregressive Integrated Moving Average model developed by Box & Jenkins (1976) commonly known as Box-Jenkins. The choice of the method is informed by the desire to have an idea of the forecast ability of the method. The study uses monthly dataset for the study covering the period from 2009:1 to 2018:12. The dataset was obtained from the Central Bank of Nigeria (CBN) and National Bureau of Statistics (NBS).

Variable Measurement

The variable used in the study is measured following the works of Kelukume and Salami (2014). The inflation rate is measured as the change in consumer price index expressed as percentage.

ARIMA Model

The Autoregressive Integrated Moving Average (ARIMA) is a model that combines the differenced values of the lags of autoregressive and moving average terms. It consists of the autoregressive and moving average models.

Autoregressive Moving average (ARMA) Models

Autoregressive moving average (ARMA) models are a combination of both p autoregressive terms and q moving average terms, it is also called ARMA (p,q) models and expressed as follows

$$Y_t = \mu + \sum_{i=1}^{p} \lambda_i Y_{t-i} + \epsilon_t + \sum_{i=1}^{q} \theta_i \, \varepsilon_{t-i} ----------(1)$$

The ARMA (p, q) model is expected to be stationary with zero mean and constant variance, if it is not stationary, it needs to be made stationary, either by removing trend from the series by way of adding time trend in the regression and estimating the residuals. Another way of making the ARMA (p, q) model stationary is by way of differencing the series. The variable Y_t is integrated of order 1 that is I (1), if taking the first difference produces a stationary process.

The ARIMA (p, d, q) denotes an ARMA model with p autoregressive terms, q moving average terms and difference in the order of d.

The ARIMA (p, d, q) denotes an ARIMA model with p autoregressive terms, q moving average terms and difference in the order of d. To develop ARIMA modeling, the method of Box and Jenkins (1976) method is used and the stages are explained as thus; information gathering, model specification, and estimation of the model, diagnostic test and prediction.

Box - Jenkins method requires about 50 or more observations and if there are more than 50 observations there is the need to test for the structural breaks, if structural break exists, then the sample can be break into subsamples, alternatively a dummy variable can be incorporated into the model to account for structural break. The main identification tools are the plot of the correlelogram which consist of Autocorrelation Function (ACF), the Partial Autocorrelation Function (PACF), and the use of standard tests such as the augmented Dickey and Fuller (1971, 1981), Zivot and Andrews tests for unit root.

Zivot and Andrews (1992) Unit Roots Test with One structural Break

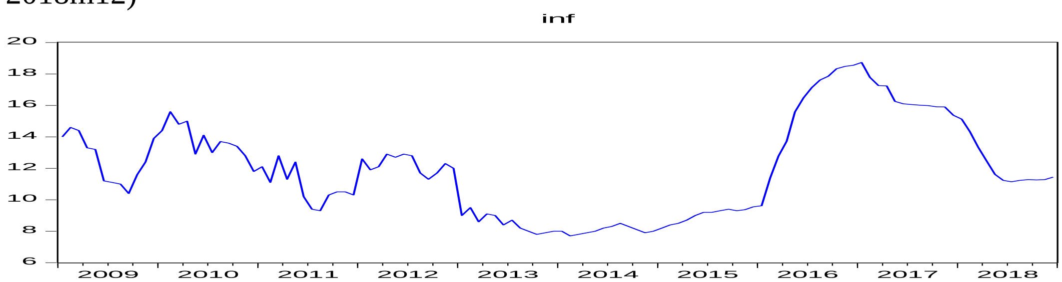
Zivot and Andrews (1992) unit root test is an alternative to the traditional tests for unit root (Augmented Dickey Fuller, Phillips Perron etc) that takes into consideration the possibility of one structural break that is determined endogenously. The alternative hypothesis of the test is there is unit root with structural break that is endogenously determined and the null hypothesis is rejected when the test statistic is less than the critical values of the test statistic at 1, 5 and 10 percent level of significance. The breakpoint is determined at a point where the t statistic from Augmented Dickey Fuller unit root test is at minimum.

This is the break date where there is strong evidence against the null hypothesis of a unit root.

Results and Discussion

Data Presentation

Figure 1: Graphical presentation of inflation trend in Nigeria (2009m1 to 2018m12)



Months

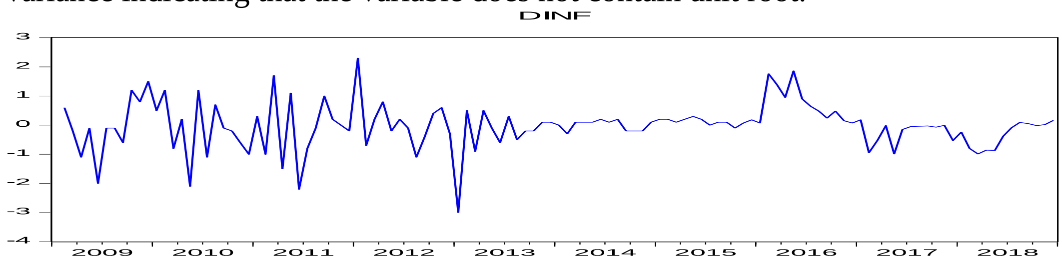
The graph of the inflation series in figure 1 shows that the inflation series contains unit root as it indicates an irregular movement in its trends. This is further confirmed by the Augmented Dickey - Fuller test for unit roots in the results presented in the Table 1 which shows that the series is not stationary at its level value given that the absolute value of the test statistic is less than the absolute critical values at 1, 5 and 10 percent levels of significance respectively.

Table 1: Stationary Test Results using Augmented Dickey Fuller

Variable				
Inflation	Intercept		Intercept and Trend	
	Level	First Difference	Level	First Difference
	-2.2325	-5.0509	-2.3362***	-5.0411***

Source: Computed by the Author using Eviews 9.0
Note: ***,**,* denotes significance at 1,5 and 10 percent level respectively.

The plot of the first difference of the series which is presented in figure 2 shows that it becomes stationary after differencing as depicted by the plot of the first difference of the series which indicates that the variance of the series seems to be very effective. The time plot of the series seems to be stationary in both mean and variance indicating that the variable does not contain unit root.



Months

The unit roots test for stationarity of the series at its first difference of the series shows it to be stationary at its first difference as indicated in Table 1 as the absolute value of the test statistic is greater than the absolute critical values at 1, 5 and 10 percent significant levels. To check for the presence of structural breaks in the series so that if identified a dummy variable can be included or the data divided into sub samples. The Table 2 shows the test for unit root with structural break for the inflation series at both level and first difference.

Table 2: Zivot and Andrews (1992) Unit Root Test Results for Inflation with structural break

Variable				
Inflation	Intercept		Intercept and Trend	
	Level	First Difference	Level	First Difference
	-3.2648	-5.5041***	-4.6889*	-11.8616***
Break Date	2015m11	2016m02	2015m11	2017m01

Source: Computed by the Author using Eviews 9.0.

Note: ***, **,* denotes significance at 1, 5 and 10 percent level respectively.

The result in Table 1 indicates that the value of the inflation series is not stationary at its level value using test for unit roots with structural break also since the absolute value of the test statistic is lower than the absolute critical values with the break period identified as 2015M10. The result confirms what is obtained using the traditional method of testing for unit root (Augmented Dickey- Fuller Test). Since the series non stationarity in level form is confirmed, the paper also conducts test for unit root with structural break for the first difference of the inflation series and the results is also presented in Table 2. The results from Table 2 indicates that the first difference of the inflation series is stationary, i.e it does not contain unit root as the absolute value of the test statistic is greater than all the absolute critical values at 1,5 and 10 percent level of significance with the period of break as 2017:01.

Having identified 2017:01 as the break date in the data, it becomes stationary after first differencing. Therefore the data is divided into two sub samples that is from 2009M01 to 2016M12 and 2017M1 to 2018M12. The sample 2009M01 to 2016M12 is selected for the analysis since it is the one that has more than 50 observations as recommended for modeling a time series it should have a minimum of 50 observations.

Having identified that the series is I (1) that is it is stationary at first difference and it contains structural break, the next step is the identification of the ARMA Model. In other words, identifying the number of Autoregressive and Moving Average terms to be included in the models to be estimated and used as the basis for forecasting the inflation in Nigeria. The autocorrelation and partial autocorrelation function of the series is used to determine the autoregressive and moving average terms and that both the autocorrelation and autocorrelation function move in the same pattern, thus indicating that it follows an ARMA (p, q) model and it is earlier found out to be integrated of order 1. The lags that are significant that is out of the standard error bounds on both the Autoregressive and moving average terms are lags 2, 12 and 13. Possible combinations are (2,1,2), (2,1, 12),(12,1,2) , (12,1,12) (13,1,2), (13,1,12),(2,1,13) and (12,1,13) were estimated and the best selected based on a number of models selection criterion such as the model having the most significant coefficient, having highest adjusted R^2, lowest volatility (variance) and having the least values of the Akaike and Schwartz information criterion. The result of the estimated tentative models is presented in Table 3

Table 3: Results from estimated Tentative Models for the sub sample

Model	Significant coefficients	Adjusted R^2	Volatility (variance)	Akaike Information Criterion	Schwartz Information Criterion
(2,1, 2)	0	0.1268	0.5218	2.257	2.350
(2,1,12)	2	0.2354	0.4570	2.1474	2.2401
(12,1,2)	2	0.1920	0.4829	2.1883	2.2817
(12,1,12)	1	0.2672	0.4379	2.2419	2.3353
(2,1,13)	3	0.3149	0.40585	2.0704	2.1871
(12,1,13)	2	0.1337	0.5221	2.2576	2.861
(13,1,2)	2	0.1694	0.5006	2.2744	2.2328
(13,1,12)	3	0.2958	0.4170	2.0923	2.2090

Source: Computed by the Author using Eviews 9.0

The results from Table 3 shows that on the basis of the criteria for the appropriate model selection, model **(2,1,13)** is the best model for the sub sample data as it has 2 significant coefficients, highest Adjusted R^2 value, least values of volatility (variance), Akaike and Schwartz information criteria after considering the break date of 2017m01.

The result in Table 4 indicates the results of the estimated tentative models for the whole sample that is from 2009m01 to 2018m12. Based on the correlogram (as shown in the appendix II) both the autocorrelation function and partial autocorrelation function indicates significant spikes at lags 2, 12 and 13 respectively. Hence it follows an ARIMA process of integrated order1. Possible Arima combinations are (2,1,2), (2,1, 12),(12,1,2) , (12,1,12) (13,1,2), (13,1,12),(2,1,13) and (12,1,13) were estimated and the best selected based on a number of models selection criterion such as the model having the most significant coefficient, highest adjusted R^2, lowest volatility (variance), the least values of the Akaike and Schwartz information criterion. The result of the estimated tentative models is presented in Table 4

Table 4: Results from estimated Tentative Models for the whole sample

Model	Significant coefficients	Adjusted R^2	Volatility (variance)	Akaike Information Criterion	Schwartz Information Criterion
(2,1, 2)	0	0.1178	0.6023	2.3966	2.4767
(2,1,12)	2	0.2052	0.5427	2.3113	2.3915
(12,1,2)	2	0.1823	0.5583	2.3315	2.4116
(12,1,12)	1	0.2262	0.5284	2.4309	2.5111
(2,1,13)	2	0.1713	0.5658	2.3412	2.4138
(12,1,13)	2	0.1427	0.5854	2.3908	2.4709
(13,1,2)	2	0.1711	0.5659	2.3439	2.4241
(13,1,12)	2	0.1733	0.5645	2.3678	2.4480

Source: Computed by the Author using Eviews 9.0

Table 4 shows the results of the estimated models using the whole sample after considering the break date of 2017m01. Based on the model selection criterion of highest number of significant coefficients and adjusted R^2 as well as lowest values of volatility (variance), Akaike and Schwartz information criterion, model **(2, 1, 12)** is the adequate and parsimonious model that is fitted to the data in forecasting inflation.

Model Checking

Before the interpretation and the use of the fitted model, some diagnostic checks are conducted to find whether the model is specified correctly and is devoid of autocorrelation and that there is no ARCH effect. The results of the Diagnostic tests are presented in Table 5.

Table 5: Results of Autocorrelation Test

Test	Test Statistic value	Probability
ARCH (Ljung- Box)	1.0608	0.3052

The results show the Ljung - Box test for white noise of the residuals of the for the selected model and based on the probability values on all the lags is greater than 0.05 which indicates that it is not significant to reject the null hypothesis that the residuals are white noise and the results is presented in the appendices. Similarly, a test for the stability of the estimated models were conducted using the AR and MA roots which require all be within the unit circle to confirm that

ARMA process is both covariance stationary and invertible, the graph is presented in the appendices.

Forecasting

The next stage in ARIMA modeling is the use of the identified appropriate model to forecast future value of the series under investigation. The ability to do so will further testify the validity of the model. The two identified and estimated models using the whole and sub sample data were used to forecast the future values of the inflation rates and comparison made to identify the best fitted model to forecast future values of inflation and the summary of the two models is presented in Table 6

Table 6: Forecast properties of the estimated models

Models/	(2,1,13)	(2,1,12)
Roots Mean Square Error (RMSE)	4.2222	5.0198
Mean Absolute Error	3.6751	4.3593
Mean absolute percentage Error	37.1511	46.1825

Source: Computed by the Author using E views 9.0

On the basis of the least RMSE, MAE and MAPE the model (2,1,13) which used the sub sample data that considers structural break in the data performs better in predicting the future values of the inflation because the values of RMSE,MAE and MAPE are lower than the one that utilized the whole sample data. Therefore, it is used to forecast future value (six months) of the inflation and is presented in Table 7

Table 7: Actual and Forecast Values of Inflation for six months periods

Month	Actual value of Inflation	Forecast Values of Inflation
July,2018	14.82	14.23
August,2018	14.82	14.14
September,2018	14.82	14.28
October,2018	14.82	14.26
November, 2018	14.82	14.28
December, 2018	14.82	14.44

Source: Computed by the Author using E views 9.0

The result in Table indicates that whereas the actual inflation is 14.82 in the month of July and December, 2018. The forecast values are 14.23 and 14.44 percent respectively, which shows that the forecast underestimates the actual values of the inflation rates.

Conclusions and Recommendations

This paper models and forecast inflation rate in Nigeria using monthly time series data set from the period of January, 2009 to December, 2018 employed the Box and Jenkins (1976) Autoregressive Integrated Moving Average method. The study examines the performance of two models without and with the presence of structural break. The study identifies ARIMA (2, 1, and 13) as the appropriate and parsimonious model that fits the data, having met all the model selection criteria and passed diagnostics tests and the model was used in forecasting future values of the inflation. Findings from the study supports the works of Nyoni and Nathaniel (2018) who found that ARIMA has a better predicting power of future values of inflation. The study however, contradicts the work of Mobatsi and Roboloko (2016) who found GARCH method of forecast better than ARIMA modeling. The study recommends that to adequately cushion the negative effects of inflation on the economy there is the need to have an insight of the future value of inflation with a view to designing appropriate policy measures to cushion the effects of inflation on the economy. Future studies on macroeconomic variable should consider the possibility of structural breaks in econometric modeling.

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Appendices

Appendix I : Corelogram of the residuals for the whole sample

Sample: 1 120
Included observations: 119
Q-statistic probabilities adjusted for 2 ARMA terms

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
.|. |	.|. |	1	0.064	0.064	0.5063	
.|. |	.|. |	2	0.014	0.010	0.5316	
.|. |	.|. |	3	-0.023	-0.025	0.5988	0.439
.|. |	.|. |	4	-0.001	0.002	0.5990	0.741
.|. |	.|. |	5	0.027	0.027	0.6880	0.876
*|. |	*|. |	6	-0.070	-0.074	1.3052	0.860
.|. |	.|. |	7	-0.017	-0.008	1.3409	0.931
.|. |	.|. |	8	0.040	0.046	1.5518	0.956
.|. |	.|. |	9	-0.033	-0.043	1.6982	0.975
.|. |	.|. |	10	0.028	0.031	1.8041	0.986
.|. |	.|. |	11	0.048	0.053	2.1146	0.990
**|. |	**|. |	12	-0.299	-0.319	14.140	0.167
.|. |	.|. |	13	0.010	0.059	14.154	0.225
.|. |	.|. |	14	0.019	0.044	14.201	0.288
.|. |	.|. |	15	0.015	-0.028	14.233	0.358
*|. |	*|. |	16	-0.115	-0.123	16.066	0.309
*|. |	.|. |	17	-0.108	-0.057	17.698	0.279
.|. |	.|. |	18	0.039	0.004	17.915	0.329
.|* |	.|* |	19	0.111	0.114	19.687	0.291
*|. |	*|. |	20	-0.093	-0.097	20.954	0.282
.|. |	.|. |	21	-0.019	-0.046	21.009	0.336
.|. |	.|. |	22	-0.056	-0.042	21.472	0.370
.|. |	.|. |	23	-0.032	-0.003	21.627	0.421
.|. |	*|. |	24	-0.044	-0.156	21.925	0.464
.|* |	.|** |	25	0.130	0.217	24.517	0.376
.|* |	.|* |	26	0.102	0.086	26.116	0.347
.|. |	.|. |	27	0.046	0.020	26.447	0.384
.|. |	*|. |	28	-0.047	-0.146	26.802	0.420

.|. |	.|. |	29	-0.008	-0.047	26.813	0.474
.|. |	.|. |	30	0.016	0.039	26.856	0.526
*|. |	.|. |	31	-0.109	0.009	28.806	0.475
.|. |	.|. |	32	0.065	0.001	29.505	0.491
.|. |	*|. |	33	-0.053	-0.118	29.979	0.518
.|. |	.|. |	34	0.021	0.005	30.053	0.565
.|. |	.|. |	35	0.005	0.052	30.056	0.614
.|. |	*|. |	36	-0.055	-0.173	30.577	0.636

Appendix II:

Corelogram of the residuals for the Sub sample

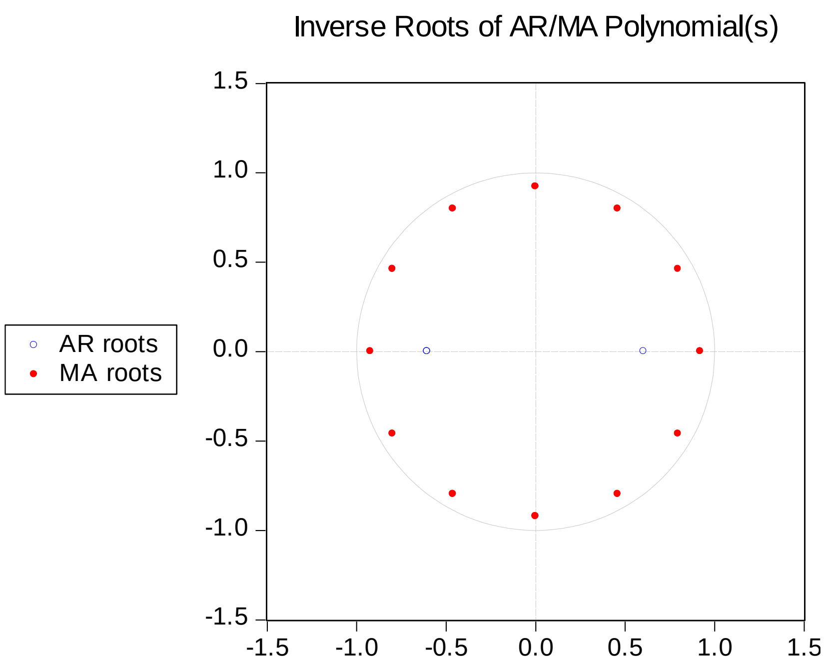
Date: 01/17/21 Time: 16:06
Sample: 2009M01 2017M01
Included observations: 96
Q-statistic probabilities adjusted for 2 ARMA terms

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
.|* |	.|* |	1	0.101	0.101	1.0127	
.|. |	.|. |	2	0.048	0.038	1.2424	
*|. |	*|. |	3	-0.093	-0.103	2.1221	0.145
*|. |	*|. |	4	-0.084	-0.068	2.8481	0.241
.|. |	.|. |	5	0.003	0.028	2.8491	0.415
.|. |	.|. |	6	-0.059	-0.065	3.2132	0.523
.|. |	.|. |	7	-0.010	-0.015	3.2232	0.666
.|. |	.|. |	8	-0.001	0.005	3.2234	0.780
*|. |	*|. |	9	-0.084	-0.095	3.9879	0.781
.|. |	.|. |	10	-0.000	0.005	3.9879	0.858
.|. |	.|* |	11	0.064	0.077	4.4362	0.880
.|. |	.|. |	12	0.036	0.001	4.5777	0.918
.|** |	.|** |	13	0.292	0.279	14.228	0.221
.|. |	.|. |	14	0.072	0.039	14.830	0.251
.|. |	.|. |	15	-0.003	-0.043	14.830	0.318
*|. |	*|. |	16	-0.198	-0.161	19.431	0.149
*|. |	*|. |	17	-0.145	-0.068	21.918	0.110
.|. |	.|. |	18	0.009	0.033	21.928	0.146
.|* |	.|* |	19	0.109	0.141	23.378	0.137
*|. |	*|. |	20	-0.075	-0.129	24.076	0.153
.|. |	.|. |	21	-0.017	-0.027	24.111	0.192
.|. |	.|. |	22	-0.023	0.035	24.180	0.235
.|. |	.|. |	23	0.017	0.007	24.217	0.283
.|. |	*|. |	24	-0.017	-0.081	24.257	0.334
.|* |	.|* |	25	0.165	0.193	27.843	0.222
.|* |	.|. |	26	0.133	0.012	30.215	0.178
.|. |	.|. |	27	0.071	0.035	30.907	0.192

*|. |	*|. |	28	-0.116	-0.110	32.770	0.169
*|. |	.|. |	29	-0.117	-0.005	34.688	0.147
.|. |	.|* |	30	-0.019	0.081	34.742	0.177
*|. |	.|. |	31	-0.072	-0.045	35.486	0.189
.|* |	.|. |	32	0.075	-0.051	36.311	0.198
*|. |	*|. |	33	-0.079	-0.083	37.233	0.204
.|. |	.|. |	34	-0.007	0.033	37.240	0.240
.|. |	.|. |	35	-0.008	0.058	37.251	0.280
.|. |	*|. |	36	-0.056	-0.119	37.741	0.302

Appendix III:

Stability Test of the Estimated Models



An Analysis of Water, Energy and Food Nexus: A linear and Nonlinear Granger Causality Approach

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Abstract

The nexus between water, energy and food security has drawn attention among researchers and policymakers in recent times. Given that empirical works in the area are scanty, this paper empirically evaluates the water, energy and food security (WEF) relationship using both linear and non-linear Granger causality approach. By employing data for five (5) selected African countries, the results from the linear estimations showed mixed causality between the key variables (Water, Energy, and Food). Evidence of a non-linear causal relationship between the variables was not found because the estimates obtained were predominantly statistically insignificant. The findings of the study indicate the presence of unidirectional linear causality running from Water to Energy, which was found for three countries (Egypt, Nigeria, and South Africa). The study also found the presence of causality running from water to food in South Africa. On the other hand, no evidence of causality between energy and food was found.

Keywords: *Water, Energy, Food, Causality.*
JEL Classification : *Q25, Q40, Q10.*

Introduction

The looming global climate change has raised concerns about the sustainability of environmental quality. Climate change among factors is seen to have exerted pressure on water, energy, food resources and human health globally, thereby bestowing communities with constricted trade-offs and an imminent conflict among these resources, which have dynamic and complex interactions (Magadza, 2000 and Hoff, 2011). Currently, the global environment is presumed to be anguish from extreme climatic conditions such as extreme heat, rainfall shortages, dust storms, harsh geography as well as huge environmental degradation such as ecological footprint (Global Footprint Network, 2013). Therefore, Hayley et al. (2015) expressed that understanding effective and sustainable solutions to challenges on a global level requires in-depth knowledge and understanding of the networks and inter-linkages of Water, Energy, and Food (WEF). According to Endo et al. (2015), the concept of the WEF nexus was launched in Bonn, 2011, when the German Federal Government organized an international conference with the theme “The Water-Energy and Food Security Nexus—Solutions for the Green Economy” to contribute to the United Nations Conference on Sustainable Development (Rio + 20).

Despite the successful initiation of the idea, the WEF nexus is viewed as rather subjective, as the first two factors (Water and Energy) are considered as inputs in the production process, while the latter (Food) is an output of production (Denis, 2017). Hussey and Pittock (2012) further stated that distinctly, water and energy are recognized as indispensable inputs to modern economies that have undergone rapid reforms mainly driven by the security of supply, environmental sustainability, and economic efficiency. On the sustainability of the WEF nexus, Sharma (2016) stated the need for policy design involving the management of natural resources to achieve efficiency and to minimize the likelihood of inadvertent consequences. Studies such as Golam and Sharma (2015) have suggested that the WEF nexus could be used as an effective adaptation strategy for climate change. They emphasized that the potential synergies and complementarities among the three (WEF) sectors should be used as a framework for an efficient and effective strategy option.

This study has identified that the WEF nexus is still in its developmental stage and the fact that there is a sparse availability of empirical works in the area, possibly due to lack of data, most especially in the African context. Thus, what is known about the WEF nexus is largely concentrated around theoretical studies that review and analyze the significance of the WEF nexus. Based on these gaps, this paper evaluates the WEF inter-linkages across resource changes over time through a quantitative approach. Particularly, the study sorts to achieve this through the use of the econometric tool of linear and nonlinear Granger causality tests. First, the paper verified hypothetically, the claim in the conceptual literature of a Uni-directional/Bi-directional relationship as discussed in section 2.0. This is done using close proxies obtained from the UN data department website and the World Bank’s World Development Indicators. Section 2.0 presents the literature review, which is followed by the methodology (data and model) in section 3.0. The results and discussion are presented in section 4.0, while section 5.0 deals with the conclusion and recommendation of the study.

Literature Review

Water, energy, and food (WEF) without any doubt are indistinctly linked, thus, access to these resources and their effective management explains the environmental development progress (Heyley et al. 2015). The first serious discussions and analyses of the WEF nexus can be credited to studies of World Economic Forum (2011), Hoff (2011; Rasul 2014). The central focus was on boosting economic growth having less effect on the use of WEF resources and investments to sustain ecosystems' services. The proposition also identified that the WEF nexus is subject to (and also drives) external factors such as global governance failure, economic disparity, and geopolitical conflicts. Also, the authors noted the importance of ecosystem goods and/or services that must be protected to ensure the resilience of WEF sectors.

Before the conception of the three resources nexus, what was established was the Water-Energy nexus (see Hardy et al., (2012); Scott et al. (2011); Vilanova et al. (2015) and Viera & Ghisi (2016)); Water-Food nexus (see Antonelli (1998) and Vanham (2016)) and Energy-Food nexus (see Abdelradi & Serra (2015) and Karkacier & Goktolga (2005)). In the water-food nexus, water necessitates food production, especially in the agricultural sector where it serves as a key input for animal and crop production. For water-energy synergy, water also serves as a source of extraction and power generation (hydro-electricity). Lastly, in the energy-food nexus, energy is required for agricultural activities such as harvesting, transportation and storage (White et al. 2017).

Despite its overwhelming significance, the WEF nexus is viewed as a dynamic and complex relationship. Shannak et al. (2018) stated that the resources are complex aggregates formed and influenced by the collection of elements, and managing them relies on several factors such as technology choices, fuel choices, resource availability and market factors, which can all be affected by national resource policies. Shannak et al. (2018) further added that these resources are also interlinked for instance; water is desirable for energy production, as energy is required for extraction, distribution, and treatment of water, whereas, food production relies on both water and energy availability. Hence, it is important to note that there exists a sturdy trade-off among the resources as well as the environmental impacts and economic considerations (Zhang & Velimir, 2017).

Among the empirical studies, only the study by Ozturk (2015) was identified as that which established the Food-Energy-Water nexus for BRICS (Brazil, Russia, India, China, and South Africa) countries. However, the study segmented the model based on the various sectors. The findings from the study indicate a widened demand and supply gap of energy and water which may pose serious food security problems for the BRICS countries. A study by Xingchen et al. (2020) using the SVAR model, found that food production had a negative impact on energy production as the impact of water supply on food production was weak. But there was evidence of the positive impact of energy on water productivity.

Methodology

Types and Sources of Data

Due to the restriction on measurability and availability of data on energy, water supply, and food productivity, the data used in this paper relied on close proxies such as Gross food production index[1], energy (total hydro production) and renewable internal freshwater resources per capita[2] (in cubic meters). The first two data mentioned were sourced from United Nations Data Division, while data on the water was sourced from World Development Indicators. Only five (5) African countries were selected for the study mainly due to the availability of data for the countries and advancement in economic activities. These countries include Nigeria, Cote d'Ivoire, Egypt, Ghana and South Africa. The study covers the period 1992 to 2017 based on the available data.

Data Analysis

This study employs the Granger Causality test developed by Granger (1980). Furthermore, there is a possibility that the distribution of the factors may not be normally distributed and could assume a non-linear pattern. To account for this possibility, the study also adopted the nonlinear Granger Causality test of Baek and Brock (1992) to empirically evaluate the argument of a non-linear relationship between the WEF variables. The reason for nonlinearity is based on the fact that the resources are sometimes affected by shocks resulting from extreme climatic conditions such as excessive torrential rainfall and drought among others. These factors have an unintended consequential effect on the distribution and availability of resources. For instance; the presence of drought

[1] According to the FAO, the Food production index covers food crops that are considered edible and that contain nutrients

[2] There were some missing observations in between the years, thus 2 years moving average was used to generate the missing values.

may negatively affect food productivity, water supply as well as energy production.

A variable is said to Granger cause another variable if its lagged values are useful in forecasting the future value of the other variable (Abubakar, 2017). As noted by Huang et al. (2008) this test is widely used to infer causality. The linear Granger causality test equations are expressed:

$$water_t = \alpha + \sum_{i=1}^{m} \beta_i \, water_{t-i} + \sum_{j=0}^{n} \gamma_j \, food_{t-j} + \mu_t \quad (1)$$

$$food_t = \lambda + \sum_{i=1}^{p} \phi_i \, food_{t-i} + \sum_{j=0}^{q} \omega_j \, water_{t-j} + \varepsilon_t \quad (2)$$

$$energy_t = \pi + \sum_{i=1}^{s} \theta_i \, energy_{t-i} + \sum_{k=0}^{u} \tau_k \, water_{t-k} + \nu_t \quad (3)$$

$$water_t = \alpha + \sum_{i=1}^{m} \beta_i \, water_{t-i} + \sum_{k=0}^{o} \delta_k \, energy_{t-k} + \mu_t \quad (4)$$

$$food_t = \lambda + \sum_{i=1}^{p} \phi_i \, food_{t-i} + \sum_{k=0}^{r} \rho_k \, energy_{t-k} + \varepsilon_t \quad (5)$$

$$energy_t = \pi + \sum_{i=1}^{s} \theta_i \, energy_{t-i} + \sum_{j=0}^{t} \eta_j \, food_{t-j} + \nu_t \quad (6)$$

The evidence for the existence of causality is said to be found if the coefficients of the lagged independent value are statistically significant, for example, if Y_j's are significant in equation 1. Thus, by estimating the above equations, the causal relationship between the three resources (WEF) is determined.

The non-linear Granger causality test of Baek and Brock (1992) being a nonparametric method employs the correlation integral which is an estimator measuring spatial probabilities across time to examine the causal relationship between variables (Heimstra & Jones, 1994). To illustrate the test, consider two series X_t and Y_t where the superscript *m* is the length of the lead of the variable X and the subscripts *Lx* and *Ly* are the lengths of the lags of variables X and Y respectively. The distance between the lead and lag vectors of a variable is represented by the term *e*.

The variable Y does not Granger cause variable X, if for the given values of L*x*, L*y* and $m \geq 1$, and $e > 0$:

The probability, $\Pr(\|X_t^m - X_s^m\| < e \mid \|X_{t-Lx}^{Lx} - X_{s-Lx}^{Lx}\| < e, \|Y_{t-Ly}^{Ly} - X_{s-Ly}^{Ly}\| < e) = \Pr(\|X_t^m - X_s^m\| < e \mid \|X_{t-Lx}^{Lx} - X_{s-Lx}^{Lx}\| < e)$ (7)

From equation 7, $\|\cdot\|$denotes the maximum norm, and the left-hand side of the equation denotes that the conditional probability that two *m*-length lead vectors of X are within a certain distance (represented by) *e* of each other, given that the corresponding lag vectors of X and Y are within the distance *e* of each other. Similarly, the right-hand side of the equation denotes that the conditional probability that two *m*-length lead vectors of X are within a certain distance (represented by) *e* of each other, given that the corresponding lag vectors of X are within the distance *e* of each other (see Heimstra & Jones, 1994). The arbitrary variables X and Y in equation 7 can be replaced by any pair from the study's Water, Energy and Food variables.

Empirical findings and Discussions

Descriptive Statistics

The result from the descriptive statistics in Table 1.0 indicates that all the variables for the countries, except for energy in South Africa, are not normally distributed as indicated by the Jarque-Bera statistics. The estimates also indicated that Egypt had the highest hydro energy production of 15510kwh, though; they had the lowest renewable internal freshwater resources of 18.52 cubic meters.

Table 1.0 Summary of Descriptive Statistics

Variable	***Mean***	***Max.***	***Min.***	***Std. Dev.***	***Skewness***	***Kurtosis***	***Jarque-Bera***
Cote d' Ivoire							
ENERGY	1657.74	2131.00	1048.00	239.18	-0.65	3.20	1.88
FOOD	99.53	129.02	69.02	18.27	0.08	2.14	0.83
WATER	4338.91	5997.31	3130.99	833.50	0.39	2.10	1.54
Egypt							
ENERGY	12932.77	15510.00	8540.00	1546.01	-0.74	4.01	3.50
FOOD	96.11	127.96	60.11	21.56	-0.22	1.70	2.04
WATER	24.27	30.68	18.52	3.63	0.14	1.89	1.42
Ghana							
ENERGY	6137.96	8387.00	3727.00	1237.63	-0.19	2.76	0.22
FOOD	102.09	154.69	54.51	33.36	0.21	1.71	2.01
WATER	1431.90	1935.69	1030.61	273.74	0.26	1.89	1.63
Nigeria							
ENERGY	6137.96	8387.00	3727.00	1237.63	-0.19	2.76	0.22
FOOD	91.57	119.94	60.02	18.60	-0.07	1.82	1.52
WATER	1635.11	2206.43	1149.53	321.69	0.18	1.84	1.61
South Africa							
ENERGY	3814.77	5845.00	772.00	1101.50	-1.13	4.42	7.72
FOOD	100.79	125.85	71.96	16.03	-0.07	1.79	1.61
WATER	948.98	1158.44	781.37	108.38	0.27	2.07	1.24

This is counterfactual, but the high hydro energy production could be attributed to the presence of the Nile River in the country. Ghana also had the highest gross food productivity (154.69 points), while Nigeria had the lowest (60.02).

Unit Root Test Result

To determine the Stationarity of the variables, the Augmented Dickey-Fuller (ADF) and the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) were employed to test the variables. The KPSS test can determine if a time-series is stationary around a mean or linear/deterministic trend. The estimates of the KPSS test presented in Table 2.0 indicates that all the variables are stationary at levels implying the constancy of the mean and variance around its deterministic trend. This also implies the suitability of the series for the Granger causality test.

Table 2.0 Unit root Test result

Country	Variables	ADF	Level	KPSS	Level
Cote d' Ivoire	*Food*	*-3.536**	*I(0)*	*0.081****	*I(0)*
	Energy	*-4.431****	*I(0)*	*0.273****	*I(0)*
	Water	*-9.909****	*I(0)*	*0.190****	*I(0)*
Egypt	*Food*	*-5.009****	*I(0)*	*0.132****	*I(0)*
	Energy	*-3.539***	*I(1)*	*0.394****	*I(0)*
	Water	*-5.634****	*I(2)*	*0.186****	*I(0)*
Ghana	*Food*	*-5.046****	*I(0)*	*0.150****	*I(0)*
	Energy	*-2.697**	*I(1)*	*0.200****	*I(0)*
	Water	*-7.063****	*I(0)*	*0.202****	*I(0)*
Nigeria	*Food*	*-3.255**	*I(0)*	*0.085****	*I(0)*
	Energy	*-2.697**	*I(0)*	*0.200****	*I(0)*
	Water	*-4.580****	*I(2)*	*0.204****	*I(0)*
South Africa	*Food*	*-6.281****	*I(1)*	*0.126****	*I(0)*
	Energy	*-3.490***	*I(0)*	*0.472****	*I(0)*
	Water	*-5.129****	*I(2)*	*0.167****	*I(0)*

Note: *, ** and *** indicates statistical significance at 10, 5 and 1 per cent respectively
Source*: Author's computation*

Non-Linear and Linear Granger Causality Test

The estimates from the nonlinear Granger causality presented in Table 4.0 were generally insignificant, indicating the acceptance of all the null hypotheses that there is no causal relationship between the variables. Though the Granger test may be hypothetical, and thus one needs to thread with caution in the interpretations of the results. However, the linear Granger causality result presented in Table 3.0 looks more robust than the nonlinear estimates, as the later predominantly had very low F-statistics and high probability values, depicting statistical insignificance. This invalidates our earlier assumption of the existence of non-linearity among WEF.

Table 3.0 Linear Granger Causality Estimates

Hypothesis	***Cote d' Ivoire***	***Egypt***	***Ghana***	***Nigeria***	***South Africa***
	F-Stat.	*F-Stat.*	*F-Stat*	*F-Stat.*	*F-Stat.*
ENERGY does not Granger Cause FOOD	0.14	0.39	0.67	0.83	1.66
FOOD does not Granger Cause ENERGY	0.11	0.74	0.11	1.41	0.17
WATER does not Granger Cause FOOD	1.68	0.79	0.31	0.70	5.45***
FOOD does not Granger Cause WATER	0.38	1.35	0.08	2.77*	0.23
WATER does not Granger Cause ENERGY	0.30	4.50***	2.54	2.84*	7.93***
ENERGY does not Granger Cause WATER	2.37	0.87	1.37	1.11	0.44

*, ** and *** indicates statistical significance at 10, 5 and 1 per cent respectively
Source*: Author's computation*

While estimates from the linear causality test showed that water Granger causes food productivity in South Africa, the estimates for Nigeria indicated that food productivity Granger cause water supply in Nigeria. Though this is counter-intuitive because it may be quite difficult to establish causation from food to water. The unidirectional causality running from water supply to food productivity implies that the availability of fresh water is very vital for food production in South Africa. However, the most consistent and significant results found was that water Granger causes energy productivity in 3 countries (Egypt, Nigeria, and South Africa) out of the 5 countries sampled, implying that the availability of water bodies in these countries is very important for hydropower generation. The result supports the situation of Nigeria which relies to a great extent on hydro-electric energy, though supplemented with gas. Similarly, Egypt's high production of hydro-electric energy could be attributed to the presence of and utilization of the Nile River. The absence of causality running from the water to energy productivity in Cote d’ Ivoire and Ghana are not surprising because power generation is largely sourced from fossil fuel.

Other interesting findings from the estimates are the consistency of non-Granger causality moving from Energy to Water; Energy to Food and Food to Energy based on variables used as proxies for the analysis. But this is open to debate within several contextualizations of the variables, with the possibility of having diverse results from the nexus.

Table 4.0 Nonlinear Granger Causality Estimates

Hypothesis	**Cote d' Ivoire**	**Egypt**	**Ghana**	**Nigeria**	**South Africa**
	F-Stat.	*F-Stat.*	*F-Stat*	*F-Stat.*	*F-Stat.*
ENERGY does not Granger Cause FOOD	0.003	-0.33	0.0001	-0.019	-0.01
FOOD does not Granger Cause ENERGY	-0.0003	-0.42	-0.003	-0.002	0.003
WATER does not Granger Cause FOOD	-0.219	-0.04	-0.01	-0.007	-0.018
FOOD does not Granger Cause WATER	-0.034	-0.024	-0.024	-0.017	-0.028
WATER does not Granger Cause ENERGY	-0.00001	-0.01	-0.004	-0.007	-0.004
ENERGY does not Granger Cause WATER	-0.017	-0.00003	-0.004	-0.005	-0.018

Note: *, ** and *** indicates statistical significance at 10, 5 and 1 per cent respectively

Source*: Author’s computation*

Conclusion and Recommendations

This study empirically evaluated the water, food and energy nexus as proposed in WEF (2011), Hoff (2011) and Rasul (2014). The study argued that though the nexus exists, it may not follow the assumption of a normal distribution of the variables. But given the contextual issues associated with variables such as extreme climatic conditions such as drought, flood and excessive torrential rainfall, one could assume the likelihood of a non-linear association among the variables. This informed the study in adopting the linear and nonlinear Granger causality test to verify the hypothetical existence of the WEF nexus using data from five (5) African countries. The result of the linear Granger test indicates a strong link from water to energy in three (3) countries (Egypt, Nigeria and South Africa), implying a unidirectional flow. There is also a significant unidirectional flow from water to food in South Africa. The estimates for these countries further indicate that energy production is highly dependent on water supply, though, with Egypt having the highest productivity in terms of Hydro energy production. Another key finding is the absence of a directional relationship between energy and food production. This may also be since most finished food produced in these countries are being imported. Thus, may not have any significant direct link. However, the study was not able to empirically verify the trade-offs that were assumed to have existed among the resources. The remaining countries had not significant Granger causal relationship and hence, much cannot be said about them.

The study, therefore, recommends the need for future research in this area involving panel data analysis and besides, the need to explore other alternative measures of water, food and energy to further establish empirically the WEF link, thereby identifying the existing trade-offs among them.

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Can We Establish Predictable Trends in Quality of Life in Kaduna State and Nigeria?

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Abstract

Poor living conditions are common in both urban and rural areas of Nigeria. The nation's poor quality of life is exemplified by high poverty and large unemployment rate of 35%, low longevity of 54 years, high illiteracy level and insecurity, particularly in the northern part of the country. Kaduna state, in the north-western part of Nigeria, is a trade centre and a major transportation hub for the surrounding agricultural areas. The state is also known as the center of learning, as evident from the numerous educational institutions. Therefore, this paper examined if there are some predictable trends in the quality of life in Kaduna State and Nigeria. The study sourced data from 2018/2019 Nigeria Living Standards Survey (NLSS) by National Bureau of Statistics (NBS). The result shows that Kaduna State has higher dependency ratio and mean household size than the Nigeria's average. The findings also indicated that the percentage of working age population involving in wage employment in Kaduna State is slightly lower than the national average. These results highlight the need for sustained efforts by government and non-government institutions towards improving the quality of life in Kaduna State, in order to create jobs and attain inclusive growth.

Keywords: *Quality of Life, Health, Education, Nigeria*
JEL Code: *D63, I10, I20*

Introduction

The quality of life is how well people live. Its concerns comfort and happiness experienced by individual or household members in a given society. The appraisal of quality of life is often based on multi-dimensional measures, including health (mortality and suicide rates, access to health services), education (literacy rates), unemployment rate, and many subjective factors, such as individual sense of happiness, and family relationships (Szemik, Kowalska & Kulik, 2019; Rapley, 2003). This implies that the degree to which an individual is healthy, comfortable, happy, and able to participate in life events is quality of life. As Haid and Seiffge-Krenke (2013), Brand (2015) and Ek (2015) observed, quality of life is largely and highly subjective. This is because; different individual may define his/her quality of life, in terms of having ability to live a good life. For instance, a disabled person may report a high quality of life, while healthy individual (without disability), but recently lost a job may report a lower quality of life.

Thus, quality of life is a broad ranging concept affected in a complex way by the person's physical health, education, psychological state, and level of independence, social relationships and their relationships to salient features of their environment (Ferdiana, Marcel & King, 2017). It also concerns everything from family well-being – maintaining social relationship or keeping good relationships/doing activities with friends, peers and family members (Szemik *et al.* 2019), to employment, being productive, earning income and work satisfaction (Brand, 2015).

It is worthy of note that, poor living conditions are common in both urban and rural areas of Nigeria, as well as states. The nation's poor quality of life is exemplified by high poverty where 40% of the population or almost 83 million people live below the country's poverty line of #137,430 per year or #376 per day (National Bureau of Statistics, 2020); large unemployment rate of 35%, low average life expectancy at birth of 54 years, high illiteracy level, kidnapping and insecurity, particularly in the northern part of the country. According to World Bank report (2018), despite being a middle-income economy, Nigeria fares astonishingly poorly in quality of living. For instance, while Southern zones recorded significant drop in poverty between 2011 and 2016; with little variation across the states. However, the poverty rate in the northern regions of the country has been increasing. The north accounts for 87% of all poor in the country with wide variation across the states (World Bank, 2018).

For example, Kaduna state, in the north-western part of Nigeria, is a trade and industrial centre of Northern Nigeria. The state is also a major transportation hub for the surrounding agricultural areas. Again, the Kaduna Refining and Petrol-chemical Company (KRPC), one of the Nigeria's four main oil refineries is located in Kaduna. The state is also known as the center of learning, as evident from the numerous educational institutions; and with an inland dry port. However, the state is one of the top six cities with the highest unemployment rate, where 20% of the population is estimated to be unemployed (World Bank, 2009). Therefore, considering the nature of Kaduna state's economy, can we establish predictable trends in quality of living in Kaduna state and Nigeria's averages?

From the literature, most of the studies have basically focused on either employment status (De Boer & Bennebooek, 2016, Haid, 2013) or health (LaMontages & Pirkis, 2016). However, this study conducted comparative analysis between Kaduna State and Nigeria averages on quality of life components. Similarly, convinced that quality of life coupled with industrial development, this is the bedrock of any modern economy. It is paramount to strengthen the quality of life in Kaduna State. Hence, the main purpose of this paper is to examine the quality of life among people in Kaduna State and Nigeria. The rest of this paper is organized as follows: Section one focus on introduction. The next section reviewed literature, while section three presents the methodology. The empirical results are presented in section four, and section five focuses on conclusion and recommendations.

Literature Review

Conceptually, despite the recognized importance of quality of life across nations of the world, the individual's perception on the concept has been emphasized in the definition of World Health Organization (WHO) Quality of Life Assessment (WHO, 1995). The components of Quality of Life associated with people's perceptions of their position in life in the context of the culture and value systems in which they live. These components as Figure 1 shown, relates to people's goals, expectations, standard and concerns.

Figure 1: Components of Quality of Life

Quality of life largely concern education, having skills and knowledge (Ferdiana *et al.* 2017); people's physical health (WHO, 1995); income, assets, wealth, and mobility, maintaining self-esteem, self-confidence and safety, security, freedom and relationship with their God, as well as their environmental quality.

Theoretically, the focus on welfare research within economics was actually intensified by the different roles that were attributed to the standard of living of people over the time by several economists and analysts. Several economists emphasize that intervention to improve quality of life will be more successful, if it is culturally relevant and addressing the components of quality of life expressed by the population (Rapley, 2003; Szemik *et al.* 2019). From the above theoretical review, we can conclude that considerations of demography, cultural attributes of people are keys to their quality of life.

In terms of empiric, Audretsch and Thurik (2001) examined the link between entrepreneurship and quality of life in OECD countries from 1974 and 1998. Their study employed panel regression technique. Their finding shows that entrepreneurial activity increases growth, bringing about reduction in unemployment and improve quality of living significantly. In a similar study, Carree and Thurik (2010) investigated the impact of entrepreneurship on economic growth in Western Europe and North America. Their results indicated that entrepreneurship also improve quality of life.

Sorens (2013) presented the empirical analysis of inter-state migration, public policy and quality of life in United States. The study estimates spatial, matched-neighbors and dyadic models of the net interstate migration for all 50 states, covering the years 2000 and 2012. The evidence suggests that quality of living strongly correlated with land-use regulation, and both fiscal and regulatory components of economic freedom attract new residents. Haid (2013) emphasized that employment status is key to quality of lives. The finding of the study shows that employment status of residents significantly enhances quality of life.

De Boer and Bennebooek (2016) assessed the employment status, difficulties at work and quality of life. The regression result indicated that people without paid employment experience lower quality of life, higher anxiety and depression rates. The study of LaMontages and Pirkis (2016) also empirically provides evidence for the role of psychological job quality on quality of life. Data were collected from cohort of 15,988 males. The analysis was restricted to 18-55-year-old working age participants. The empirical result indicated that there were higher magnitude associations between psychological job quality and quality of life.

Ouyang *et al.* (2020) assessed the resident happiness under uncertainty of economic policies in China during the periods of 2010 and 2018. Results show that the uncertainty of economic policy significantly reduces resident happiness. In the context of the uncertainty of economic policies, families can relieve such negative impacts as an increasing proportion of financial assets in their total assets.

In Nigeria, Akinyemi *et al.* (2012) examined the quality of life and associated factors among adults in a community in South-West Nigeria. A descriptive cross-sectional study of 527 adults in Oru community was conducted. The study also employed multivariate logistic regression which shows that those respondents less than 25 years had good quality of life. Similarly, living in flats and other bigger apartments, and lack of involvement in religious activities were shown to be predictors of good quality of life.

Akinyemi, Oyebisi and Odot-Itoro (2018) examined the relationship between entrepreneurship, unemployment and economic growth in Nigeria over the period 1981-2011. Their finding reveals that there is a positive relationship between unemployment and entrepreneurial activity which in turn brings about economic growth. The study concludes that economic growth is not linked to total labour force, but to labour productivity given improved working conditions in Nigeria. Effiong and Bassey (2020) examined the effect of government expenditure on health on the quality of life. The Autoregressive Distributed Lag (ARDL) model was employed in the study. The result depicted a clear presence of long-run relationship between government expenditure on health and longevity proxy for quality of life.

In all these studies (developed and Nigeria studies), no attempt was made to include both micro and macro components of quality of life in their analysis. Again, convinced that quality of life coupled with industrial development is the bedrock of any modern economy. It is paramount to strengthen the quality of life in Nigeria, particularly the northern Nigeria where poverty and poor quality of living has been increasing with wide variation across the region's states. However, no attempt was made to include the possible national-state dichotomy, but several studies, such as, Akinyemi *et al.* (2018), Effiong and Bassey (2020) assumed that all states in Nigeria are the same in terms of their quality of lives. Besides, little is known about the quality of lives in northern Nigeria, particularly Kaduna State, which is a trade, educational and industrial centre of Northern Nigeria. This study, therefore, adds to the existing studies in Nigeria and fills these gaps.

Methodology

Research Design

The study area for this study is Kaduna State and Nigeria. It is located in the North-Western zone of the country. The state is also unique in terms of its commercial activities, trade, educational institutions, and industrialization. Kaduna State, with 23 Local Government Areas, is the third most populous state in Nigeria. The state had a population of 6.1 million people, next to Kano and Lagos States (NPC, 2006). The current population is projected at between 8.8 to 10 million, and with an annual growth rate of 2.5% (Kaduna State Infrastructure Master Plan, 2018-2050). At this growth rate, the population is estimated to reach almost 13 million by 2050; while about 40% of the population now lives in rural areas. Despite its economy advancement, the state is one of the top six cities with the highest unemployment rate, where 20% of the population is estimated to be unemployed (World Bank, 2009).

Data and Method of Data Collection

The study employed descriptive statistics, and sourced data from 2018/2019 Nigeria Living Standards Survey (NLSS). NLSS is a nationally representative survey with 5,000 households and 26,783 individuals. The survey was conducted by the National Bureau of Statistics (NBS) in collaboration with the Living Standard Measurement Study (LSMS) by World Bank. The sample covers the six geopolitical zones as well as rural and urban areas. The data also covers the 36 states of the federation (and FCT Abuja).

The NLSS survey is a long-term project with the goal of collecting household-level panel information, such as data on household characteristics, welfare, and living standards. The survey is the result of a partnership that NBS has established the Bill and Melinda Gates Foundation (BMGF) and the World Bank (WB). This partnership helped develop a method of collecting welfare data in a way that allows for the study of household welfare’s evolution over time. The NLSS sample consisted of 60 Primary Sampling Units (PSUs) or Enumeration Areas (EAs) chosen from each of the 37 states in Nigeria. This results in a total of 2,220 EAs nationally. Each EA contributes 10 households to the NLSS sample, resulting in a sample size of 22,200 households.

Findings and Discussions

The result from Table 1 indicated that the current average household size in Nigeria is 5.06 persons per family. It is worth of note that, the average family size in Kaduna State is 6.24 for each household. This finding suggests that households in Kaduna State have more family members than the national average. By implication, to improve the welfare and quality of lives in Kaduna State, this will require additional efforts and good quality of living strategies beyond what is obtainable at the national level. Similarly, other northern states, such as, Jigawa (8.15), Kano (7.04), Katsina (6.8), Kebbi (6.39), and Sokoto (5.93) have higher family size more than the national average of 5.06. Compare to southern states, namely, Lagos (3.51), and Rivers (4.73). Perhaps, the high household sizes in the northern part of Nigeria might be a result of polygamous activities in the region. Hence, this result further suggests extra welfare strategies for the region.

Table 1: Average Household size and Dependency Ratio

	Average Household size	*Dependency Ratio*
Nigeria	5.06	0.97
Kaduna	6.24	1.07
Industrial States		
Lagos	3.51	0.63
Rivers	4.73	0.78
FCT	6.05	0.89
Other states in North-Western Zone of Nigeria		
Jigawa	8.15	1.40
Kano	7.04	1.28
Katsina	6.80	1.31
Kebbi	6.39	1.24
Sokoto	5.93	1.20
Source: NLSS, National Bureau of Statistics, 2020		

Furthermore, Table 1 indicates that the total dependency ratio in Nigeria on average is 0.97. In Kaduna state, the dependency ratio is 1.07. This statistic is also higher than the national average, and other industrial states in Nigeria, for instance, Lagos, Rivers states, and FCT Abuja. These findings are not surprising as World Bank (2018) also observed that the north accounts for 87% of all poor in the country with wide variation across her states. This might largely be the result of more family members and higher dependency ratio in the Northern part of Nigeria.

Table 2 also shows the percentage of literacy level by gender in Nigeria. The results indicate that male (with 58.5%) are literate to their female counterpart (49%). On the other hand, 47% and 34% of male and female are literate, respectively. On average, the residents of Kaduna State (40%) are less literate compare to the national average of 53.7%. This suggests that despite Kaduna State is known as the center of learning, as evident from the numerous educational institutions in the state; educational sector of the state still need more improvement.

Table 2: Reporting Literacy Rate by Sex (in percent)

	Male	***Female***	***Total***
Nigeria	58.5	49	53.7
Kaduna	46.8	33.5	40
Industrial States			
Lagos	92.9	88.6	90.8
Rivers	85	79.1	82
FCT	74	58.9	66.3
Other states in North-Western Zone of Nigeria			
Jigawa	21.2	13	17.2
Kano	36.8	25.9	31.1
Katsina	34	20.5	27.2
Kebbi	32.3	18	25.1
Sokoto	22	13.9	18.2
Zamfara	23	11.7	17.3
Source: National Bureau of Statistics, 2020			

In Nigeria, about 14.3% of population above 5 years of age has never attended school. This is presented in Table 3. Furthermore, compared to Lagos (3.7%) and Rivers (4.7%), Kaduna State statistics of 9.7% population perform better in terms of percentage share of population who have never attended school, compare to other Northern states, namely, Kano (26.8%), Kebbi (26.5%), Katsina (20.8%), Jigawa (9.9%) and Sokoto (11.8%). However, this statistic is still higher than Lagos (3.7%) and Rivers (4.7%), respectively. Among the primary reasons of never attending the school are: the reluctance and lack of interest on the parents' part dominate the list of answers.

Table 3: Share of Population who have never attended school (in percent)

	Never Attended School
Nigeria	14.3
Kaduna	9.7
Industrial States	
Lagos	3.7
Rivers	4.7
FCT	17
Other states in North-Western Zone of Nigeria	
Jigawa	9.9
Kano	26.8
Katsina	20.8
Kebbi	26.5
Sokoto	11.8
Source: National Bureau of Statistics, 2020	

Table 4 indicates the participation in the labour activities. Only 11.6% for Nigeria and 9.4% for Kaduna state of males, involved in wage employment, respectively. While 5.3% and 4% of females surveyed for Nigeria and Kaduna state are involved in wage employment. This suggests that the percentage of working age population involving in wage employment in Kaduna state is slightly lower than the national average. The percentage is higher in Lagos state with 30.3% and 16.8% for male and female, respectively, and lowest for Zamfara state (1.3% for male and 0.2% for female).

As Table 4 further indicates, among adults (age 15 years and above), 15.2% and 24% of men and women work in own non-farm enterprise in Kaduna State. While the national averages are slightly lower with 15% and 23%. Again, around 40% and 30% of males and 14% and 20% of females participate in farming activity for Kaduna State and Nigeria, respectively.

This also implies that more population within the working age in Kaduna state (like Jigawa, Kebbi and Sokoto states) involves in farming activities compare to the average statistics. Many individuals, 15.2% and 12.5% of men and 10.7% and 6.4% of women are simultaneously involved in several activities - combination of wage, farm and non-farm work – in Nigeria and Kaduna State, respectively.

Table 4: Participation in the Labour Activities in the Last 7 Days before the NLSS Survey

	BY ACTIVITY										**NO ACTIVITY**	
	Wage		***Farm***		***Non-Farm***		***Apprenticeship***		***Mixed***			
	M	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
Nigeria	11.6	5.3	29.5	19.6	15	22.9	3.5	2.8	15.2	10.7	25.3	38.7
Kaduna	9.4	4	39.6	14.1	15.2	23.5	2.3	3.5	12.5	6.4	21	48.6
Industrial States												
Lagos	30.3	16.8	1.1	0.1	30.3	42.4	6.3	4	1.4	0.4	30.5	36.4
Rivers	14.6	7.8	18.1	23.2	14.4	18.8	3.4	2.7	6.9	5.7	42.6	41.9
FCT	13	6.5	38.6	40.1	10.1	13.2	1.6	1.5	14.3	10.8	22.6	28
Other states in North-Western Zone of Nigeria												
Jigawa	6.4	1.9	45.2	3.4	8.5	29.8	0.2	0	20.7	0.5	19.1	64.5
Kano	14.7	2.1	20.7	2.9	21.4	32.8	2.2	0.6	17.6	0.6	23.5	61
Katsina	3.6	0.5	27.5	16.3	12.1	30.4	1.3	0.6	41.3	26.1	14.1	26.1
Kebbi	2.2	0.3	46.6	22.6	7.9	23.9	1.2	0.9	35.5	30.4	6.6	21.9
Sokoto	4.9	1.1	51.5	3.1	7.1	7.7	0	0	8	1.1	28.4	87
Zamfara	1.3	0.2	45.6	9.5	4.2	35.6	0.2	0.6	32.5	17.8	16.1	36.2

Source: National Bureau of Statistics, 2020

Furthermore, in terms of male without income earning activities, the national figure is 25.3%, but the Kaduna figure is 21%. It does suggest that more men got job in Kaduna State, and this statistics is greater than the Nigeria's average. For female, however, there are most female that do not participate in any income earning activities in Kaduna State (48.6%) to national average of 38.7%.

Table 5: Industry of Activity for Wage Employment by Sex (% of people employed)

	Agri-culture		**Mining/ Construction**		**Manufac-turing**		**Electricity/ Water/Gas**		**Scientific/ Technical**		**Transportation**	
	M	F	M	F	M	F	M	F	M	F	M	F
Nigeria	8.6	7	11	1.3	6.3	3.5	2.3	0.7	7.6	4.8	10.1	0.5
Kaduna	3.6	2	10.7	0	2.3	1.1	1.2	0	10	6.7	20.5	0
Industrial States												
Lagos	0.4	1.8	5.5	0	12	4.6	2	0.7	25.4	20.9	11.5	0.6
Rivers	4.5	5	12.5	0.6	1.5	1.1	7.1	2.7	18.2	1.7	7.4	0
FCT	0.4	2.8	10	4.4	3.2	1	1.3	0.6	8.9	4.4	6.2	0.8
Other states in North-Western Zone of Nigeria												
Jigawa	13.7	0	4.9	0	3.9	0	1.6	0	0.7	0	8.6	0
Kano	8.9	7.8	5.7	0	7	0	0.9	0	2.1	0	12.5	2.7
Katsina	9.8	5.8	3.1	0	7.8	0	0.6	0	6.6	0	13.6	0
Kebbi	9.7	6.6	7	0	4.8	0	1.4	0	1.4	3.8	0.6	0
Source: National Bureau of Statistics, 2020												

Table 5 show the percentage of people's industrial activities by sex of those who are employed. For instance, among those who have wage employment, 8.6% of male and 7% of female engaged in agricultural activities. However, lower male (3.6%) and female (2%) were fully engaged in farming and livestock activities in Kaduna State. The finding suggests that considering the large male and female unemployment, agricultural production could be re-strategies to reduce this rate of unemployment in the state. The same is applicable to mining/construction, manufacturing, electricity/water/gas, except scientific/technical and transportation activities. This is not surprising because, the state is known as the center of learning, as evident from the numerous educational institutions. Similarly, it is a major transportation hub for the surrounding states.

Table 5 (cont.): Industry of Activity for Wage Employment by Sex (% of people employed)

	Buying and Selling		**Financial/ Insurance/ Real Estate**		**Personal Services**		**Education**		**Health**		**Public Administration**	
	M	F	M	F	M	F	M	F	M	F	M	F
Nigeria	4.7	5.1	2.8	2.8	12.5	11.4	14.4	38.9	3.5	10.7	12.9	11.4
Kaduna	4.4	2	0.2	2.5	7	7.2	20.2	47.6	4.2	22.4	11.8	8.5
Industrial States												
Lagos	5	4.8	6.1	4.9	10.9	10.9	4.6	26.8	2.7	4.4	8.9	15.2
Rivers	2.5	9.8	1.3	4.7	4.9	4.2	11.9	38	2.7	12.2	23	19.9
FCT	2.7	9.7	1.5	3.5	13.2	11.6	12.2	37.5	3.2	3.8	31.8	18.9
Other states in North-Western Zone of Nigeria												
Jigawa	1.8	0	1	0	34.4	72.4	14.8	22.8	2.4	0	12	4.8
Kano	20.5	7.1	4.1	8.4	3.6	12.4	19.7	54.6	3.4	7.1	8.8	0
Katsina	3.2	0	2.1	0	10.3	0	19.7	40.8	8	53.5	14.1	0

Kebbi	0	0	3.1	0	11.8	20.7	20.4	48.6	3	0	29.3	11.4
Sokoto	1.8	0	0.5	0	0	0	37.8	62	20.8	38	15.2	0
Zamfara	0	0	0	0	0	0	34.1	17.4	18.5	82.6	12.2	0
Source: National Bureau of Statistics, 2020												

Table 5 (cont) further indicates that, 14.8% of male and 38.9% of female were employed in the educational sector in Nigeria. These national statistics is lower compared to Kaduna state's figure, where 20.2% of male and 47.6% of female are employed in education sector. Perhaps the state is known for its educational institutions. The same is applicable to health sector in the state. However, the national averages of trade, buying and selling, financial/insurance/real estate, personal services, and public administration perform higher than Kaduna state's averages. All these findings are in line with the argument of Haid and Seiffge-Krenke (2013), Brand (2015) and Ek (2015) that quality of life is largely and highly subjective. This is because; different individual may define his/her quality of life, in terms of having ability to live a good life.

Conclusion and Recommendations

Based on the context of this study's research question of: can we establish predictable trends in quality of living in Kaduna state and Nigeria's averages. The empirical findings of the study clearly indicated that the trends in quality of living in Kaduna state and Nigeria's averages are not the same. For instance, among the major findings of this study, it was found that households in Kaduna State have more family members than the national average; the dependency ratio in Kaduna state is also higher than the national average; and men and women are unemployed compare to national average. All these implies that, to improve the welfare and quality of lives in Kaduna State, this will require additional efforts and good quality of living strategies beyond what is obtainable at the national level.

Therefore, the study's findings suggest the needs for policy makers and Kaduna State government to further invest in improving the quality of living in the state. Particularly, by focusing on agricultural activities, vocational skills and promoting entrepreneurship spirit across the 23 LGA of the state. Strategies should also focus on creating fiscal space for public financing of human capital development and social protection; and accelerated development of infrastructure. These imply that there is need to take rapid action to ensure investment in their people, with a fierce sense of urgency – especially in employment generation, health and education – the major building blocks of quality of life.

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Estimating the Cost of Improving Households' Resilience to Floods through the Construction of a Dam in Some Parts of Jigawa State, Nigeria

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Abstract

Climate change and/or climate variability has heightened the frequency and re-occurrence of climate related disasters, particularly floods in the past two decades globally. In line with achieving disaster resilience and sustainable development, particularly the eradication of flood risks in urban areas and in line with recommendations in the literature on the need to combine both structural and non-structural measures to help reduce people's vulnerability, improve adaptation to and mitigate against climate-linked disasters like flooding. This paper seeks to estimate the costs and benefits of improving households' resilience to floods through the construction of a dam for flood mitigation, as well as for promoting agricultural activities and improved welfare (income) of households living in high-risk flood areas in Jigawa State. Using secondary data combined with cross-sectional data collected through questionnaires from 251 households (flood victims of 2016) and well-structured interviews (involving government institutions and community elders). This paper used contingent valuation technique (benefit-cost analysis) for the estimation. The study found the proposed dam project to be feasible when used for the production of rice or wheat in the selected study area. The study therefore, recommends the need for disaster risk management authorities to improve on post-flood risk assessment and data collection to aid future planning for improved flood resilient projects.

***Keywords**: Flood, Vulnerability, Mitigation, Adaptation, Benefit-cost analysis, Household*

Introduction

The condition of an environment at any point in time (whether in the short or long run) influences the well-being of mankind locally and globally. This makes it normal to integrate the environment into the economic system, in relation to explaining economic allocation problems which are or have been an integral component of any economic system at any given time. This is important because scarcity or availability of environmental goods and services affects the well-being of producers and consumers (economic agents) (Weismeth, 2012). The level of investment in the provision of public goods usually depends on the extent of social awareness and the public support it gets. This applies to the case of the drive to universally reduce greenhouse gases and its significance to climate change mitigation (Weber & Wiesmeth, 2018). This implies that environmental protection entails investment in public goods to build environmental resilience to external shocks (e.g., flooding) for the well-being of mankind.

Generally, allocation problems in a climate-economic system which takes environmental goods and services into consideration can be solved using a mechanism which will ideally lead to an optimal allocation, at least under certain reasonable conditions (Weismeth, 2012). But the first challenge is that markets for environmental commodities are non-existent in reality. In addition, the production and consumption of these environmental goods and services involve external effects (externalities such as pollution), which are not captured in the normal market system. Hence, the market system will never operate at an optimal level in so far as environmental commodities exert external effects. This is because a gap between social costs and private costs will exist once environmental commodities (public goods) are produced or consumed (Weismeth, 2011). Proper weighing of the benefits and costs of different environmental policies is an efficient way of coping with greenhouse warming. This is very important since the costs of providing environmental protection and the damages are often incomplete and uncertain, hence, these estimates are tentative. In general, the right level of environmental control hinges on three key parameters of a climate-economic system: the cost of reducing greenhouse gases emission, the extent of damages of global warming to the human societies and the time variations as captured in the discount rate of future commodities, in addition to the time lags in the response of the climate to emissions (Nordhaus, 1991; Nordhaus, 2007).

Out of 27.8 million new displacements in 2015, cutting across 127 countries globally, 19.2 million of them were linked with disasters in 113 countries. A number of factors have been linked to the causes of displacement in Africa, some of which include droughts, floods, communal and political conflicts, storms and a host of other natural disasters. In 2015, Africa was home to over 15 million internally displaced persons (IDP). These displacements have impacted negatively on the environment by contributing to increased environmental degradation, and also putting serious pressure on scarce food, water, and energy resources. This implies that the major causes of human displacements globally are environmental degradation and the growing intensity of meteorological disasters linked to climate change. Hence, there is the need for collective humanitarian and development initiatives to address the root causes of forced displacements and mitigate its impacts on the environment (UNEP, 2016).

This clearly demonstrates that flood is one of the greatest natural and climate-related threats to human existence, and that those living in informal settlements will constitute the most vulnerable group, whether or not such cities are located in coastal areas, inland areas or flood plains. Existing studies on floods in Nigeria, particularly those that have looked at vulnerabilities and flood disaster risk management efforts, include impacts and institutional responses (Olorunfemi, 2011), factors responsible for reoccurrence of floods in some Nigerian cities and flood effects on human activities (Aderogba, 2012), gender as well as urban/rural differentials from flood losses (Adeagbo *et al.*, 2016) and factors influencing households' and individuals' adaptive capacity to flood disasters (Daramola *et al.*, 2016) and so on. Some other studies on flood management and risk response in Nigeria have recommended the need for building flood resilient infrastructure through restructuring our cities and the need for different stakeholders to participate (Olorunfemi, 2011; Barau *et al.*, 2015). However, to the best of our review, we have not found any study that has attempted to estimate the cost and benefits of building a flood resilient infrastructure aimed at reducing households' vulnerability to flooding in high-risk flood areas. This study therefore, aims at filling this gap with a focus on Jigawa State, Nigeria. Jigawa State was selected because based on NEMA (2016) statistics, more communities in Jigawa State have been affected by flooding between 2012 and 2016 than other communities in other States in Northern Nigeria. This is supported by the listing of Jigawa State among other States (Kaduna, Adamawa, Kebbi, Kano, Cross River and Niger), as one of the most affected by fluvial floods in Nigeria. This is primarily due to their situation along the plains connecting the country's major rivers (Agbola *et al.*, 2012). Section 2.0 presents the literature review, which is followed by the methodology (data and model) in section 3.0. The results and discussion are presented in section 4.0, while section 5.0 concludes the study.

Literature Review

Flooding is a crucial component in the climate system, with unparalleled historical occurrences. This has sparked significant discussion among economies affected by climate change, which encompasses over 70 million people annually.

The effective management of flood risk has been a decisive issue over the years because of several environmental and climatic changes such as increasing levels of rainfall and rapidly growing populations, among others. There are also economic implications of flood occurrences with reports (such as those of Guha-Sapir *et al*., 2013; EMDAT, 2015) indicating that flood disasters have cost billions of dollars over the past decades while also resulting in several hundreds of thousands of deaths, psychological issues (such as depression and anxiety), and several degrees of injuries among others in flood prone areas of Asia (Tapsell *et al*., 2002; Hunter, 2003; Tapsell & Tunstall, 2008).

However, in some Sub-Saharan African countries such as Nigeria, flood disasters have resulted in dislodgments of several houses and properties (Obeta, 2014). As a result, Nigeria's losses have amounted to billions of dollars (NEMA 2013 report). The impacts of these disasters may include death, substantial injuries, homelessness, transmission of widespread infections and diseases, and famine (Fadairo & Ganiyu, 2010, Ogunbodede & Sunmola, 2014). These disasters are commonly connected to global climate change as well as inadequate regional planning of susceptible flood areas (Action Aid, 2006; Adeloye & Rustum, 2011). Nigeria had a bitter flooding incident in 2012 that affected approximately 32 states and was the worst on record with several days of heavy down-pour in some of these states (NEMA, 2013 report). The floods extended from July to October that year and affected 7.7 million people, more than 2 million of which were recorded as internally displaced persons (IDPs). More than 5000 people were physically injured and over 5900 houses were destroyed. In the past, flooding in Nigeria was typically fluvial, coastal, and pluvial in nature and had mostly affected rural areas and country sides (Douglas *et al*., 2008, and Bashir *et al*., 2012). The fluvial floods would usually result from the major flood pressure witnessed in areas with major rivers that cuts across the North-western, Middle belt and South-south regions of the country (Iloje, 2004).

In Nigeria, however, flood can be mitigated because these incidences are predictable. This can be done using best practices in flood risk reduction and the lessons learned from other countries' experiences. But efforts of these stakeholders have been limited mainly due to lack of quality data (Nkwunonwo *et al*., 2015).

Debatably, the increasing cases of flood occurrences in Nigeria coupled with the limited existing successes in the achievement of sustainable development goals targets, indicated that management of flood risk is insufficient in Nigeria. Recent studies have examined the effects of flooding as well as the possible ways of mitigating them in communities, geopolitical regions, and various states within the country. Nevertheless, the focal point of these studies is that a more all-inclusive perspective on the prevalent flooding in Nigeria necessitates wide-ranging deliberations (Adeoye *et al*., 2009; Bashir, *et al*., 2012; Adedeji *et al*., 2013; Terungwa & Torkwase, 2013; Agbonkhese *et al*., 2014; Obeta, 2014; Ali & Hamidu, 2014).

The role of Disaster Risk Reduction (DRR) in curbing the detrimental (social, economic and environmental) effects of natural disasters (floods, earthquakes, hurricanes, and so on) has been widely discussed in the literature. In the United States (US) for example, studies (as cited in Shreve & Kelman, 2014) have shown that out of 4000 disaster mitigation programmes investments, a mean benefit-cost ratio (BCR) of 4 was reported by the Federal Emergency Management Agency (FEMA). However, in developing countries, the benefits of DRR are often underestimated considering the frequency and subsequent impacts of these disasters (Shreve & Kelman, 2014). This argument is supported by a case study in Mozambique where post-flood mitigation aid demand was 203 times greater than the partly-financed pre-disaster demand (La Trobe & Venton, 2003). One should bear in mind that the BCR from DRR does not always yield a positive outcome as reported in quite a number of studies. There are also questions of whether the estimation of the BRCs for DRR should be taken seriously only when the disaster occurs. For instance, should the process of constructing a building for long term use from the onset, take flood risk reduction measures into account or not? Are these measures worthy enough and are the benefits from taking such measures realizable? There is sparse literature on this topic, which requires more to be done in order to come up with measures on DRR actions that will yield favourable results, whether or not the disaster occurs (Shreve & Kelman, 2014).

The work of Kull *et al*., (2008), developed a people-focused resilience-motivated flood risk reduction method. This method yielded higher economic efficiency, reduced start-up investment costs and investment returns insensitive to the conventional assumptions usually made in Cost-Benefit Analysis (CBA), like projected climatic conditions and discount rates. The outcome from Kull's approach was more economically efficient when compared with other measures adopted for flood mitigation within the same region, which are mainly structurally-based. Others had established and adopted a technology-based approach in Vietnam, for instance, introducing the use of a new boat system (Khan *et al*., 2008). The Red Cross performed a CBA to evaluate the benefits of providing First Aid training in some studies on Nepal (Cabot-Venton *et al*., 2008). In an attempt to come up with a more all-inclusive estimate of projected potential costs, Mechler *et al*., (2008), Kull *et al*., (2008) and Kull et al., (2013) have included climate change scenarios in their CBAs. Since sustainable ecosystem services provision promotes sustainable livelihoods, risks reduction and stability in the ecosystem, Nepal Red Cross (Cabot-Venton *et al*., 2008) has also carried out an evaluation of CBA on ecosystem revitalization approaches like reforestation of rainforest and mangroves in Nepal. There are however, studies (De Loë & Wojtanowski, 2001; Ganderton, 2005) on CBA which do not provide explicit information on the approach used or complete explanation on data analysis done.

Among the many studies relating to CBA in DRR activities, most were community-centred or community-based (Venton & Venton, 2004; Mechler, 2005; Holub & Fuchs, 2008 ;Burton & Venton, 2009; Heidari, 2009; White & Rorick, 2010; IFRC, 2012a; IFRC, 2012b), that is, mainly in relation to floods or flood prone areas. There were quite a few studies done on the national scale and in relation to meteorological services (Ganderton, 2005; Godschalk *et al*., 2009; Hawley *et al*., 2012; Rose *et al*., 2007; Whitehead & Rose, 2009; World Bank, 2010). Most of the beneficiaries of the DRR programmes in these studies were those residing in regions exposed to disasters (floods, droughts, and so on). This is so because these disasters impacted on the livelihood activities in the various communities, some of which include farming, fishing and pastoralism. In terms of framing of these studies, it was a combination of forward-looking and backward-looking studies, with most of them concentrating more on the backward-looking approach. This is because issues relating to climate change and climate modelling are surrounded with uncertainties as it requires clear comprehension of related future risks, making forward-looking studies demanding and problematic (Kull *et al*., 2008; Kull *et al*., 2013; Venton, 2010). Only a few studies have attempted using both approaches simultaneously.

Most computations of CBA for the DRR in the literature use a discount rate of between 10% to 12%, with few applying discount rates below 5%. These rates are applied based on different arguments put forth in the literature. While some argued for the use of higher discount rates (between 10 - 15%) on the assumption that rapid intervention in protecting the environment today will increase the coping capacities of future generations to such hazards and make them better-off (Kull *et al*., 2013), others that recommended a very low or zero discount rates are of the view that equal value should be attached towards projects that protect the future environment as those that protect the present environment (Kull *et al*., 2013; Venton *et al*, 2010). To those who support a low discount rate, applying high discount rates is just like transferring the burden from the present generation to future generations (by prioritizing their needs over those of generations to come makes the present generation better-off than the future generation). However, it appears that the 10 to 12% rate is the standard used for most development projects in practice. In order to get a clearer picture of the implications of making choices between the two views above, carrying out a sensitivity analysis of rates between 0% and 20% may help (Shreve & Kelman, 2014).

The activities making up the items valued in these studies can be broadly categorized into various headings: Agricultural (size of farmland used, seeds and productivity of crops), Meteorological Services (setting up early warning systems and disseminating climatic information), Ecosystem-based Services (goods/products, services like recreation, watershed, and biodiversity), Emergency Aid Services (labour and transport services costs), and Physical Assets and Maintenance Cost (construction/building materials, energy services provision), (Shreve & Kelman, 2014). Some have argued that a measure for valuing human life be included, which is difficult to assign (Kunreuther & Michel-kerjan, 2012). In terms of coverage, most studies have done outstandingly well in valuing physical assets because they tend to be the simplest category to measure. Since most of the studies are done at the community scales, some had also properly integrated the costs that arise from losing means of livelihood, primarily resulting from floods, which is an expected consequence from such a hazard. Direct costs like wages lost due to a temporary market building closures, and repairable damages on infrastructure and buildings have been estimated in studies through field surveys and interviews. The loss of livelihood can pose challenges on the physical and mental health conditions of flood victims. Only a few studies have attempted to quantify the associated costs (indirect) in the literature. Studies that have tried to estimate the costs and benefits from the provision of meteorological services (Rogers & Tsirkunov, 2010) have focused mainly on the agricultural and aviation sectors of the economy on the national scale. In this regard, some community-based studies have provided estimates for actual losses in agriculture. However, challenges arising from inadequate data and difficulty in assigning monetary value to social and environmental goods and services, may explain the lack of studies that provide estimates for benefits in most of the CBA for DRR studies (Shreve & Kelman, 2014). Whitehead and Rose (2009) have done a great job emphasizing the need for valuing the benefits from services related to the ecosystem. The same narrative applies to the value of human life, as only few studies (Kunreuther & Michel-Kerjan, 2012) have assigned it value too. Khan, Mustafa and Kull (2008), have reiterated the importance of doing so, which gave them a much higher BCR than that of Kunreuther and Michel-Kerjan in their study estimation (Shreve & Kelman, 2014).

Additionally, a comprehensive CBA (especially for long-term programmes) requires clearly comprehending the motives behind decision-making at both the private and public-sector levels, and why they might change over time (Deaton, 1987, cited in Shreve & Kelman, 2014). Also, a good CBA should promote the potentials to attract future investment DRR and form the basis for evaluation-initiated pilot programmes, in terms of their successes, challenges and failures (Shreve & Kelman, 2014). BCR computations should be contextualized for policy relevance.

Methodology

Study Area

Jigawa State is in the North-western region of Nigeria (Latitude 12.00^{o}N and longitude 09.45^{o}E). Dutse is the capital of Jigawa State. Jigawa State has a total of 27 Local Government Areas (LGAs). Additionally, the State covers a landmass area of about 24,742 km^2, with a population of around 5,828,200 people in 2016 (NPC, 2016, NBS, 2016). About 14% of the total landmass of Jigawa State constitutes its wetlands (Fadama) area.

With a combination of tropical wet and dry climates (with seasonal rainfall between May and October), the State is mainly Sudan Savannah vegetation with the remaining constituting the Sahel Savannah vegetation type (Ahmed, 2010). The city experiences a mean annual temperature of about 30^{o}C. Rainfall variability is pronounced in this area and rainfall distribution is skewed, with an annual average ranging from 635mm to 899mm, or less than 1000 mm (NIMET, 2008).

Data and Sample

Both primary and secondary data were used for this study. The secondary data were obtained from the Nigerian Meteorological Agency (NIMET) and the Nigerian National Emergency Management Agency (NEMA). Information on input costs and farm gate prices for rice and wheat were obtained from the National Agricultural Extension and Research Liaison Services (NAERLS), Ahmadu Bello University, Zaria, Nigeria. The primary data (cross-sectional) were collected from a cross-section of households with the help of a well-structured survey questionnaire. In addition, a series of interviews was conducted involving experts from the Ministry of Housing and Urban Planning, Ministry of Environment, as well as those in the National Emergency Management Agency (NEMA). This was done with the help of well-structured interview guides and to ensure proper data triangulation.

Based on the data obtained from the Nigerian National Emergency Management Agency (NEMA) on 2016 flood statistics, a total of 9459 households (sample frame) were affected by flooding in 2016 in Jigawa State. Using survey monkey calculator for sample size calculation, and based on a 95% confidence interval with a margin error of 5%, a sample size of 370 household heads were selected. Furthermore, based on information on the Local Government Areas (LGAs) affected, we had a total of nine affected LGAs (Babura, Malam Madori, Hadejia, Kafin Hausa, Ringim, Jahun, Guri, Dutse and Suletankarkar) in the database provided for 2016 by NEMA. The study randomly selected four out of the nine LGAs affected. Hence, the study covered Ringim (Ringim, Majiya Gari and Auramo Sabuwa communities), Guri (Guri and GRA communities), Hadejia (Hadejia and Gudiccin communities), and Kafin Hausa (Tage community) LGAs. The questionnaires were randomly distributed among male and female household heads across the eight communities within the four LGAs selected. Having selected four of the most affected LGAs out of nine LGAs, the sample size of 370 households were distributed as a proportion of the total number of affected households in the four LGAs, as shown in Table 1 below:

Table 1: Distribution of Sample Size According to Population Profile

Selected LGAs	No. of HH affected	Distribution of Sample Size	No. of Response
1. Ringim	1,525	164	106
2. Guri	822	88	61
3. Hadejia	525	57	48
4. Kafin-Hausa	570	61	36
TOTAL	**3,442**	**370**	**251**

Source: Author's computation based on NEMA 2016 data

However, out of the 370 sample households intended to be surveyed, only 251 household heads responded to the questionnaires administered (a 67.8% response rate). Hence, we based our analysis on the 251 households that responded. The household surveys were conducted between December 2017 and February 2018.

Contingent Valuation Method

Contingent valuation survey techniques usually involve the use of questionnaires designed primarily to elicit preferences of individuals. In the case of some public goods (pipe borne water, roads, recreational facilities, drainage, national park services, ecosystem services, hazardous wastes, and so on), whose markets are non-existent or poor and whose market proxies are difficult to obtain, the only means of inferring preferences from observed behaviour of individuals is through the use of the contingent valuation method (Boardman *et al*., 2006). This method, though sometimes considered a hypothetical approach, is used to elicit information on peoples' or households' willingness to pay (WTP) for public goods because the respondents are not asked to pay for their stated valuations for the goods. The approach is not controversial as long as it is used to value the use or potential use of such goods. In addition, it is used to capture the benefits and costs (via BCA or CBA) of the public goods.

Some steps normally must be followed when carrying out contingent valuation (CV) surveys. The first involves identifying a sample to survey. This is followed by administering questions to individuals or households to examine their valuation of the goods. Next, the information provided by the respondents is used by the researcher to estimate their willingness to pay (WTP) for the goods. Finally, the average amount expressed by the sampled respondents as their WTP is generalized to the entire population, provided that the sample was selected randomly. To arrive at the aggregate WTP or valuation, the size of the entire population is multiplied by the average WTP or valuation. Because characteristics of the sampled population (such as age, income, gender, level of education, etc.) differ from one location or population to another, it is necessary that the researcher collects information on these characteristics alongside their valuation of the goods (Boardman *et al*., 2006).

As noted in the literature, a well-known economic technique for comparing between the benefits and costs of well-defined project or activity is the Benefit-Cost Analysis (BCA), also known as cost-benefit analysis (CBA) (Benson & Twigg, 2004; FEMA, 2007; Kramer, 1993; Kull *et al*., 2013; Venton *et al*., 2010). Four stages are involved in any CBA. They include definition of the proposed project for which resources are to be allocated; an evaluation of the project's economic impacts through assessing its net benefits and crowding-out effects; identifying the economically important impacts of the project though quantitative estimates; providing a monetary valuation, discount weightings as well as a sensitivity analysis of the project (Pearce *et al*., 2006; Hanley & Spash, 1993).

In spite of its weaknesses, CBA remains the most widely used standard of measurement to communicate benefits to policy and decision makers. Aside from using CBA to prepare for future response to disaster-related events, it could also be used to form the basis for proposing convincing economic investments for risk reduction (Venton, 2010). The Benefit-Cost Ratio (BCR) will be useful in this regard, since it serves as an indicator that summarizes all monetary values accruing from a given project. CBA for DRR covering different scales, vulnerabilities, geographical locations and types of hazards have been widely discussed in the literature. Absent from most of these studies are systematic reports on CBAs, making it difficult to understand the circumstances under which one method should be appropriate over another. As far as measuring the economic efficiency within the CBA framework is concerned, there are three standard units of measurement used: (i) Net Present Value (NPV) method (ii) Internal Rate of Return (IRR) method and (iii) cost-benefit-ratio (CBR or BCR) method. Often, IRR and NPV measures tend to yield the same result *(Kull et al.*, 2013). Since this study is intended to have policy relevance for continued communication with decision makers, the focus will be on the BCR method in line with suggestions from studies (such as Hanley, 1998; Godschalk *et al*., 2009; Cavallo *et al*., 2013; Ayyub, 2014) and this was used to address the main objective of this study.

Results and Discussion

Considering that the kind of flooding experienced in Jigawa State was found to be fluvial (river flooding), this study proposed the construction of a flood resilient project that would be beneficial to both members of the flood prone communities and the private sector firm, which will finance the project. The study proposed the construction of dams in strategic locations of the affected flood areas. Each dam will be constructed in such a way that will help capture or trap excess water flowing from the river channels (the Hadejia and Jama'are rivers) during peak periods of rainfall, which is usually responsible for flooding the affected communities. In turn, a privately-operated irrigation mechanism will be constructed alongside each dam, for use in the production of some agricultural cash crops (rice and wheat). This irrigation mechanism will also generate revenue that will provide the private firm and members of the communities with employment opportunities. Hence, the study proposed the construction of an $11m^2$ high dam associated with an irrigation system that will benefit all the stakeholders involved. The capacity of the dam (the amount of water that can be stored in the dam) is $280{,}000m^3$. Each dam, based on its capacity, can provide enough water to cultivate an estimated thirty-five hectares (35ha) of wheat or rice. The following steps were followed to determine the viability of the proposed project:

i. Estimating the costs of the proposed flood resilience project. This was achieved by understanding the eligible costs of the project and the appropriate required costs in a benefit-cost analysis (BCA).

ii. Pointing out the benefits associated with the flood resilient project proposed.
iii. Determining the net present value of the proposed flood resilient project benefits using the benefit computation process. That is, recognizing and using the BCA terms.

The total estimated cost of the bulk of water infrastructure which included the dam, the irrigation system and the related infrastructure (the provisions of road access, power lines, and proper supervision by a qualified engineer), was approximately $294,415.00 (₦106,873,000.00). A breakdown of the costs is shown in Table 2 below. It is important to note that the provision for maintenance cost, which constituted 10% of the costs of the project, excludes the provision for contingencies that may arise during the construction of the irrigation-dam structure. Normally, such projects have a life span or useful life of between 50 and 100 years. However, since this is a small-scale dam project, we used a 50-

year useful life for the project. As for the discount rate for calculating the net present value of the project, it is selected based on the existing Monetary Policy Rate (MPR) in Nigeria, which was 14% as at the time of conducting this study. Since the dam is sufficient to provide irrigation for 35ha of cultivated land, the cost of the in-capital funding per hectare is approximately \$8,411.46/ha. Looking at the per hectare cost of the project is a very important way of comparing the dam sites where irrigation activities are involved. Another important comparison can be made by looking at the cost of the dam to the capacity of the dam (which determines the area that can be irrigated for wheat or rice cultivation during the dry season). The cost of the dam in relation to the amount of water that can be stored is \$1.05/m^3, taking into account the 10% contingency cost and maintenance cost respectively. This is particularly useful for economic comparisons especially where more than one dam is to be constructed.

Estimating the cost and benefits of the proposed dam-irrigation scheme is necessary to determine the economic viability of the project. In this case, the dry season crops (rice and wheat) are expected to each be grown on a 35-hectare irrigation scheme, which is attached to every dam. As shown in Table 3 below, the current price of rice '(farm gate selling price) in Jigawa State is \$291.5/ton, with expected rice yield from irrigation systems in Jigawa State of between 4tonnes/hectare and 5tonnes/hectare, under good management practices. In our case however, we targeted a yield of 4t/ha. For wheat, its current price (farm gate selling price) is \$360/ton, with its expected yield between 3t/ha and 4.5t/ha. We set ours at 3.5t/ha, assuming good farm management practices and taking into account possible risks that may cause yields to fall below the maximum. Hence, for 35ha, the expected yield for both rice and wheat will be 140 tonnes and 122.5 tonnes, respectively. This will bring an expected return of \$40,810 and \$44,100 for rice and wheat production respectively.

Table 2: Cost of Establishing the Flood Resilient Irrigation Dam Project

Item	Activity	Unit Rate	Quantity	Cost (US$)	Amount (US$)
1.	Site Investigation work	Sum	-	-	12,000.00
2.	Engineer's Fees: design and supervision	Sum	-	-	17,000.00
3.	Mobilization Fee	Sum	-	-	7,500.00
4.	Clearing Site:				
	Embankment Area	ha	5	2000	10,000.00
	Reservoir	ha	40	500	20,000.00
5.	Cut-off/Core:				
	Evacuation	m^3	750	5.5	4,125.00
	Backfilling	m^3	750	7.0	5,250.00
6.	Embankment	m^3	22,000	3.5	77,000.00
7.	Training banks	m^3	1400	6.0	8,400.00
8.	Spillway	m^3	770	6.0	4,620.00
9.	Finishing works	hours	240	10	2,400.00
10.	Other dam works including settlement works after construction	Sum	-	-	5,000.00
	Subtotal Dam			**A**	**173,295.00**
11.	Irrigation scheme (one-centre pivot)	ha	35	-	42,000.00
12.	Miscellaneous (access road/power line	Sum	-	-	30,000.00
	Subtotal Irrigation Scheme			**B**	72,000.00
	Subtotal Overall Project			**A+B**	245,295.00
	Contingencies			10%(A+B)	24,560
	Maintenance Cost			10%(A+B)	24,560
	Grand Total			**US$**	**294,415.00**

Source: A. G. Nassima Minerals Company Ltd, 2018

Note: Information on input costs and farm gate prices for rice and wheat were obtained from the National Agricultural Extension and Research Liaison Services (NAERLS), Ahmadu Bello University, Zaria, Nigeria.

Table 3: Expected Returns on the Proposed Farming Activities under the Dam-Irrigation Project

Crop	Expected Yield (35ha)	Area to be cultivated	Farm gate price (US$)	Expected output	Expected revenue (US$)
Rice	4t/ha	35ha	291.5/t	140t	40,810.00
Wheat	3.5t/ha	35ha	360/t	122.5t	44,100.00
Total					**84,910.00**

Source: Author's computation based on field survey, 2018

As shown in Table 4 below, the average costs per farming year (dry season) for the cultivation of rice and wheat (which includes the cost of fertilizer, labour, land preparation, and other inputs plus harvesting) are $386/ha and $413/ha respectively. There is an additional cost of $300 for irrigating one hectare of land, for both the cultivation of rice and wheat. Including the cost of irrigation for each commodity brings the annual input cost to $24,010 and $24,955 for 35ha of rice and wheat production, respectively. Therefore, even without a comprehensive cost benefit analysis, the construction of the dam and irrigation scheme appears to be economically viable and profitable, yielding a net profit of $16,800 and $19,145 for rice and wheat cultivation respectively. Each profit estimates are enough to cover the 10% operation and maintenance costs from the total capital cost of each dam to be constructed. In fact, it appears that the cost of the dam can be paid off within the first 18 years of initiating the project, assuming that only rice is cultivated on the 35ha of land. If wheat was the crop cultivated, the cost of the irrigation dam project will be paid within the first 16 years of the initiation of the scheme/project.

Table 4: Expected Cost of Production per year (dry season)

Crop	Area to be cultivated	Cost of irrigation (US$)	Cost of production (US$)	Total cost of production (US$)	Total cost for 35ha Cultivation (US$)
Rice	35ha	300/ha	386/ha	686/ha	24,010.00
Wheat	35ha	300/ha	413/ha	713/ha	24,955.00
Total					**48,965.00**

Source: Author's computation based on field survey, 2018

Since the overall cost of the project is known, it is important to proceed with identifying and estimating the possible benefits from the project/scheme. A number of benefits can be identified from the implementation of the proposed project, some of which are quantifiable (financial benefits), while others are not (social benefits) due to unavailable information or data. Some of the social benefits to the community that are unquantifiable include the provision of recreational sites, water supply, electricity, wildlife habitat, and so on. However, our focus here is more on the financial aspect of the benefits of the project. The three quantifiable benefits are the averted cost of damages from floods to households (found from the field survey conducted), the private firm's profit from investing in rice or wheat cultivation, and the possible employment opportunities for members of the affected communities. Table 5 below shows the possible gains by members of the community in terms of employment opportunities. Based on information obtained from the NAERLS, an average of 30 or 35 workers are expected to be employed per cultivated hectare of rice or wheat annually. In addition, the cost of employed labour is estimated at $138/ha and $165/ha of rice and wheat cultivated respectively. Based on the proposed 35-hectare plots of land to be cultivated for both commodities, an estimated number of 1,050 and 1,225 persons will be employed for rice and wheat cultivation respectively. This brings the total cost of paying the hired labour to $4,860/35ha and $5,775/35ha for rice and wheat respectively. These amounts contribute to the accrued benefits from the proposed projects. Other unquantifiable benefits of the projects include amount saved from the costs of emergency response and management, environmental clean-up, environmental damage, setting up temporary shelters and alternative transits. We then proceeded to determine the net present value of the resilient project benefits using the benefit computation process. This involves the calculation of the present value coefficient.

Table 5: Expected Cost on Hired Labour/Employees per year (dry season)

Crop	**Expected number of labour (35ha)**	**Area to be cultivated**	**Overall number of employees(35ha)**	**Cost of employed individuals (US$)**	**Total cost on labour hired (US$)**
Rice	30 people/ha	35ha	1050 persons	138/ha	4,830.00
Wheat	35 people/ha	35ha	1225 persons	165/ha	5,775.00
Total					**10,605.00**

Source: Author's computation based on field survey, 2018

The present value coefficient (PVC) is the combined effect of the discount rate and the useful time of the flood resilient project. The PVC is used to bring annualized costs and benefits to the net present value (NPV). The formulae for calculating PVC is shown below:

$$PVC = \frac{[1-(1+r)^{-T}]}{r}$$

Where:
r is the discount rate (14%, that is, the prevailing MPR in Nigeria) and T is the projects useful life (which is 50 years in our case).

$$PVC = \frac{[1-(1+0.14)^{-50}]}{0.14} = \frac{[1-(1.14)^{-50}]}{0.14} = 7.13$$

Therefore, the total benefits of the project equals:
PVC times (annual damage averted or annual damage reduction plus annual income earned by workers employed plus profit earned by the government from the cultivation of rice or wheat).

Total cost of the project is $294,415 plus cost of producing wheat or rice over the project lifetime. The Benefit-Cost Ratio (BCR) is the Total project benefits divided by Total cost of the project. Normally, any viable project worth investing in must have a BCR value of at least one to be considered.

Note: To determine the cost of damage averted, we multiplied the average cost of damage by the total number of households affected by the floods covered in the survey (which was 251 households). The details on how the various components for the benefit-cost analysis were computed are shown below:

As shown in table 2 above, the total cost of constructing a dam with an attached irrigation system was $294,415. In addition, the estimated costs of producing either of the commodities (rice and wheat) every year was $24,010 and $24,955 respectively. Assuming constant input costs, commodity prices and production costs over the useful life of the proposed project, the estimated overall cost of producing both commodities (rice and wheat) over a 50-year period will be $1,200,000 and $1,247,750 respectively. Hence, the estimated overall or total cost of the project, assuming that dam water was used for the cultivation of rice through irrigation becomes: estimated cost of the dam-irrigation project plus the estimated cost of rice production over a 50 years period ($294,415 plus $1,200,000) which gives $ 1,494,415. Following a similar procedure, the estimated overall or total cost of the project, assuming that dam water was used for the cultivation of wheat through irrigation becomes: estimated cost of the irrigation/dam project plus the estimated cost of wheat production over a 50-year period ($294,415 plus $1,247,750) which also gives $1,542,165. Based on the data obtained from the survey, the average cost of the damages per household from flooding was ₦416,797.012 ($1,148.28). Since 251 households were covered in the survey, the estimated total cost of damage due to floods ($1,148.28 multiplied by 251) becomes $288,218.28

Assuming that $288,218.28 is the minimum cost of flood damages that will be averted with the establishment of the dam-irrigation project, this amount can be taken as one of the possible benefits from the proposed project. In addition to the benefits above, the estimated aggregate amount to pay hired labour (farm workers) from the communities concerned is $4,830 or $5,775 for cultivating rice or wheat respectively. This is also considered a possible benefit from the cultivation of rice or wheat, which are all associated with the proposed project at hand. Lastly, there are benefits in the form of the firm's profit from investing in rice or wheat cultivation. As pointed out earlier, the estimated possible benefits from rice or wheat production will be $16,800 and $19,145, respectively. The estimated overall benefit of the proposed project under rice production alone, without taking PVC into account ($288,218.28 plus $4,830 plus $16,800) becomes $309,848.28. But, PVC equals 7.13, hence, the real estimated overall benefit of the project under rice cultivation is ($309,848.28 multiplied by 7.13) $2,209,218.24. Similarly, the estimated overall benefit of the proposed project under wheat production alone, without taking PVC into account, ($288,218.28 plus $5,775 plus $19,145) becomes $313,138.28. Since PVC equals 7.13, the real estimated overall benefit of the project under wheat cultivation ($313,138.28 multiplied by 7.13) becomes $2,232,675.94. From the available information above, we can then proceed to compute the BCR, for the cultivation of each of the crops (rice or wheat). The results are shown in the tables below:

Table 6: Benefit-Cost Analysis for the Project under Rice Cultivation

Description	Computation	Result
Total Project Benefits	($309,848.28 × 7.13)	$2,209,218.24
Total Project Cost	($294,415 + $1,200,000)	$ 1,494,415.00
Benefit-Cost Ratio (BCR)	$\frac{\$2,209,218.24}{\$1,494,415.00}$	**1.48**

Source: Author's computation based on field survey, 2018

Table 7: Benefit-Cost Analysis for the Project under Wheat Cultivation

Description	Computation	Result
Total Project Benefits	($313,138.28 × 7.13)	$2,232,675.94
Total Project Cost	($294,415 + $1,247,750)	$1,542,165
Benefit-Cost Ratio (BCR)	$\frac{\$2,232,675.94}{\$1,542,165.00}$	**1.45**

Source: Author's computation based on field survey, 2018

From the result presented in both tables (Table 6 and Table 7) above, we can see that the BCR is greater than 1, for cultivating rice (1.48) or wheat (1.45) with each dam/irrigation project. Hence, the findings show that the proposed project is worth investing in by the private firm in Jigawa State to help improve the resilience of the communities affected by floods, as the benefits from investing in the project outweigh the cost of the investment. However, there is need to do some sensitivity analysis. Assuming the MPR (discount rate) declines by 3% (from 14% to 11%), what happens to the BCR? The new PVC will be 9.04 at a discount rate of 11%. Hence the total benefits of the project under rice production now becomes $2,801,028.45 ($309,848.28 multiplied by 9.04). Hence the BCR becomes 1.87 under rice production. For wheat production, the total benefit of the project will be $2,830,770.05 ($313,138.28 multiplied by 9.04). Also, the BCR will be 1.84 under wheat production. From this, we can conclude that if the discount rate drops to 11%, the project will still be worth investing in production of either rice or wheat because the BCR values are greater than one. The investment proves to be more profitable in this case compared to when the discount rate was 14%. On the other hand, if the discount rate increases by 3% (that is, from 14% to 17%), what happens to the BCR? The PVC will be 5.88 at a discount rate of 17%. This implies that the total benefits of the project under the production of rice and wheat will be $1,821,907.89 and $1,841,253.09 respectively. Hence, the BCR under rice and wheat production will be 1.22 and 1.19 respectively. This results still supports the viability of the project at 17% discount rate. In any case, investment in the project by the private firm will be worthwhile. However, once the discount rate increases to 21%, the project seizes to become viable to invest in.

Conclusion and Recommendations

The study principally examined the cost and benefits of building a flood resilient infrastructure aimed at reducing households' vulnerability to flooding in high-risk flood areas within the study area. Since fluvial floods were the most predominant flood type experienced in Jigawa State, the study proposed a flood resilient dam-irrigation project that will be beneficial to both members of the flood prone communities and the private sector firm, which will be financing the project. From the findings, the proposed investment in the dam-irrigation project was found to be profitable (feasible) when used in the production of either wheat or rice within the affected areas, provided the discount rate is less than 21%. This is so because the benefits accruing from the investment in the dam-irrigation project will always outweigh the costs involved as evident in the BCR values of 1.48 and 1.45, when used in the production of rice and wheat respectively. The study therefore, recommends the need for disaster risk management authorities to improve on post-flood risk assessment (floods losses and damages) and data collection to aid future planning for improved flood resilient projects. The study also recommends that government authorities make more effort towards creating sustainable livelihood alternatives for affected communities through the provision of empowerment (via education) and job creation opportunities, as well as social services provisions and social investment programmes.

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The Role of Civil Society Organizations (CSOs) in Deepening Democratic Tenets in Nigeria.

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Abstract

The need to enhance the role of civil society organizations (CSOs) for better engagement of government to foster democratic tenets and development in Nigeria has become ever more necessary as her democracy is increasingly being confronted with recurrent challenges of flagrant disregard for the rule of law, human rights abuses, arbitrariness and political impunity. Since the return to civil rule in 1999, there has been increase in agitations for self-assertion and determination by the numerous component ethnic groups, demand for equality, equity, fairness and justice by the hitherto repressed citizens. The promise of liberty and free speech which democratic rule dangles is becoming a mirage by the day as the desire to hold mass protest and civil disobedience against worsening socio-economic and security conditions is viewed as mutinous and therefore, vehemently suppressed. Against this background, this paper examines the role of CSOs in bridging the gap between the people and government. It particularly examined the contributions of CSOs on the three basic fundamental pillars of democracy which are: periodic elections, adherence to rule of law and respect for human rights. The paper adopts the liberal democracy theory as a framework of analysis. The findings reveal that CSOs are faced with numerous challenges which are both internal and external which have led to their being less effective. The paper further contends that poor funding, lack of public awareness of the roles of CSOs and inability to have access to vital information especially from government agencies amongst others militate against the smooth operations of CSOs. It recommends that the CSOs should build their structures from grassroots to create public awareness and ensure proper funding and accounting system.

Keywords: Civil society organizations, pressure groups, democracy, liberal democracy, human rights.

Introduction

Civil society organizations (CSOs) have been recognized as important agents to societal development as observed from their activities and impacts in the developed Western democracies. They contribute immensely to these societies by improving the quality of governance, developing capacity of government to apply the principles of accountability, transparency and fair-play in the distribution of justice. They have also played critical roles in the provision of public goods, social welfare services, humanitarian services, socio-economic empowerment and very importantly restraining the abuse of state power by government. CSOs and political parties are two veritable institutions that work within different spheres of operations in the democratization process because their objectives and approaches are remarkably different, yet their activities are reinforcing the development of democracy.

CSOs are expected to serve as an interface between the public and the private spheres of societies, but consciously or otherwise, they are not immune from the exigencies of the very political society in which they operate. However, within the context of democratization process which requires the establishment of a synergy and allegiance, partnership and compromise, CSOs and political parties being the critical stakeholders do perform roles that are common to the expectations of representative democracy.

According to Bernhard, Hicken, Reenock and Lindberg (2015), there are three areas in which civil society organizations (CSOs) play vital roles in the process of representative democracy. First, they are arenas through which citizens' preferences are formulated and aggregated. Second, they represent the sphere of the society in which citizens overcome collective action problems, secure representation and contribution to policy change. Third, through CSOs' resistance to unpopular state actions and their role as whistleblowers, they are regulating the conduct and practice of political party in power and the opposition parties as well. In the opinion of Berber (1995), unlike political parties which central objective is to capture state power, CSOs are non-political, non-profit voluntary organisations that aim at establishing common grounds with other institutions either through consensual, integrative and collaborative actions or interactive networks to bring about, consolidate or sustain democracy.

The successes recorded by CSOs in the developed Western democracies have elicited the attention being given to such civil societies in the third worldcountries such as states in Africa, Asia and Latin America. Though not a completely alien phenomenon to African history, during the colonial era, various groups engaged the colonial government to favourably influence colonial policies towards Africans. Some of those actions, no doubt, significantly led to the granting of independence. However, how has Nigeria, like other nations which were colonized been able to evolve viable political systems, institutions and structures for sustainable political development and social order? This is because the reality today is that African post-colonial setting is a confusing mixture of authoritarian and democratic parliamentary institutions.

The idea of supremacy of the law, from which authority is derived, which was consciously introduced by the colonial administration seems to be lacking. Thus, there exists no corresponding consciousness that sovereignty or ultimate control of government lies with the people. A cursory overview of Nigeria's socio-political challenges would reveal that though the nation's democracy is seen to be making steady advancement, she is still very much bedeviled with problems like absence of free and fair election, highly monetized politics and vote-buying, unprecedented level of corruption and impunity in office amongst the ruling class, personalized leadership, rights abuses; ethnic and primordial politics which are the basis of discrimination in relation to access to positions and resources (Eregha, 2004). A resulting problem from these challenges, which have hindered development overtime, is what Huntington (1981) has described as the ineffective nature of Africa's institutions, which he pointed out to be weak, non-adaptable, and lacking coherence. These manifest deficiencies are related to the lack of well-organized political parties, bureaucracies, inchoate civil and political societies and ineffective structure of civilian control over the military.

In addressing these multi-faceted challenges of the failure of the Nigerian State, governance and development crisis; the civil society organizations are considered the most capable and formidable non-state actors that are able to engage the government based on their track records in handling critical areas of human and national existence especially in the management of societal ills and improving human lives, their strict demand for accountability, transparency, observance of rule of law and sustenance of civil rule. Civil societies are also known to provide services, hold the governments and markets accountable by representing or advocating for citizens, and build the capacity of citizens to participate in governance and public administration.

Civil Society Organizations and Representative Democracy: Conceptual and Theoretical Underpinning

Gberevbie (2013) explains that the concept of civil society like other concepts in the social sciences lacks a single, precise and universally accepted definition. The likely reason for this, according to him, is connected to the political backgrounds and experiences of those defining the concept. Notwithstanding, many scholars seem to have unanimously agreed by their various definitions on some basic characteristics of the concept. Common among these similarities will include: organized groups(s) of individuals; non-governmental in nature; action and activities mostly directed at government; main objective aimed at influencing policies; programme of government for public good; non-profit and self-financing.

The definitions given by Orji (2004) and Ikelegbe (2005), do not have a mark deviation from the above stated characteristics of the nature of CSO. While Orji maintains that civil society is an organized activities by group or groups of individuals essentially out to perform certain services with the view of influencing government policies and programmes for the improvement of society, Ikelegbe refers to it as a participatory broad based and self-governing formation engaged in shaping public affairs, policy and government. He further explains it as an instrument by which the citizens engage the State in different struggles, challenges and contestations. Imobighe (2003), on the other hand, points out that the civil society in Nigeria includes professional organizations, labour movements, youth associations, peasants, socio-cultural groups, civil rights and communal groups, around which the civil populace build various identities for the promotion of their various interests for development.

He further contends that civil society refers to a group of non-governmental organizations, professionals and associations in any shape and size in a society formed purposely to engage the state or government on issues that affect the people with a view to finding acceptable solutions to the developmental challenges of the state – political, social and technological for the enhancement of the living standard of the people. While Olateju (2012) argues that civil society is often used to mean either society as opposed to the state or, more precisely as an intermediate sphere of social organization or association between the basic units of society – family and firms – and the state.

There is no doubt that the activities of civil society have grown over the years, infact, growth and development in society are concomitant to the development of CSOs. One of such developments that has aided the cause and advocacy of the association is the advancement in the information and communication technology (ICT), which has made access to information much easier. This factor and other efforts have helped to galvanize more public support and participation.

Democratic governance stands out amongst the existing forms of government as most desired world over. The fact that it is the type which opinions of citizens find expression and governing power is indirectly exercised through elected representatives makes it a preferred choice. According to Dahl (1971), this system of government must meet these essential conditions: an extensive competition among individuals and groups especially political parties for elective positions of government power at regular intervals and excluding the use of force; a highly inclusive level of participation in the selection of leaders and policies at least through regular and fair election that no major group is excluded; and a level of civic and political liberties: freedom of expression, freedom of press, freedom to form and or join organizations sufficient to ensure the integrity of competition and participation.

These basic essentials of democracy have been sub-divided into two constituent parts, namely; the “forms of government” and "the substance of government” or what can also be referred to as "legal and participatory perspectives". Okunade (1998) submits that the form of government which is also same as the legal conception emphasizes the decision making process and requisite procedures that enable people to govern such as voting, electoral contest to public office. The substance or participatory conception of government on the other hand refers to the outcome from the former process (forms or legal) such as direct benefit of policies on the citizens. They also submit that popular control over collective decision making and equality in the exercise of that control is what democracy is all about.

On the other hand, civil society organization is assumed to operate in the larger theory of liberal democracy theory. This is because the importance attributed to civil society relies to a large extent on how civil society contributes to the institution and practices of liberal democracy. Shively (2005) posits that liberalism is the highest good of society, that is; the ability of the members of that society to develop their individual capacity. It requires people to be maximally responsible for their actions. The inference here, according to liberalist is that collective decision making is what guides the state. This central assumption of liberalism has become the foundation for democratic government. John Stuart Mills, a major figure in liberal thought and an advocate of democratic government explains that the "chief end of all politics is to allow people to become responsible and mature, they can do this, only if they take part in decision affecting their own lives" (Shively, 2005).

Therefore, activities of the state depending on the political perspective can be extensive or minimalist but when the state does intervene in the life of the political community, it must be guided by procedures that generally entail public deliberation, voting and majority decision rules. Thus, CSOs serve to preserve a robust sphere of liberal, free-state. These associations operate as centres of power that compete with the state and enable their members to critically deliberate and engage with the initiative of the state. The state must however guarantee the fundamental rights of free speech and free association which are pre-requisite for social mobilization and also allow some degree of transparency in policy making activities to enable civil society use democratic means to checkmate the State.

It can be deduced that civil societies and political parties are recognized with a high level of institutionalization in the democratization process in general. According to Mohammed (2018), hypothetically, the higher the level of institutionalization of democratic institutions like the CSOs, the more instrumental they become in the process of deepening democracy. The idea is to understand the role of each actor in the democratic process and the changing nature of this role given the dynamics of political system, socio-economic and environmental factors.

In the area of electoral process of liberal democratic societies, the institutional theory implies that CSOs are institutional partners in ensuring systematic change in the political process for the common good rather than the interest of the State, a clique within it or certain class in the society. Civil society represents a particular sector that sprouts from the associational life of the society. It is a veritable institution within which political parties develop and carry out their activities. This is because any association of like-minded individuals who come together and unite under a political platform to express their political interests, wrestle power and give a direction to the process of governance must necessarily stem from the society in which it operates. Thus, in civil society lies a political society within which modern political parties emerge and thrives. The robustness of these institutions in the electoral process depends on how deepening institutionalized they become in the democratization process. For these institutions, institutionalization is a continuous variable rather than a nominal variable which begins and ends after election.

The Role of Civil Society Organization in Deepening Democracy in Nigeria

Civil society Organizations have played vital roles in the entrenchment of democracy and democratic tenets in Nigeria, many of these groups like Campaign for Democracy (CD), Centre for Democracy and Development (CDD), Committee for Defense of Human Rights (CDHR), Civil Liberties Organization (CLO) and National Democratic Coalition (NADECO), were instrumental in the restoration of civil rule. It would be recalled that between 1993 and 1999, the CSOs in collaboration with some professional bodies like Nigeria Labour Congress (NLC), Nigerian Bar Association (NBA) and students' union like the National Association of Nigerian Students (NANS) were mobilized for strikes and protest marches across the country which eventually led to the military departure from governance. Orji (2004) believes that these CSOs and other professional bodies were at the forefront in the fight against military rule and for the restoration of democracy and democratic governance in Nigeria.

For instance, NADECO was formed in May 1994, when it became clear that Abacha was going to renege on his promise of convening a constitutional conference 'with sovereign powers'. According to Mustapha (2001), NADECO declared that it stood for the restoration of democracy and true federalism. It asserted that the military dictatorships of Babangida and Abacha have had terrible consequences for the country. It described the Abacha political transition as insincere, and poorly managed. It, therefore, called for the validation of the June 12 Election, the formation of a broad-based national government led by Abiola, and the convening of a sovereign national conference with the objective of achieving true federalism and political stability. NADECO-Abroad, on the other hand, campaigned strenuously for strict observance of existing bans on arms sales and deliveries, strict observance of travel restrictions on members of the military junta nd their collaborators, a freeze on foreign assets of members of the regime and their agents, and the imposition of comprehensive sporting and oil sanctions.

On the whole, NADECO remained more vocal in its criticism of the Abacha junta, and joined other civil society groups to establish the umbrella United

Democratic Front of Nigeria (UDFN). It published a journal, *Nigerian Liberation*, and its leaders were constantly featured on Radio Democrat International Nigeria (later renamed Radio Kudirat International), the underground anti-Abacha radio station beamed to Nigeria. To say the least, NADECO could be likened as a gadfly in the life of the Abacha military regime. It mounted vigorous campaign against the regime till Abacha's unmitigated demise and subsequent disintegration of his dictatorship.

To further examine their roles, the paper will particularly focus on some challenging areas which are fundamental to Nigeria's democracy and in which sectors the CSOs have played key functions. Such areas include election, rule of law and human rights protection.

Civil Society Organizations and Elections in Nigeria

Elections in Nigeria are rarely considered free and fair because they are fraught with fraud, violence and usually culminate in the destruction of properties and loss of lives. The causes and modes of election malpractices are diverse, varied and complex. Thus, the involvement of civil society groups, as neutral observers separate from the interest of the ruling political elite and the opposition political party (ies) has brought in progressive constructive engagement to the electoral process. According to Policy and Legal Advocacy Centre (2002), key roles of CSOsin the election process include advocacy and monitoring which enable them to take part in observer's mission on the field and in the collation centres. To this end, CSOs have come together to form Election Observers Group (EOG) to achieve a more coordinated approach. Not only does this ensure that due process is followed, but it also gives credibility to the process.

Towards reforming the Electoral Act in 2007, CSOs made several presentations and recommendations to House Committee on Electoral Reform Committee. It would be recalled that CSOs were instrumental to the setting up of Uwais Panel that paved way for the significant electoral reforms after the 2007 elections. They were able to achieve this feat through constant advocacy and prodding of the government on the urgent need to reform the electoral process. One of which includes the use of electronic voting as one of the ways of addressing election malpractices in Nigeria. Apart from this, CSOs continually advocate to citizens to actively participate in the electoral process by encouraging them to register and vote. Also, they take interest in post-election petitions and tribunal judgments for the purpose of setting constitutional discourse that can pave way for constitutional amendment that will improve the electoral system.

So far, engagement and re-engagement of the Independent National Electoral Commission (INEC) by CSOs and other important stakeholders for re-engineering of the electoral process has continued to strengthen the system. For instance; there is hope that the partial trial use of the electronic voting will inevitably lead to its eventual complete usage in future elections. Indeed, the CSOs facilitated greater understanding through establishing an interface between INEC and other stakeholders like- the media, political parties and civil societies, and between INEC and coalition of CSOs. In particular, the CSOs actually engaged INEC at the different stages in the electoral process. One of such engagement platforms was the INEC's Roundtable on "Preparations Towards the 2015 General Elections: Enhancing Citizens' Participation through Civil Society Organisations" held on April 8, 2014 (Mohammed, 2018). It was one of the early engagements with INEC that further added more strength to CSOs voter education activities.

Civil society organization and the rule of law

CSOs are being confronted with a situation where adherence to the rule of law by the ruling class is in conflict with the personalized leadership style. The arbitrary abuse of position of authority and non-compliance to judicial decisions by the executive arm of government and sometimes the legislature have shown that equality and supremacy of the law is a process yet to be fully entrenched in Nigeria's democracy. Nonetheless, CSOs have not relented in their effort to bring to light such anomalies in the system. Saliu and Mohammed (2007) gave one of such instances to a protest championed by coalition of CSOs, The National Civil Society Coalition against Third Term (NCSCATT) and other political parties against tenure elongation bid in the Fourth Republic in 2007. Furthermore, Ojo (2012) reports that ex-President Obasanjo's administration had attempted to tinker with the Nigerian constitution in 2005/2006, to insert a tenure elongation clause, but the plot was essentially thwarted by the National Assembly with pressure from the civil rights groups

Again, in 2010, CSOs rose to the occasion to demand for the recognition of the then Vice President Goodluck Jonathan as the Acting President, when late President Musa Yar'Adua was indisposed and receiving treatment for a protracted length of time abroad. CSOs such as the 'Save Nigeria Group' and 'Enough is Enough Group' actually seized the initiative and demanded for a resolution that would give due recognition to vice president as acting president. This led to the adoption of the now popular 'Doctrine of Necessity' by the National Assembly in March 2010 (Odeh, 2012). The civil society organisations, till date, have continued to ensure that the Nigerian constitution is upheld by all.

Civil society advocacy and human rights in Nigeria

The nature of governance which most times negates the rule of law and 'stretches' state might to maintain personal political power predisposed the state to that which is prevalent with human rights violations and abuses. Thus, civil society at various times have challenged the government on rights violation and even bringing the international community to bear on the state. Otaghagua (2011), made reference to the condemnation and public outcry which were fuelled by advocacy from CSOs following the summary execution of Ken Saro-wiwa and eight others in 1995 under Abacha's military rule. In a related development, the Odi Massacre in Bayelsa State, under a civilian government raised widespread condemnation through publicity given to those extra-judicial killings by the CSOs. Indignation and criticism at the action of Nigerian government led to the administration of Chief Olusegun Obasanjo making frantic effort to redeem her image among the comity of nations.

A more recent test case for governance on human rights which was taken up as a challenge was the handling of the Corona Virus pandemic by the government. For instance, Nigeria Human RightsCommission (NHRC) reported in April 2020, that extra judicial killings by the army and police as a result of enforcing lockdown in different parts of the country has outnumbered the actual number of deaths arising from Corona Virus as at the said date. Also on transparency and to guard against marginalization, the International Centre for Investigative Report (ICIR) and Socio-Economic Right and Accountability Project (SERAP) called on the federal government to declare publicly palliative received from corporate organizations and individuals, show modalities for palliative sharing among states of the federation and indices used for measuring the poorest of the poor in the society which enabled one to benefit from social intervention programmes by the federal government.

The efforts of ICIR and SERAP on the aforementioned issues led to some positive actions. Some highly placed public servants saddled with the responsibility of distributing the palliatives have been investigated and those found culpable arraigned for sharp practices. Again, the intervention of CSOs has necessitated a re-evaluation of enforcement measures and adoption of a more inclusive, fair and transparent palliative sharing system.

Factors militating against effective performance of civil society organizations in Nigeria

1. The issue of poor funding and corruption: The problem in this area is divergent. On one hand, the poor economy hinders members to meaningfully contribute to be able to sustain engagement of government, while on the other hand, financial support from international donor agencies have led to many proxy CSOs that exist in name only.
2. Disconnection of CSOs from Rural Areas: The groups are largely located in urban areas leaving no presence at the grassroots. This situation of non-engagement of government from the bottom-up approach has constituted an institutional disconnect and has impacted negatively on the service delivery of CSOs especially at the rural areas.
3. Cultural inhibition, polarization and partisan sentiment: Parochial sentiments have continually weakened the effects of CSOs. Members or groups may decide to boycott engagement of government on a particular policy or programme that is inimical to public good and national development because of cultural or other related interest. Mazuri (1982) explains that acute ethnic cleavage has considerably hampered the struggle for a viable society in Africa.

Lack of internal democracy and requisite skill: Hijack of the organizations by some members in order to project separate agenda or prosecute some subterranean interest has made some CSOs to lose focus and relevance. There is also the factor of lack of the requisite skill or knowledge on issues for proper engagement of government by members which is forfeited on the account to gain membership strength.

Conclusion and Recommendations

There is no doubt that, CSOs are indispensable factor to the strengthening of any democracy. The fact that the groups have made government to be held accountable for some of their actions and conforms to acceptable global standards of governance portends a move towards development. However, no developed nation of the world today achieved such position without pragmatic and exemplary leadership by government or the ruling class. The near absence of purposeful leadership in Nigeria, which is shown through the action of subsequent governments that have come into power since independence till date by their acts of corruption and impunity, especially amongst the executives on electoral malpractices, ethnic prejudices and unwillingness by the ruling class to resolve age long fundamental issues of a failing federal system, weak institutions, flagrant abuse of human rights, subverted legal framework and procedures of government for selfish interest have left Nigeria in a very precarious situation.

The onerous task of addressing these multifaceted problems has fallen on CSOs, a group considered most capable and formidable to engage government, based on its attributes in handling critical areas of human and national existence, especially societal ills and improving development by demanding from government accountability, transparency, and observance to the rule of law. The efforts of CSOs have been seen in all spheres of governance in Nigeria, particularly, in matters of sanctity of election, respect of human rights, obedience to rule of law and sound governmental practices and conducts. Though, the successes of the group are still minimal, however, government is put on her toes and made to account for her actions more often than before. Therefore, the need for CSOs in stabilizing Nigeria’s nascent democracy is increasingly evident; but it should be more systematic, functional and all-encompassing and not restricted to nominal significance of just numbers. The recommendations for this study are:

- Members of CSOs should be trained and retrained especially in elections and electoral matters in order for them to be conversant with modern and recent skills and trends. This is particularly essential as such trainings will enhance their capacities in monitoring elections at various levels.
- CSOs should take more than a casual interest in the happenings and occurrences in the various political parties in Nigeria. CSOs should scrutinize even the process of emergence of party officials and their flag-bearers right from ward to the national levels.
- CSO must guard against such factors that are likely to hinder their effective performance such as internal (lack of internal democracy, vision and mission obstruction) and external (ethnic or cultural, political or governmental affiliation).
- There should be an increase and focus advocacy on grassroots mobilization. CSOs should make their presence felt and noticed at the rural areas. Establishing contacts and liaison offices at the rural areas will

help in eliciting support and galvanizing mass mobilization and participation at the grassroots.

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Role of Community Participation in Promoting Basic Education Services Delivery in Sabon Gari Local Government Area of Kaduna State.

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Abstract

The paper assesses the role of community participation in promoting Basic education service delivery in Sabon Gari local government area of Kaduna State. The study highlights the significant problems facing community participation, such as inadequate functioning of SBMCs, inadequate clarity of roles of SBMCs. An objective had been set to determine the role of SBMC in promoting basic education service delivery in Sabon Gari local government area. The study adopted collaboration theory, which helped in explaining the role of community participation on basic education in Sabon Gari local government area of Kaduna State. The researcher has employed primary method in collecting data for the study; the primary data has been gathered through a questionnaire and oral interview, mainly with simple percentage and chi-square statistical analysis. The study reveals that the SBMCs plays significant role in promoting basic education service delivery. The study recommends that any program/project to be executed should be identified by the community based on the felt need of the community. Boosting the level of community participation through engagement to raise awareness on basic education.

Keywords: *Community Participation, School Based Management committee, Basic Education*

Introduction

Community participation has received greater attention in international and national policy in recent years. The forms of community support needed for school development recently became more formalized in SBMC policy, with new forms of community participation emerging (Rusell, 2009; Aref & Redzuan, 2009; Mnaranara, 2010). Community participation has been used as panacea to solve complex problems related to school and education in general. It is not something that suddenly appears in education delivery. In fact, not all communities were passive in the education of their children. Until in the last century, communities were the most responsible for managing schools. Even presently, there are places in Nigeria where communities organize themselves to provide and manage schools for their children. Although, the participation of communities in school administration has not been extended to a wider practice (Tshabalala, 2006).

The government's efforts alone could not be enough in meeting the needs and aspirations of Nigeria's educational system in terms of infrastructure and other school development projects and programs, it was the responsibility of SBMCs to provide full participation of all stakeholders in school development and any decision concerning their schools. Many piece works literature and experiences such as Cuyvers, Weerd, Dupont, Mols, and Nuytten (2011), Branham (2004) cited in Bakwai et al (2016), opined that the achievements in schools that community were participated is a greater in above-standard than in substandard schools, it was therefore, the responsibility of any reasonable community to improve infrastructure in its schools. It is a responsibility of SBMCs to develop necessary strategies for promoting this community participation in all aspects of school processes. Tshabalala (2006) opined that the key factor for effective ways to determine school effectiveness is the community participation. It helps increase the accountability of schools by reducing teacher absenteeism, increasing teacher effort and these generally seem to contribute to improved students' conduct. It also helps develop true democratic processes in school development process. According to Aluede (2006) most primary schools have suffered a great deprivation of infrastructural facilities that support teaching and learning. In another study conducted by Adepoju and Fabiyi (2007) revealed that 12% of pupils sat on the floor; 38% of the classrooms have had no ceilings; while 87% of the classrooms were overcrowded, and with poor funding, the few classrooms built on some of the primary school grounds decay faster due to the poor maintenance (Lunenburg, 2010).

Community participation is an old phenomenon, when it comes to the issues of education and schools funding specifically at community level. Most of the communities were actively involved in supporting the education of their children financially. Many pieces of literatures have indicated that during the last two decades education has witnessed an upsurge in the concern for community participation in educational organizations. Subsequently, the reaction in academic circles has been a tremendous increase in the research and literature in community participation in schools and their projects. The review has also revealed numerous published studies on infrastructural development in and outside Nigeria.

Despite the high rate of community participation, the functions of SBMC are still low in Kaduna State; the Education Sector Support Programme in Nigeria (ESSPIN) has conducted qualitative research into SBMCs and community engagement in education in five ESSPIN states in 2009 in Nigeria. This research has revealed that SBMCs were not functioning well, there was a lack of clarity and understanding the SBMC's role and responsibilities; low level of the financial resources to support schools in the ways that LGEAs often expected them to do, community members were sometimes excluded by local elites; and there was low participation by women and children despite guidelines requiring their inclusion. According to ESSPIN report (2014) SBMCs are found in nearly all schools in Kaduna, but in non-ESSPIN schools do not appear to be functioning well. The report has also indicated that in ESSPIN schools, 28% of SBMCs show record of meeting more than once in the past year, compared to only 1.5% of SBMCs in non-ESSPIN schools. The overall standard set out by ESSPIN for a functioning SBMC was met by 35% of ESSPIN schools and 18% of non-ESSPIN schools. SBMCs in ESSPIN schools were also significantly more likely to be inclusive of women (14%, compared to 2% in non-ESSPIN schools), and of children (7%, compared to none of the non-ESSPIN schools). The ESSPIN report has pointed out that there was little change over time in either group of schools on any of these indicators, except that many more SBMCs in 2014 had taken action for commonly excluded groups (11% in 2014, compared to 2% in 2012) or raised the issue of children's exclusion (17% vs. 4%). This study has assessed the role of community participation in promoting basic education in Sabon Gari local government area of Kaduna State. In this light the paper seeks to find the answer the following questions, what is the role of SBMCs on promoting basic education service delivery in Sabon Gari local government area of Kaduna State?

Therefore the objective of this study is to assess the role of community participation in promoting basic education services delivery in Sabon Gari local government area, Kaduna State. Specifically, the study aimed to determine the role of SBMC on promoting basic education service delivery in Sabon Gari local government area.

Methodology

The study was conducted in Sabon Gari Local Government Area, Kaduna State. The local government is an urban area. It consists of Eleven (11) political wards and 16 educational clusters, 12 junior secondary schools, and 66 primary schools, see table (1) of the appendix of this paper. The area is a metropolitan with a literacy rate of 62%. The inhabitants are civil servants, petty traders, and peasant farmers/artisans. The study employs survey design; the population of the study stood at 3,008, this consists of 1,326 SBMCs, 1,604 teachers/head teachers, and 78 administrative staff in Sabon Gari LGEA. Initially, to determine the sample size of the study, the study adopted the Krejcie and Morgan method (1970), which gave 346 as sample size of the study. A multi-stage sampling technique is employed to select the respondents.

Cluster sampling technique was used to select respondents based on educational cluster and narrow it to some selected schools across the LGA understudy, on that basis, therefore, three (3) educational clusters were selected. The random sampling was used to select those that were administered the questionnaire among teachers/head teachers, A non-probability sampling was also used, where participants were not selected randomly but based on the researcher's knowledge of the population, as such a purposive sampling technique is employed to select the respondents that were interviewed from the Sabon Gari LGEA's administrative staff, head-teachers, and officials of SBMC. This was used based on the record of high involvement of these groups of people in promoting basic education service delivery. For effective representative and accessibility to information from the members of these groups, the study has purposively selected Two (2) head teachers and two (2) SBMCs' chairmen each from three selected primary schools and one junior secondary school making eight (8) head teacher and eight (8) SBMC Chairmen. A Head, Department of Social Mobilization, Sabon Gari LGEA and one Cluster Officer were also selected for interview, making the total number of Eighteen (18) respondents interviewed.

This makes a total number of 328 questionnaires administered to the teachers/head teacher with the help of research assistants in administering the questionnaire to the respondents. Eighteen (18) respondents were interviewed. This gave a total number of Three Hundred and Eighty-Four (346) respondents that were administered questionnaire and interviewed in the study area. A nominal measurement was used to measure the respondents' knowledge on the role of SBMC in promoting Basic Education service delivery with a simple percentage, Chi-Square statistical tool, and phenomenological method to analyze the responses.

Literature Review and Theoretical Framework

Concepts of Community Participation

The concept of community can be view in many ways. When looking for a widely accepted definition, one should look for an operational one which includes people who live in defined proximity to one another and are in interaction with each other. Many look at community as a number of families who live in a small area and who have developed a relatively complete socio-cultural system to solve local problems. Bates (1967) demonstrates the community is a social system which deals with conflict and competition, in order to give the different interest groups an opportunity to exchange inputs and outputs and continue functioning. Preilich (1963) looks at community as a group of individuals who live in interrelated centers which are connected by their pooling of information. According to Hillery (1955) proposes a list of ninety five (94) definitions of community and concluded that the most agreeable definition is a group of people in social interaction who live in a certain geographic location and who have one or more additional ties.

According to Neufeldt and Guralnik (1997), participation has a variety of meanings, focused on sharing in activities by entitlement or right, which derive from basic contrasts of democratic theory. This is in line with the submission of some writers, that even though popular participation and community participation may be distinguished, they are interlinked. Both concepts are inspired by similar ideas and imply similar processes. Midgley and Rifkin concludes that community participation has been considered to be a major importance in education programs in developing countries (Midgley, 1986 and Rifkin, 1985). To Roy and Sharma community participation is an educational and empowering process in which the people, in partnership with those who can assist them, identify the problems and the needs to increasingly assumes responsibilities themselves to plan, manage, control, and assess the collective actions that are proved necessary (Roy & Sharma, 1986). Ideally, true or active participation means that people should be acknowledgeable their educational problems and they should identify the needs for their solution or reduction, draw out targets of actions based on the available resources. However, to consolidate the theory of community involvement in to promotion of education leads to positive outcomes, such as empowerment for education partnership, action and public policies. Initially, the involvement may be passive, and this can gradually be increased by more active participation.

School Based Management Committee (SBMC)

The global reform of education of the 1990s and 2000s provided the impetus for the Nigerian Government to institutionalize the SBM system. In 2005, the National Council on Education (NCE) at its 52th Meeting directed that all schools should establish School-Based Management Committees (SBMCs) to ensure that local communities participate in the school decision-making process (FME, 2007). The Federal Ministry of Education (FME), through the Universal Basic Education Commission (UBEC), thereafter issued guidelines to all State Universal Basic Education Boards (SUBEBs) and Local Government Education Authorities (LGEAs) on how to establish SBMCs in their schools. In 2007, the government made the establishment of SBMCs mandatory. Although, almost all schools complied with the directives, yet very few had functional SBMCs. The exceptions were the SBMCs, which received support from donor agencies or organizations (FME, 2007).

In Nigeria, School-Based Management Committees (SBMC) are established by government to act as a bridge between schools and the communities they serve. The SBMCs are intended to contribute to school development planning and decision-making at the school level for improved learning outcomes.

Kaduna State Universal Basic Education Board (SUBEB) (2012) confirmed that SBMCs are an essential link between schools and the communities they serve. SBMCs are made up of a range of local people involved with their school. SBMCs work to increase communities' involvement with education, and to help improve the quality and effectiveness of schools. They provide a way of helping the education authorities to listen to what adults and children want from schools, and a way of increasing the contributions of everyone in the local area to making education work well. SBMCs are voluntary groups made up of people, who represent the school community and may include pupils, teachers, parents, community leaders, as well as other community-based groups interested in education. SBMCs meet regularly and organize activities to improve the way schools operate and support the government's responsibility of ensuring quality education for all.

School-Based Management (SBM) System in Nigeria

The School-Based Management (SBM) system in Nigeria is not something new, it can be traced back to the colonial times when School Management Committees

(SMCs) managed and raised funds for schools. The activities of these bodies, however, declined in the 1980s with the Federal Government's decision to take over all schools in the country.

The major concerns with the Guidelines issued at that time by UBEC were: (i) It did not take cognizance of the diversity of the country and the peculiarities of the different States as 'it was a one-size-fit all directives' (ii) No provision was made for the mandatory training that should be provided for stakeholders in the SBM system; (iii) It did not identify the funding mechanism for school improvement within the SBM system; (iv) There were no monitoring and mentoring systems in place (for documenting evidence-based learning; (v) The decentralization process was not clearly stated nor effectively pursued; and (vi) The mechanism for participation of women and children in school level decision making was virtually absent.

Various organizations have contributed to the development of the SBM system in Nigeria. These include :(i) Action Aid Nigeria (AAN) which introduced its model School Management Committees (SMCs) in April 2004 in 28 SBMCs in some states like, Sokoto, Kebbi and Zamfara States under its "Enhancing Girls' Basic Education in Northern Nigeria (EGBENN)" Project; (ii) The Civil Society Action Coalition on Education for All (CSACEFA) has published its SBMC training Tool Kit in 2006. The training kit was designed as a series of activities aimed at increasing women's participation and representation in local governance through the activities of SBMCs; (iii) National Institute for Educational Planning and Administration (NIEPA), in conjunction with the United Nations Children's Fund (UNICEF) and the Federal Ministry of Education (FME), developed an 8-volume Training Modules for training SBMCs; (iv) Federal Ministry of Education (FME) in 2008 organized training-of-trainers (TOT) workshops for SBMCs in 20 States with high gender disparity; (v) UK-Department for International Development (DFID)-funded Education Sector Support Programme in Nigeria (ESSPIN) piloted a "Process Approach" to SBM development in five States of Nigeria based on existing national policy guidelines and lessons learned from the literature and the SBM support programmes mentioned above (FME, 2007)

In Nigeria, the School-Based Management Committee was set up to increase citizen participation in school management; this is part of the efforts of school reform in Nigeria. Dakar Framework of Action (2000), demonstrates that the experience of the past decades has underscored the need for better governance of education systems in terms of efficiency, accountability, transparency, and flexibility, so that they can respond more effectively to the diverse and continuously changing needs of learners. Reform of educational management is urgently needed to move from highly centralized, standardized, and command-driven forms of management to more decentralized and participatory decision-making, implementation, and monitoring at lower levels of accountability.

Although observation has shown albeit erroneously, that some school managers particularly head teachers see the role of SBMC as a relegation of schools autonomy, whereas SBMC is to promote the autonomy of schools. SBMC has been defined in different ways by different writers and authors, for example Cheng (1996) sees school based management (SBM) as tasks that are set according to the characteristics and needs of the school itself and therefore school members have a much greater autonomy and responsibility for the use of resources to solve problems and carry out effective education activities, for the long-term development of the school. Caldwell and Spinks point out that school based management as a school system of education to which there has been decentralized a significant amount of authority and responsibility to make decisions related to the allocation of resources within centrally determined framework of goals, policies, standards, and accountabilities (Caldwell & Spinks, 1988).

The definitions show that in some schools which are practice SBMC policy, transfer of authority takes place, and gives schools some degree of decision making. The goals of School Based Management Committee programmes according to FME, they are typically include: (i) increasing the participation of parents and communities in schools; (ii) empowering principals and teachers; (iii) building local level capacity, and perhaps the most important; (iv) improving quality and efficiency of schooling, thus raising student achievement levels (FME, 2007).

The objectives are:(i) engender community’s interest in school in their localities with a view to their assuming ownership of their schools; (ii) provide mechanisms for more effective management at school level; (iii) provide a platform on which the community and schools pool resource together to enrich schools management; (iv) provide communities and Local Government Education Authority (LGEAs) with a new mechanism to demand accountability from school managers (i.e. Head-teachers); (v) help the school in the formation of its mission statement and articulation of its vision; (vi) provide legal framework involving stakeholder in planning, monitoring and evaluation of education at the school level; (vii) provide and update a school development plan on an annual and longer term basis FME (2007) cited in (Akinsolu & Onibon, 2008).

The school belongs to the community, which forms the grassroots stakeholders in management. Decentralization will make it possible for the community to participate in the decision making of the school. Murphy and Beck (1995) noted that a central feature of SBM is the SBM committee. While the committees vary in composition and responsibilities, most writers agree that it is within the committee that school stakeholders such as head-teachers, parents, community members and students do participate in decision making.

SBMC in Kaduna State

i. The goal

The goal is to achieve high school performance and improved learning outcomes for all students through improving school management and ensuring wide participation of communities according to Kaduna State Universal Basic Education (2012).

ii. The vision

The vision (dream) of the Kaduna people is to have SBMCs which support and facilitate government drive in the development and improvement of education for all.

i. **Key roles and responsibilities of SBMCs in Kaduna State**

The following points show some of the key roles that SBMCs will be expected to perform in Kaduna State. All the roles as contained in the State Policy document that; Encourage parents to send their children to school and support them to complete their education, especially girls; Engage in raising awareness about education and promoting it within the community; Advise the school authority on teachers' behaviour and commitment to work; Monitor pupil/student performance; Facilitate the representation of children's voices in the decision-making processes; and Participate in School Development Planning (Kaduna State Universal Basic Education, 2012).

The Kaduna State Policy requests that each SBMC will be constituted based on representations of the diverse groups with an interest in improving the learning outcomes of the pupils/students in schools. The membership of SBMCs shall be composed of a maximum of 17 members.

ii. **SBMC membership**

The School Head will collaborate with the traditional leader in the area and a representative of the LGEA/SUBEB to select responsible and trustworthy members of the community to form the 17 membership of the SBMC. Fair representation of all groups listed should be ensured. At least eight members of the SBMC should be women. In all cases, SBMC members must have shared values and behaviour to provide good governance for schools in line with codes of conduct establish by the State Education Laws (Kaduna State Universal Basic Education, 2012).

SBMC members will select an executive from amongst its members including: Chairman (should as far as possible be a retired teacher); Vice-Chairman; Secretary (this will be the Head Teacher of the school); Treasurer (should not be a member of the school administration or a teacher); Press Relations Officer. SBMC members will Serve for a period of 3 years, renewable based on satisfactory performance Meet twice per school term call emergency meetings if important decisions need to be made between scheduled meetings not meet with fewer than two thirds of the SBMC membership present (Kaduna State Universal Basic Education, 2012)..

iii. Forming Committees

According to Kaduna State Universal Basic Education (2012) demostrates that within SBMCs, committees should be established where special focus is needed: for example it will be necessary to form a finance committee to support the SBMC with managing money. Forming women's committees and children's committees can greatly help these groups to participate fully and confidently in all SBMC meetings and activities.

iv. SBMC and strengthen partnership and promote participation and inclusion.

The Kaduna State SBMC Policy states that for schools to be effective, strong partnership must exist between the Head Teacher, the teachers, pupils, parents, SBMC members and members of the wider community. It also highlights the way in which SBMCs are selected and organized can contribute to building partnership, increasing voice and demand for better education delivery through active participation (Kaduna State Universal Basic Education, 2012).

v. **Partnership**

SBMCs are expected to exist in harmony with other similar bodies which have an interest in educational development. The values of trust, mutual respect and shared understanding will also be very important in working alongside the school Head Teacher, the PTA, the LGEA, SUBEB and the SMoE.

Kaduna State Universal Basic Education (2012) maintains that the SBMCs will need to develop ways for working in consultation with wider groups of partners. Strong partnerships between SBMCs of neighboring communities are also important. This kind of partnership and collaboration can be developed for example through: Visits to SBMCs which are already functional to learn from their experience; Joint visits/meetings with education service providers to discuss issues; Establishing partnerships with local role models – artisans, business people, local charities, co-operatives or CBOs; Formal contacts with interested organizations, groups or individuals including the media; Linking women's committees to each other and reaching other marginalized groups.

vi. **Participation and inclusion**

The Kaduna State Policy is clear about the active participation of the wider community in school planning and monitoring. The wider community includes women and children, and other community members who may not generally have a strong voice. Kaduna State Universal Basic Education (2012) point out that all groups will be included for better management of schools**;** The SBMC actively include all groups by: Ensuring their involvement in all SBMC activities; Encouraging parents and husbands to allow women and children to be fully involved in the SBMC; Sharing information with SBMC members on the importance and benefits of including women's and children's voices in SBMC processes; Enabling women's and children's voices to be heard through the formation of committees which feed into SBMC meetings; It is also important to hear the voices of children who are out of school Training SBMC members in child awareness, child protection and the benefits of children's participation in the SBMC

vii. **Raising awareness**

Policy guide lines proposes that the SBMC can actively increase participation by: Involving and gaining the support of local, religious and traditional leaders in raising awareness about education; organizing enrolment campaigns The use of community drama, and speaking widely about the responsibility of community and government to make sure that all children enroll in and complete primary school, make the transition to junior secondary and access quality education. In viewing female SBMC's members as a role models, particularly for other women and for girls in communities. They can visit other women in their homes to promote education and encourage them to send boys and girls to school (Kaduna State Universal Basic Education, 2012).

viii. **Useful messages that the SBMC can promote;**

According to Kaduna SUBEB (2012) the useful messages that the SBMC can promote include the following; (a**)** All children have the right to education as specified in the constitution; (b**)** The government has the responsibility to ensure that all children receive a good quality education regardless of their family's ability to pay; (c**)** All children, including boys, girls, children with disabilities, children who do not speak the main language, and children without parents, should go to school; (d) Girls who are married have exactly the same right to go to school as other children; (e) A good education should help your child to read and write, become a responsible citizen and help you and your family live a healthy life; (f) It is possible to have both Western and Islamic education; and (g) The community can ask for improved quality of education service delivery from those responsible.

Theoretical Framework

This paper has employed the theory of collaboration. Collaboration is a promising mode of human engagement but to become more than a fad, it is a theoretical "structure and framework needed to guide individuals and group towards successful collaboration" (Steiner, 1992). Conceptually, the collaboration is a recursive process where two or more people or organizations work together in an intersection of a common goal by sharing knowledge, learning, and building consensus. Most collaboration requires leadership, although the form of leadership can be social within a decentralized and egalitarian group. In particular, teams that work collaboratively can obtain greater resources, recognition, and reward when facing competition for finite resources.

Collaboration these days has assumed increased attention following the advocacy by many donor agencies as a means of solving many global challenges such as poverty, job creation rural development, diseases, and conflicts. Indeed, Austin and Noami point out the need in society to think and work together on issues of crucial concern has increased (Austin, 2000, Noami 2001). The theory of collaboration can be used to predict and influenced member behaviors, analyze a member's perception of equity and provide insight into reasons for the cooperative spirit and improve member participation in activities that will benefit citizens generally. As such, this theory can be used here to explain the role of SBMC in promoting basic education as collaborating effort to complement government effort on basic education.

Data Presentation and Analysis

This section deals with the presentation and analysis of data obtained from the questionnaire and the oral interview as stated in the methodology section of this paper. This has been done using simple percentage, Chi-Square, and Phenomenological approaches.

Questionnaire Responses

The appendix of this paper has indicated the responses from the questionnaire. Table 2 has revealed that out 328 respondents 57.6% are male, while female constitutes 42.4% of the respondents. This shows that majority of the respondents are male with 57.6% as against female whose records stood at 42.4%. The table also shows the age bracket of the respondents, which indicates that 14.0% of the respondents have been categorized between the age bracket of 21-25 years. While the respondents who are categorized between the ages bracket of 26-30 years stood for 43.3%. The respondents' age bracket of 31-35 years has recorded 21.0% from the total responses. The age bracket of 36 and above years stood at 21.6% from the total responses. This implies that majority of the respondents are in age bracket of 26-30 years, which record highest responses of 43.3%, followed by age bracket of 36 and above and 31-35 years with 21.6% and 21.0% respectively. This is indicates that the major respondents are those under the age bracket of 26 and above years. The table (2) also reports marital status of the respondents, which shows the percentage of the respondents that are married stood at 53.0% who constituted the majority, followed by single with 14.3%, the divorced respondents are 12.2%, and widowed recorded 20.4% from the total responses.

The table (2) also explains the respondents profile based on number of years in service with their employer, the table reports that 26.5%, recorded by those who spent from 1-5 years in service. The table furthers reveals that 41.5% of the respondents spent 6-10 years in service. While 19.5% of the respondents spent 11-15 years in service. And 12.5% of the respondents spent 16 and above years in service. This shows that the respondents who spent 6-10 years in service are the majority with highest percentage of 41.5%. While the respondents who spent 16 and above years in service are the lowest responses from the total respondents.

The table (2) also reveals the respondents profile based on their educational qualifications, the table has indicated that 0.6% of the respondents are those who obtained only grade II certificates, while the respondents who obtained NCE/OND certificates represents 57.9% from the total responses. And those who obtained B.ed/B.Sc certificates have recorded 27.1%, the percentage of the respondents who obtained postgraduate certificates stood at 14.3% from the total responses. This shows that the majority of the respondents are those who obtained NCE/OND and B.ed/B.Sc certificates.

Table Three (3) of the appendix of this paper has indicated the opinions of the respondents on the rate of holding two or more meetings in a Term by SBMC in Sabon Gari local government area. The table has revealed that 24.7% of the respondents opined that the rate of holding two or more meetings in a Term by SBMC in Sabon Gari local government area is very high (VH), the table has further explained that 37.5% of the respondents have opined that the rate of holding two or more meetings in a Term by SBMC in Sabon Gari local government area is high (H), while 6.4% not decided that the rate of having two or more meetings in a Term by SBMC in Sabon Gari local government area. 22.0% of the respondents have opined that the rate of having two or more meetings in a Term by SBMC in Sabon Gari local government area is low (L), and 10.4% opined that the rate of holding two or more meetings in a Term by SBMC in Sabon Gari local government area is very low (VL). This shows that there is high rate of holding two or more meetings in a Term by SBMCs in Sabon Gari local government area. This shows that there is high rate of commitment and participation of the communities in the study area for the achievement of basic education.

The table (3) presented responses according to the steps taken by SBMC to address exclusion in education in Sabon Gari local government area, the table has revealed that 21.6% of the respondents opined that the rate of steps taken by SBMC to address exclusion in education in Sabon Gari local government area is very high. And 43.6% of the respondents opined that the rate of steps taken by SBMC to address exclusion in education in Sabon Gari local government area is high. While 6.4% are not decided. The percentage of the respondents who opined that the rate of steps taken by SBMC to address exclusion in education in Sabon Gari local government area is low stood for 18.6%. The table further shows the proportional percentage for those who opined that the rate of steps taken by SBMC to address exclusion in education in Sabon Gari local government area is very low has been recorded as 10.4%. This implies that majority of the respondents opined that the rate of steps taken by SBMC to address exclusion education in Sabon Gari local government area is high.

The table (3) also reveals the responses according to networking of SBMC with CBOs, traditional, and religion institutions in Sabon Gari local government area of Kaduna state. The responses have indicated that 5.8% of the respondents opined that the rate of SBMC networking with CBOs, traditional and religion institutions in Sabon Gari local government area is very high. While 14.6% of the respondents opined that the rate of SBMC networking with CBOs, traditional, and religion institutions in Sabon Gari local government area is high, and 5.8% of the respondents are undecided. Those respondents who opined that the rate of SBMCs networking with CBOs, traditional and religion institutions in Sabon Gari local government area is low stood at 40.5%. While, 27.7% believed that the rate of SBMCs networking with CBOs, traditional and religion institutions in Sabon Gari local government area is very low. This indicates that the majority of the respondents did not agreed that there is high rate of SBMCs networking with CBOs, traditional and religion institutions in Sabon Gari local government area. In terms of contributions of resources for school management, the table (3) shows that 29.6% respondents opined that the rate of SBMCs contribution of resources for school management in Sabon Gari local government area is very high. 51.5% of the respondents have opined that the rate of SBMCs contribution of resources for school management in Sabon Gari local government area is high, and 3.7% are undecided. The percentage of the respondents who believed that the rate of SBMCs contribution of resources for school management in Sabon Gari local government area is low stood at 8.8%, also 6.4% opined that the rate of SBMC contribution of resources for school management in Sabon Gari local government area is very low. This implies that the majority of the respondents believed that SBMCs contribution of resources for school management in Sabon Gari local government area.

The table (3) also revealed the responses of the respondents according to the rate of frequents visit to school by SBMCs chairman in Sabon Gari local government area, the table indicates that 30.85% of the respondents opined that the rate of frequents visit to school by SBMCs chairman in Sabon Gari local government area is very high, while 54.3% considered it high and 3.4% undecided. The percentage of the respondents who opined that the rate of frequents visit to school by SBMCs chairman in Sabon Gari local government area is low and very low are 9.5% and 2.1% respectively. This implies that the majority of the respondents opined that there is high rate of frequents visit to school by SBMCs chairman in Sabon Gari local government area.

Table Four (4) of the appendix of this paper has reported the responses of the respondents according to their perceptions of SBMC in promoting basic education. The table has displayed the opinions of respondents according to the rate of the role of SBMCs on encouraging parents to send their children to schools in the study areas, it indicates that 22.3% and 45.5% of the respondents opined that the rate of encouraging parents to send their children to schools in the study areas by SBMCs is very high and high respectively, with 6.4% of the respondents undecided. While, 15.9% and 10.1% respondents viewed it as low and very low respectively. This implies that the majority of the respondents perceived that the rate of the role of SBMC on encouraging parents to send their children to schools in the study areas is high.

The table (4) shows that 13.1% of the respondents responded that the rate of the role of engaging to raise awareness on basic education in the study is very high, while 19.2% viewed it as high, 5.8% are undecided. 37.2% and 24.7% considered it to be low and very low. This has indicated that the majority of the respondents believed that the rate of the role of SBMC on engaging to raise awareness on basic education in the study area is low. The table (4) further explains the responses of the respondents according to the perceptions on the rate of the role of SBMC on advising the school authorities about the education in the study area. This reveals that 32.6% and 61.3% of the respondents viewed that as very high and high respectively. While, respondents, while 0.6% are undecided. Still there are 3.7% and 1.8% respondents argued that it is low and very low. This implies that the majority of the respondents believed that the there is high rate of the role of SBMC on advising the school authorities about the education in the study area.
The table (4) explained the perceptions of the respondents based on the rate of the role of SBMC on monitoring of pupils'/students' performance in the study area. It

shows that 24.1% of the respondents have perceived that the rate of the role of SBMCs on monitoring of pupils/'students' performance in the study area is very high, 55.2% and 5.2% perceived that it is high and undecided. 9.8%, and 5.8% of the respondents believed that the rate of the role of SBMC on monitoring of pupils'/students' performance in the study area is low and very low. This has indicated that the majority of the respondents perceived that there is high rate of the role of SBMC on monitoring pupils'/students' performance in the study area. The table (4) indicates that 27.7% of the respondents perceived that the rate of the role of SBMCs on facilitating the representatives of children's voice in the decision making in the study area is very high. 54.0% perceived it high, and 4.6% of the respondents are undecided. Those perceived it low and very low stood at 9.5% and 4.3%. This shows that majority of the respondents perceived that there is high rate of the role of SBMCs on facilitating the representatives of children's voice in the decision making in the study area, this majority constitutes 81.7%.

Analysis of result; based on the result obtained in the chi-square table in the appendix of this study; we can conclude that there is significant relationship between the role of SBMCs and the promotion of basic education service delivery in Sabon Gari local government area, Since chi-square significant value of 0.05 is greater than chi-square P-value of 0.00, we reject the null hypothesis (H_0) which says there is no significant relationship between the role of SBMCs and the promotion of basic education service delivery in Sabon Gari local government area.

Interview Responses

From the responses of head teachers in the oral interview, almost all of the respondents from sampled schools in primary schools, opined that SBMCs are playing significant roles in terms of school management, such as monitoring of teachers' punctualities and infrastructural, serves as link between school authorities and communities. The respondents have informed that SBMCs are holding meeting two or more times at a term, taking steps in improving pupil's enrollment, advising school authorities, and monitoring of infrastructures, especially new ones, they have added that the SBMCs are facilitating pupil's/student's representative in decision making process. In terms of contributing resources for school management, the respondents viewed that apart from what government is allocated as school running cost, the SBMCs also contribute resources out of their pockets and out sourcing resources from the members of the communities. Two of the head teachers in primary schools have added that the roles of SBMCs were encouraging parents to send their children to schools especially girls. But two teachers from junior secondary schools have revealed that the SBMC's meetings is not holding regularly, sometimes, not more than one or two meetings at a term, and the SBMCs Chairmen did not regularly visits schools, also the SBMCs and PTAs are encouraging pupils enrolments ,and advising school authorities on school developments.

Conclusion and Recommendations

Community participation is now widely recognized as a basic operational principle of community development. Conventionally, the participatory approach is considered as the reaction to the shortcomings of top-down development practices, externally imposed, and export-oriented. The advantage of the SBMC participation in the promotion of basic education service delivery is that the development was centered on the role of the local community as a primary actor that should be allowed to influence and share the responsibility of the development process affecting their lives. As such, this paper concluded that the SBMC have been playing significant role on promotion of basic education in Sabon Gari local government area, but the rate of the role of SBMC on engaging to raise awareness on basic education in the study area is low, and the SBMCs are running in limited resources to spur their full capacity on promotion of basic education.

To strengthen the full participation of the community in the developmental programs, such as SMBCs, any program/project that will be executed should be identified by the community based on the felt need of the community specifically in basic education, at the implementation and evaluation stages of the projects. This will give them every capacity to attain the success and accomplishment of such a project, and to boost the level of community participation through raising public awareness on basic education.

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Table 1; the Political Wards and Educational Cluster in Sabon Gari local government Area

Sno	Political Wards	Educational Cluster	
1	Basawa Ward	A	Ung. Makera, Dan Makwarwa, and Jafaru LEA
2	Bomo Ward	B	Almajirai, Yar Dorawa, Layin Zomo and Kabama LEA;
3	Chikaji Ward	C	Ang kanawa, Jushin Waje and Ang malam Sule LEA
4	Dogarawa Ward	D	Lemu, Migoma, and Samaru model LEA;
5	Hanwa Ward	E	Ang Barashi, Sakadadi, Kwarin Ayuba and Hanwa Model LEA primary Schools;
6	Jama'a Ward	F	Kwakwaren Manu, Kurmin Bomo, Hayin Sambo and Rinji LEA Primary Schools
7	Jushi Ward	G	Zabi, Gwanda, Zangon. Danbarno, G. Gwanda LEA primary schools;
8	Muchia Ward	H	Katanga, Rafin Gwaza, Ang. Nafara, Ang Sarki K, and Ang. Wakili LEA Primary Schools;
9	Samaru Ward	I	Amina Model, Ang Sarkin Baka, and Dan Sa;a LEA Primary Schools
10	Ung Gabas Ward	J	Dogon Bauchi LEA Primary School;
11	Zabi Ward	K	Basawa Barrack, Ang Rimi, Ang Biso, Dufa Dufa, and Ang Makera LEA Primary Schools
12		L	Chikaji Model and GRA Model Primary Schools;
13		M	Maraban Gwanda, Hayin Dogo, Tsugugi and D/ Science LEA Primary Schools
14		N	Bauda and Ang. Fulani LEA Primary Schools
15		O	Iya Bashir LEA Primary School.

Source; Researchers Survey (2020)

Table 2. The Respondents Profile

S/No	Variable	Particular	Frequency	Percentage (%)
1	Sex	Male	189	57.6
		Female	139	42.4
		Total	**328**	**100.0**
2	Age	21-25 Years	46	14.0
		26-30 Years	142	43.3
		31-35 Years	69	21.0
		36 and above years	71	21.6
		Total	**328**	**100.0**
3	Marital	Married	174	53.0
		Single	47	14.3
		Divorced	40	12.2
		Widowed	67	20.4
		Total	**328**	**100.0**
4	Years in Service	5 Years	87	26.5
		10 Years	136	41.5
		15 Years	50	13.3
		20 Years	64	19.5
		25 and above Years	41	12.5
		Total	**328**	**100.0**
5	Qualifications	Grade II	2	.6
		Diploma/ NCE	190	57.9
		BSc/Bed	89	27.1
		Postgraduate	47	14.3
		Total	**328**	**100.0**

Source; Researchers' Survey (2020)

Table 3, The Role of SMBC (IV)

S/nO	Variable	Very High		High		Undecided		Low		Very Low		Total	
		F	%	F	%	F	%	F	%	F	%	F	%
1	Holding Two or more SBMC meetings in Term of the current school year	81	24.7	123	37.5	21	6.4	72	22.0	31	9.5	**328**	**100**
2	SBMC took steps to address exclusion	71	21.6	143	43.6	19	5.8	61	18.6	34	10.4	**328**	**100**
3	SBMC networked with Community-Based Organisations (CBOs), t	19	5.8	48	14.6	37	11.3	133	40.5	91	27.7	**328**	**100**
4	SBMC contributed resources for the schoo case mgt of malaria	97	29.6	169	51.5	12	3.7	29	8.8	21	6.4	**328**	**100**
5	SBMC chair visited the school at least three times	101	30.8	178	54.3	11	3.4	31	9.5	7	2.1	**328**	**100**

Source; Researchers' Survey (2020)

Table 4. The Promotion of Basic Education

S/NO	Variable;:	Very High		High		Undecided		Low		Very Low		Total	
1	Encourage parents to send their children to school and support them to complete their education especially girls	F	%	F	%	F	%	F	%	F	%	F	%
		73	22.3	149	45.4	21	6.4	52	15.9	33	10.1	**328**	**100**
2	Engage in raising awareness about education	43	13.1	63	19.2	19	5.8	122	37.2	81	24.7	**328**	**100**
3	Advise the school authority on teachers' behavior and commitment to work	107	32.6	201	61.3	2	.6	12	3.7	6	1.8	**328**	**100**

4	Monitor pupil/student performance;	79	24.1	181	55.2	17	5.2	32	9.8	19	5.8	**328**	**100**
5	Facilitate the representation of children's voices in the decision-making processes;	91	27.7	177	54.0	15	4.6	31	9.5	14	4.3	**328**	**100**

Source; Researchers' Survey (2020)

Table 5; the Chi-Square table

	Value	df	Asymptotic Significance (2 sided)
Pearson Chi-Square	896.615[a]	16	.000
Likelihood Ratio	745.533	16	.000
Linear-by-Linear Association	301.946	1	.000
N of Valid Cases	328		

a. 8 cells (32.0%) have expected count less than 5. The minimum expected count is 1.34

The Impact of Commercial Bank Credit on Agricultural Sector in Nigeria (1993-2019)

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Abstract

The study identified poor infrastructure, inadequate financing, lack of appropriate technology, high interest rates, bureaucratic difficulties and unfair conditions required by commercial banks, corruption and nepotism, political instability, difficulty is assessing bank loans, etc. As some of the factors that necessitated this study. In view of these, the research sought to quantify the nature of relationship between Loan Assessment and Food Security in Nigeria. The study was anchored on the Structural Change Theory by Lewis Arthur (1954), descriptive research and correlational survey design was employed in the study using secondary data. The Ordinary Least Square method of estimation (OLS) was adopted for this study consist of multiple regression.The findings of the study revealed that there was a significant positive relationship between Loan Assessment and Food Security in Nigeria. The study concluded that commercial bank credit has an enormous influence in the agricultural sector as it improved food production in the country through food availability, food access and food utilization. Thus, recommends that commercial banks in Nigeria should make more loan/credit facilities available and accessible to farmers all over the country to sustain the increased agricultural product needs in Nigeria. These funds must be made available to serious minded farmers at affordable interest rates.

***Keywords**: Agriculture, Commercial Banks, credit, Loans, Food, OLS*

Background of the Study

Agriculture is an inevitable concomitant to the economies of developing countries, as it plays a key role in providing food to the population and supplying other sectors with raw materials for production of goods and services (Food and Agriculture Organization, 2017). Agricultural sector plays catalytic role in modern economy and has many dynamic benefits crucial for sustainable economic development. In advanced countries, the sector is highly regarded and its contributions to the economy in terms of foreign exchange, employment and improved standard of living is immeasurable. Furthermore, it creates investment capital at a faster rate than any other sector of the economy through its complex value chain, thereby creating an effective linkage among different sectors (Emeaghalu, 2018).

In Nigeria, agriculture is still the most important sector of the economy due to the fact that it plays very important role in its developmental process. The performance of the agricultural sector is very crucial in the country's food security and poverty alleviation, due to the fact that majority of the poor are staying in the rural communities and rely mainly on agriculture-based economic activities for their source of livelihood but for more than three decades has not been performing optimally. Its contribution to the Gross Domestic Product has been low and the nation is depending on other countries for food. The Agriculture's share of GDP in Nigeria in 1950 was 69 percent, but declined continuously to 49% in 1970, 22 percent in 1982, 42.2% in 2007, 40% in 2010 and 22% in 2019 (Ogueli, 2020).

Also, agricultural production in Nigeria is dominated by small-scale farmers who account for about 95% of the country's agricultural production. This system of farming is characterized by low asset base, low fixed capital, labour intensive production, small farm size, low investment and expenditure on farm inputs, crude tools and equipment and low productivity, among others (Adewunmi & Ayinde, 2013). The performance of the sector is largely dependent on the provision of affordable financial services basically through credits to both the rural and urban participant in the sectoral value chain. Nnamocha and Eke (2015) opined that funds are needed in agriculture regularly to enable the farmer purchase more land, buy his inputs at the appropriate time and to pay for hired labor or farm machinery, but it is interesting to note that credit to agriculture sector in the last 10 years remains as low as 5%. Credit may be obtained from various sources, including banks, Non-bank financial institutions, stock markets, and so on. Even though the Central Bank of Nigeria (CBN) had at various times dedicated funds to agricultural production through various schemes with the aim of resuscitating the agricultural sector. The Securities and Exchange Commission (SEC) through its annual publications believe that only commercial banks and the capital market has the capacity to unlock better access to credit and finance for the sector through innovative financing structures and products (Okpala, 2018). Commercial Banks are the major sources of such financial services in form of loans and advances and that is why commercial banks in Nigeria have been directed to devout a major part of their funding to finance this sector, beside other government owned banks like the Nigerian Agricultural and Cooperative Bank (NACB) (Sunny, 2013). The contributions of commercial banks to the agricultural sector have stemmed debate and growing interest among researchers, policy makers and farmers have recognized their immense contribution in agricultural production. The vital role of commercial bank credit in ensuring growth in food production in an economy has been widely acknowledge for instance, Imoughele, Ehikioya and Ismaila, (2014) established that commercial banks facilitate technological innovation through their intermediary role. Their emphasis was that efficient allocation of savings through identification and funding for farmers with best chances of successfully implementing innovative product and production are tools to achieve real economic performance.

Nwanyanwu (2012) also noted that the commercial banks help to make credit available by mobilizing surplus fund from depositor who have no immediate needs of such money and channel it in form of credit to potential farmers who have brilliant structures in their agribusiness on how to create additional wealth in the economy but lack the necessary capital to execute the ideals. However, acknowledging the role of commercial bank credit in the agricultural sector has been enhanced by the various banking reformed has been established by the monetary authority in Nigeria in enhancing credit accessibility. The overall intentions of these reforms have been to ensure financial stability, so as to influence the growth of the industry and also enhance bank to play critical role of financial intermediation in provision and accessibility of credit in the sector and these various reforms have led to the improvement in banking services to agribusinesses.

Commercial banks financing has been identified as a means of transforming the agricultural sector and revamping the Nigeria economy by ensuring food security, job creation and economic diversification. Having pointed these facts, the great need for commercial bank credit to develop the agricultural sector today, more than ever, is necessitated by the recent economic recession that bedeviled the country as a result of its oil dependency and inability to save for rainy days. Thus, there is the need to critically examine the role of commercial banks in agricultural development in Nigeria with a view to highlight areas of its strengths and weaknesses and making recommendations that will go a long way towards encouraging lending to the sector, since as we have observed that access to finance is critical to lifting small scale farmers above the subsistence level. Therefore, this study examines the influence of commercial bank credit on the growth of the agricultural sector in Nigeria.

An honest survey of the current situation in the agricultural sector in Nigeria will immediately reveal not only a progressive decline of the contribution of agriculture to the gross domestic product both in relative and absolute terms, but also a stalemate in the country's ability to maintain its food independence in spite all the government's effort through its policies and programmes to revamp the sector and despite the significance of the agricultural sector to poverty reduction and overall development. The problems faced by the Nigerian agricultural sector are legion and needs to be tackled headlong before severe hunger typified by poverty and lack of adequate nutrient becomes an issue.

Successive governments have come up with numerous programmes to address the inability of agricultural output to keep pace with the country's demand for agricultural products. Finance institutions have over the years shied away from lending to the small-scale farmers who form the larger part of the farming population, citing reasons such as high default rates, difficulty in monitoring numerous individuals whose loans do not provide much return on investment, as well as not being cost effective (Jumare, 2016).

Consequently, the sector has been characterized with low production and robust markets for outputs as small holder farmers still rely on rudimentary methods and technology and they have limited skills and inputs such as improved seeds that would increase yields (Emeaghalu, 2018). Peasant and subsistence farming with the use of rudimentary technologies have been very predominant in the agricultural sector of Nigeria and this has resulted to low levels of production.

The sector's contributions to both the gross domestic product of the economy and its per capita contribution is very insignificant, thus the overall production has not been up to the level that will ensure that the sector makes the needed impact. Factors responsible for this includes poor infrastructure, inadequate financing, lack of appropriate technology, high interest rates, bureaucratic difficulties and unfair conditions required by commercial banks, corruption and nepotism, political instability, difficulty is assessing bank loans, etc. The gross effect of the situation described above is that, most of these farmers lack economies of scale as a result of the small-scale production, resulting in a high per capita cost and generally low production levels. Finance or capital has been identified as been inadequate to expand production in the sector especially by the low-income earners or farmers who hold small farms.

According to Ifeoma (2018) inadequate access to economic resources especially financed by the numerous sparsely located farmers across Nigeria continues to inhibit agricultural development. This calls for critical examinations and the adoption of an approach to avoid declaring farmers "an endangered species". It is important to double efforts to transform the economy and continuously explore pragmatic methodologies to address the problem of our farmers (Maurice & Tashkalma, 2012). Commercial banks have a very important role to play in addressing the numerous constraints bedeviling the agricultural sector. The United Nations Capital Development Fund (UNCDF) has shown that financial institutions play key roles in development (UNCDF, 2011).

The broad objective of the study is to justify the linkage between Commercial Bank Credit and Agricultural Growth in Nigeria. However, the specific objectives are: To quantify the nature of relationship between Loan Assessment and Food Security in Nigeria. For the purpose of this study, it is essential to decompose Loan Assessment with Loan Assessment and Food Security with Food Availability (FA), food assessment (FAS), Food Utilization (FU) and Food Absorption (FAB).

Conceptual Review

Commercial Bank Credit

The word credit was defined by Miller (1993) in Aina, Amila, Hassan, Kubalu, Alechenu and Yakubu (2016) as a device for facilitating the temporary transfer of purchasing power from one individual or organization to another. They contended that credit provides the basis for production efficiency through specialization of function. Credit has been described as a continuation of potentially and actually obtaining goods and services (actually) by giving a promise to pay (potentiality).

According to Ijaiya and Abdulraheem (2000), credit is a financial resource that is obtainable from financial institution within a specified period of time based on agreed terms with the promising of paying back as and when due. Njanike (2009) defined commercial bank credit as a debt, which entails the redistribution of the financial assets between the lender and the borrower. The bank loan is commonly referred to the borrower, who got an amount of money from the lender, and need to pay back, known as the principal. In addition, the banks normally charge a fee from the borrower, which is the interest on the debt.

Mohammed (2012) disclosed that the intermediation role played by commercial bank can be said to be a catalyst for economic growth and development based on the premise that banks collect savings and resources from individual, entities, government and corporate bodies as investment funds and channel the savings to the users of resources for investment activities. This implies that the rate at which banks advance financial resources to the real sector determines the pace of a nation's economic growth.

Loan Assessment in Nigeria

Access to loan may be referred to as, the right to obtain or make use of or take advantage of borrowed money from a lender. In Nigeria, credit is an important instrument for improving and enhancing the productivity capacity of any sector. It also facilitates the flow of savings from surplus units to deficit units (Diagne, 2000). The outcome of this is that only a small proportion of the total number of rural households and farmers credit from the formal sector.

Again, among those with access to the institutional credit, a very small group particularly the rich and the elites in the village receive a very large share of the total amount disbursed. Consequently, the overwhelmingly constrained borrowers are forced to turn to the rather expensive and unreliable informal credit sources (Okuru, 2004). Agriculture loans are specifically designated for use in the industry, and there are plenty of ways you can use the proceeds to get your farm or ranch up and running or expand your operations.

The access to loan and funding among farmers in Nigeria remains largely unmet despite government's efforts of diversifying the country's economy through its agricultural revolution initiatives supported by the Central Bank of Nigeria. The challenges are not only on the farmers themselves but also on financial institutions that can hardly identify genuine farmers from those who have been described overtime as political farmers.

Food Security

Food security can be defined as access by people at all times to enough food for an active, healthy life and includes at a minimum: the ready availability of nutritionally adequate and safe food, and the assured ability to acquire acceptable food in socially acceptable ways without resorting to emergency food supplies, scavenging, stealing and other coping strategies (Adetiloye, 2012). The World Health Organization (2013) states that there are three pillars that determine food security: food availability, food access, and food use and misuse. The Food and Agriculture Organization (2012) adds a fourth pillar: the stability of the first three dimensions of food security over time. In 2009, the World Summit on Food Security stated that the "four pillars of food security are availability, access, utilization, and absorption.

This is sometimes referred to as the availability and safety of consumable food through the production and preservation processes up to the time of consumption. Food insecurity is described as the unavailability of food, safety and intake at individual, household, sub-national and global levels (Oladeji, Ayegbusi & Olowe, 2004). This goes to show that a nation that cannot feed itself is food insecure. A more straightforward definition of food security concerns the availability of food in sufficient quantities to meet the sustenance of the population. Hunger is a severe manifestation of food insecurity.

The National Agency for Food and Drug Administration and Control (NAFDAC) is involved in quality control and safety of packaged foods in Nigeria especially of meat and poultry. The emphasis should be first on production before preservation of the produce. Eugenio, Babinand

and Thomas, (2002) believes in the possibility of a globalizing world being fully food secure via the circulation of safe affordable food throughout the world. Nevertheless, for a country like Nigeria this should be avoided as much as possible given the outflow of scarce resources.

Theoretical Review

The theoretical base of this paper is from the intellectual works of McKinnon and Shaw (1973), Stiglitz Weiss (1981), Bernanke Blinder (1988) and Lewis Arthur (1954) in their Financial Liberalization Theory, Loan Pricing Theory, Bank Lending Credit Channel Theory and Structural Change Theory respectively.

The Financial Liberalization Theory

Under this theory, the consideration is central on the part played by government intervention in the financial markets as a critical setback to growth, investment and savings mobilization. The role of government in interest rate control and credit allocation to the productive economic sectors in developing countries hinders the mobilization of savings and discourages financial assets holding, economic growth and capital formation. Interest rate ceiling on deposit indirectly inhibited financial saving which resulted in excess liquidity outside the banking industry.

Government pervasive intervention and financial system involvement through the supervisory and regulatory framework, especially interest rate control and credit allocation tend to facilitate financial market distortions. As such, the intervention of government is adversely affecting the market players' decision regarding investment and savings and resulted in financial mediation fragmentation. The resultant effect of this scenario is an economy that is financially repressed.

Loan Pricing Theory

Banks cannot always set high interest rates. Banks should consider the problems of adverse selection and moral hazard since it is very difficult to forecast the borrower type at the start of the banking relationship (Stiglitz and Weiss, 1981). If banks set interest rates too high, they may induce adverse selection problems because high-risk borrowers are willing to accept these high rates. Once these borrowers receive the loans, they may develop moral hazard behavior or so-called borrower moral hazard since they are likely to take on highly risky projects or investments (Chodecai, 2004). From the reasoning of Stiglitz and Weiss, it is usual that in some cases we may not find that the interest rate set by banks is commensurate with the risk of the borrowers.

The Bank Lending Credit Channel Theory

The banking lending channel stated that monetary policy also affects the external finance premium by shifting the supply of the intermediated credit, especially loans from commercial banks. It indicated that if supply of bank loans is disrupted for some reason, bank dependent borrower may not be necessarily shut off but incur cost of finding lenders. Therefore, a reduction in the supply, relative to other forms of credit is most likely to increase external finance premium and reduce real activity.

The Structural Change Theory

The assumption of this theory states that an economy is made up of two sectors. One is the traditional (agricultural or subsistence) sector, while the other is the modern (capitalist, industrial or manufacturing) sector. This gave rise to the two-sector model. The theory also assumed that the development of an economy is dependent on the growth of the two sectors.

Y = f (AGRIC, IND)

Where; Y = Economic development,

AGRIC =Agricultural sector and

IND = Industrial sector.

Empirical Review

Numerous studies have been conducted to reveal the impact of commercial bank credit on agricultural sector in both developed and developing economies. Majority of these studies seems to suggest that commercial bank credit has a positive effect on agricultural growth and development. For instance, Imoughele, Ehikioya and Mohammed (2013) investigated the impact of commercial bank credit accessibility and sectoral output performance in Nigerian economy for the period which spanned between 1986 and 2010. An augmented growth model was estimated via the Ordinary Least Square (OLS) techniques to ascertain the relationship between various commercial bank credits and sectoral output growth. The variables were tested for stationarity and co-integration analysis was also carried out using the Augmented Dickey-Fuller test. The study found that the various commercial bank credit supply and other included variables has a long run relationship with sectoral output performance i.e agricultural, manufacturing and services sector. The study concluded that consistent expansion of monetary policy which engenders supply and demand for commercial bank credit by the manufacturer, Farmer and services provider promote the sectors productivity and recommended that continuous credit accessibility in a deregulated financial market economy has the capacity to induced the nation sectoral output performance which will promote economic growth and development.

Medugu, Musa and Abalis (2019) examined the impact of Commercial Banks' credit on Agricultural output in Nigeria, covering the period 1980 to 2018. Annual time series data was employed, which was sourced from Central Bank (CBN) publications such as Statistical Bulletins and Bullions, and National Bureau of Statistics (NBS) publications. Stationary test was conducted on variables to ascertain whether they have unit roots. the study showed positive and significant relationship exists between commercial banks' credit and Agricultural output in Nigeria. The study recommended that Government should as a matter of policy through the Central Bank make credits from Commercial Banks available and affordable by lowering interest rate.

Nnamocha and Eke (2015) investigated the effect of Bank Credit on Agricultural Output in Nigeria using the Error Correction Mode (ECM). A yearly data (1970- 2013) obtained from the Central Bank of Nigeria was used for the analysis. The study, it showed that, in the long-run bank credit and industrial output contributed a lot to agricultural output in Nigeria, while; only industrial output influenced agricultural output in the short-run. The study recommended that loans for the farmers should be disbursed in good time with low interest.

Aina, Amila, Hassan, Kubalu, Alechenu and Yakubu (2016) analyzed the impact of commercial bank lending on agricultural production and productivity in Ondo and Ekiti State of Nigeria. Descriptive statistics, gross margin, elasticity of production, return to scale as well as regression analysis were used to analyze the data. The study found that commercial bank credits is positively related to agricultural production and shows a significant impact on output levels. The study recommended that there should be active involvement of government and the private sector at boosting in flow of funds into agriculture and agribusiness.

Bassey, Akpaeti, and Udo (2014) investigated the impact of bank credit financing on agricultural output in Nigeria between the periods of 1970-2011. Employing Ordinary Least Square (OLS) regression method, the result shows that in order to boost agricultural GDP, emphasis should be directed towards proper funding of the sector by the government and other financial stakeholders. Akintola (2004) identified banks' traditional roles to include financing of agriculture, manufacturing and syndicating of credit to productive sectors of the economy and opined that credit of banks to the Nigerian economy has been increasing over the years.

Ogbanje, Yahaya and Kolawole (2012) examined the relationship between commercial banking sector loans and agricultural development in Nigeria from 1981 to 2007 using descriptive and inferential statistics. The result revealed that during 1981-1991, there was substantial increase in commercial banks' loans to the agricultural sector, while the loans more than tripled during the subsequent periods. Thus, commercial banks showed great concern for the growth of the agricultural sector in Nigeria. Result also revealed that commercial banks' loan to the agricultural sector considerably and progressively affected agricultural sector contribution to GDP in Nigeria.

Agunuwa, Inaya, and Proso (2015) examined the impact of commercial banks' credits on agricultural productivity in Nigeria. The statistical tool of analysis is the Ordinary Least Squares (OLS) techniques. However, the variables were subjected to the Unit Root Test to ensure stationarity before the application of the OLS. On the whole, three hypotheses were tested; all the alternative hypotheses were validated by the OLS result. The study showed a significant positive relationship between commercial bank credit and agricultural productivity in Nigeria. The study recommended that the Agricultural Credit, Guarantee Scheme should improve on their conditions for credit guarantee in order to make agricultural financing attractive to commercial banks.

Okezie and Erendu (2016) examined the determinants of agricultural credit in Nigeria between 1981 and 2014, using secondary data obtained from the CBN statistical publications. A multiple regression analysis was used to determine the effects of these variables on the amount of credit supplied to the agricultural sector through the Agricultural Credit Guarantee Scheme Fund (ACGSF) of the federal government. The results indicated that there has been increase in the supply of credit to the agricultural sector under the scheme, especially between 2000 and 2012. It was recommended that the on-going policies of the federal government aimed at attracting foreign investments be sustained and also the financial institutions need to review their lending rates downwards since the real interest rate was seen to inhibit supply of credit to agriculture.

Theoretical Framework

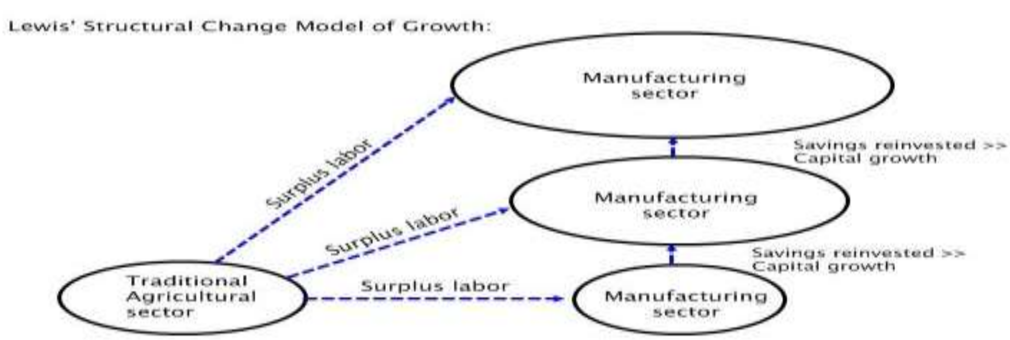
The study adopted the Structural Change Theory as framework. The Structural Change Theory was developed by Lewis Arthur in the year 1954 and called it "development with unlimited supply of labour". The assumption of this theory states that an economy is made up of two sectors. One is the traditional (agricultural or subsistence) sector while the other is the modern (capitalist, industrial or manufacturing) sector. This gave rise to the two-sector model. The theory also assumed that the development of an economy is dependent on the growth of the two sectors.

Y = f (AGRIC, IND)

Where; Y = Economic development,

AGRIC =Agricultural sector and

IND = Industrial sector.



Source: Pinstrup-Andersen (2009).

The agricultural sector and the industrial sector are interrelated. The agricultural sector employs capital inputs, labour expertise and also a final consumer of the output of the industrial sector, while the industrial sector employs labour and output of the agricultural sector. This theory is important to this study because agricultural development cannot be possible without proper funding. The proper funding of agriculture is made possible through the provision of agricultural loans and credits from commercial banks; the proper funding of these schemes will lead to increase in agricultural output which will, in turn, lead to adequate food security through food availability, food utilization, food absorption and food access and consequently, economic development.

Methodology

Research design is a plan or blueprint which specifies which specifies how data relating to a given problem should be collected and analysed (Onyeizugbe, 2013). The study adopted descriptive research and correlational survey design; this type of study seeks to establish what relationship exist between two or more variables. Usually, such studies indicate the direction and magnitude of relationship between the variables (Nworgu, 2006). The study used time series data from the period of 1990 – 2018.

The study used only secondary data. These data were sourced from the Central Bank of Nigeria Statistical Bulletin, Bank of Agriculture, African Development Bank, the Food and Agriculture Organization, National Bureau of Statistics yearly publications, World Bank Publications, Internet, Journals and Articles.

The data analysis techniques that was adopted for this study consist of multiple regression using the Ordinary Least Square method of estimation (OLS). This statistical tool seeks to establish the strength or degree of association between the dependent and independent variables. EVIEW 7 software was used for the analysis.

Model Specification

For the purpose of this study, it is essential to decompose Loan Assessment and Food Security with Food Availability (FA), food assessment (FAS), Food Utilization (FU) and Food Absorption (FAB).

LS = f (FA, FAS, FU, FAB) e_t . . . . (i)

This model is restated in econometric form as follows:

LS = $a_0 + a_1LFA + a_2LFAS + a_3LFU + a_4LFAB + e_t$.................(ii)

Where:

e_t = Stochastic or error term

LLS =Log of Loan Assessment

LFA = Log of Food Availability

LFAS = Log of Food Assessment

LFU = Log of Food Utilization

LFAB = Log of Food Absorption

$a_0 - a_4$ = parameters of the model

Result and Discussion

Data Presentation

Commercial Bank Credit and Agricultural Sector in Nigeria (1993–2019)

Year	Food Assessment	Food Absorption	(%) of Total Credit (Loan Assessment)	Food Utilization (%)	Food Availability
1993	2622	3.4	17.41	52.6	2294.6
1994	2266	3.2	14.32	52.5	1554.2
1995	1854	1.9	15.86	52.4	2060.4
1996	1309	2.8	16.60	52.3	7999.1
1997	1000	3.4	13.12	52.2	10283.8
1998	1300	3.5	11.53	52.2	12728.7
1999	2908	17.5	10.43	52	15351.8
2000	1926	13.1	7.58	52	15944.0
2001	746	13.6	6.21	51.8	26721.3
2002	431	12.6	8.68	51.1	31563.8
2003	1200	14.8	7.49	51.2	67568.1
2004	1413	14.4	3.62	51.0	59744.6
2005	1012	11.9	2.54	50.6	109455.2
2006	1501	12.1	0.99	50.8	79436.1
2007	1367	12.7	0.85	50.9	93767.9
2008	1900	14.9	0.17	51.0	94219.7
2009	1671	19.7	0.17	51.3	89141.2
2010	1908	21.1	0.14	51.4	92376.2
2011	1802	21.7	0.16	51.1	90758.7
2012	1110	22.3	0.13	51.1	91660.3

2013	1607	21.7	0.13	51.3	91598.4
2014	1506	23.9	0.12	51.3	91339.1
2015	1110	22.3	0.13	51.1	91660.3
2016	1607	21.7	0.13	51.3	91598.4
2017	1506	23.9	0.12	51.3	91339.1
2018	5433	27.9	0.13	51.2	91532.6
2019	4946	24.5	0.13	51.3	91490.0

Source: CBN Statistical Bulletin (Various Issues), National Bureau of Statistics (Various Issues), World Bank Development Report (Various Issues), Food and Agriculture Organization, Online Publications.

Regression Analysis

Dependent Variable: LS
Method: Least Squares
Date: 08/13/20 Time: 11:04
Sample: 1993 2019
Included observations: 27

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8716.968	1514.912	5.754109	0.0001
FA	-0.005617	0.019081	-0.294356	0.0231
FAS	1.094806	1.63E-05	-0.066870	0.0477
FU	4.152830	3.179259	-1.306226	0.0141
FAB	0.004874	0.004841	-1.006886	0.0724

R-squared	0.861768	Mean dependent var	6024.789
Adjusted R-squared	0.802448	S.D. dependent var	1541.703
S.E. of regression	1130.345	Akaike info criterion	17.15052
Sum squared resid	16609834	Schwarz criterion	17.44877
Log likelihood	-156.9300	Hannan-Quinn criter.	17.20100
F-statistic	4.097025	Durbin-Watson stat	1.162252
Prob(F-statistic)	0.018723		

In the test of significant of parameters in the model using t-test, the p-values of parameters are less than 0.05 per cent. The p-values of t-test imply all parameters in the model are significant except Food Absorption

(FAB) which is greater than 0.05 per cent. The coefficient of determination (R-Square) of the model is 86 per cent which implies the independent variables explained up to 86 per cent changes of the dependent variable.

Specifically, the coefficient of Food Availability (FA) carries a negative sign and is statistically significant at 0.02 percent which implies that Loan Assessment contributes negatively to the quantum of Food Availability in the country. Food Assessment (FAS) bears a positive sign and is statistically significant at 0.04 percent which means that Loan Assessment has a positive impact on the level of Food Assessment in Nigeria. Food Utilization (FU) is positive and statistically significant at 0.01 percent which implies that Loan Assessment contributes to Food Utilization in Nigeria. Food Absorption (FAB) is positive and significant at 10%.
The Regression equation shows that

Descriptive Statistics

	FA	FAS	FU	FAB	LS
Mean	217052.6	28770.30	36396565	394271.2	5847.286
Median	227991.0	14610.88	38884325	412707.0	5693.000
Maximum	361360.0	89043.62	73895559	647823.0	9946.000
Minimum	63505.00	2907.360	121331.0	105290.0	4062.000
Std. Dev.	57057.45	30125.12	23077172	211476.0	1566.662
Skewness	-0.354535	0.944310	-0.293281	-0.095535	0.873795
Kurtosis	5.510674	2.245544	2.227769	1.293689	3.326173
Jarque-Bera	5.955479	3.619078	0.744480	2.579504	2.765403
Probability	0.050908	0.163730	0.689189	0.275339	0.250900
Sum	4558104.	604176.2	6.92E+08	8279695.	122793.0
Sum Sq. Dev.	6.51E+10	1.82E+10	9.59E+15	8.94E+11	49088620
Observations	27	27	27	27	27

Conclusion and Recommendations

The regression result shows that there is a significant positive relationship between Loan Assessment and Food Security in Nigeria. This paper concludes that commercial bank credit had an enormous influence on the agricultural sector, as it improved food production in the country through food availability, food access and food utilization. In line with the above conclusion, the study recommended that commercial banks in Nigeria should make more loan/credit facilities available and accessible to farmers all over the country to sustain the increased agricultural product needs in Nigeria. These funds must be made available to serious minded farmers at affordable interest rates.

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Formal Education and Lassa Fever Risks Behaviour among Households' Heads in Akoko Region of Ondo State Nigeria

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Abstract

Lassa fever is endemic in West Africa region with significant statistics of infection in Nigeria. Ondo is one of the 18 States reported to have a proportion of infection with Lassa when over 1000 cases were reported across Nigeria, from January 2018 till date with different levels of fatality. The patriarchal nature of the family arrangement and the significant influence of any decision by the heads of households on the overall health of all the members, are likely to result in behaviour that may put members on having contact with the disease vector. This study examines the level of education of households' heads and their engagement in behaviour that may expose the entire households to the risk of infection with Lassa fever. The social survey was conducted in Ondo State. A total of 245 heads of households were selected using systematic and purposive sampling techniques at two different stages respectively, who responded to a structured questionnaire containing 41 items on level of education and LF risks behavioural. Though, the level of knowledge about LF is high, over 78% engaged in behaviour that make them susceptible to the risk of contacts with multi-mammoth rat and contact related behaviour varies by level of education. The need for the traditional institutions, as agents of change to engage household heads on proper education about LF is recommended to curtail the trend among others.

Keywords: *Infection, Lassa, Households, Morbidity, Education.*

Introduction

Historically, Lassa fever was discovered in 1969 and took its name after the town of Lassa in Borno State, Nigeria where the first cases originated (Fatiregun, Isere, Dosumu, Agunbiade & Onyibe, 2019). The illness is an acute febrile disease caused by the Lassa virus, a member of the family Arenaviridae, whose natural hosts are rodents of the genus *Mastom*ys. (Tobin, Asogun, Akpede, Adomeh, Odia & Gunther, 2015; Okeya, 2019). Lassa fever disease is estimated to affect 2 million people and cause an estimated 5000–10,000 death annually with outbreaks reported from Sierra Leone, Guinea, Liberia, Benin, Ghana, Mali and Nigeria (Tambo, Adetunde & Olalubi 2018). It has also been reported in Europe and North America (Usuwa, Akpa, Umeokonkwo, Umoke, Oguanuo, Olorukooba, Bamgboye & Balogun, 2020)). In Nigeria, yearly outbreaks have been reported in several parts of the country including Adamawa, Ebonyi, Edo, Nassarawa, Gombe, Plateau and Taraba States, and more recently in some parts of Ondo State in south-west Nigeria (Fatiregun, et al. 2019). NCDC (2020) reports showed that in February, 89% of all confirmed cases are from Edo (38%), Ondo (38%) and Ebonyi (11%) States (NCDC, 2020). From the body of literature, understanding of the dynamics of disease transmission and effective communication for behavioural change is an effective way to preventing the disease. Literatures exist on the risk factors that promote transmission of the disease, but gap exist on level of education of household head and decision making in Ondo State as a mitigating factor to Lassa fever disease.

Tambo et al. (2018) affirmed that Lassa fever outbreak in Nigeria affected not less than 20 States, with 175 confirmed and suspected cases and 101 deaths since August 2015. Its resurgence was reported in Ondo State in 2016, in the northern senatorial district of Akoko and Owo regions. This research was conducted in Akoko region of Ondo State to examine the influence of level of education of households' heads on some risky behaviour in Lassa fever upsurge among the indigenous population. The major objective of this study is to examine the influence of formal education of household heads on the behaviours that expose members of household to the risk of Lassa fever infection. The specific objectives are:

1. To examine the households heads' knowledge about Lassa Fever
2. To discover the engagement of household heads in Lassa Fever Infection risk behaviours
3. To determine the influence of formal Education on Lassa fever infection risk behaviour

The objectives above are designed to provide, through available data, answers to the following research questions:

1. How knowledgeable about Lassa fever are households' heads?
2. Do heads of households engage in behaviour that put them at the risks of infection with Lassa fever?
3. Does the level of education influence the engagement in Lassa fever risks behaviours?

The hypothesis listed below is expected to be tested with the available data:

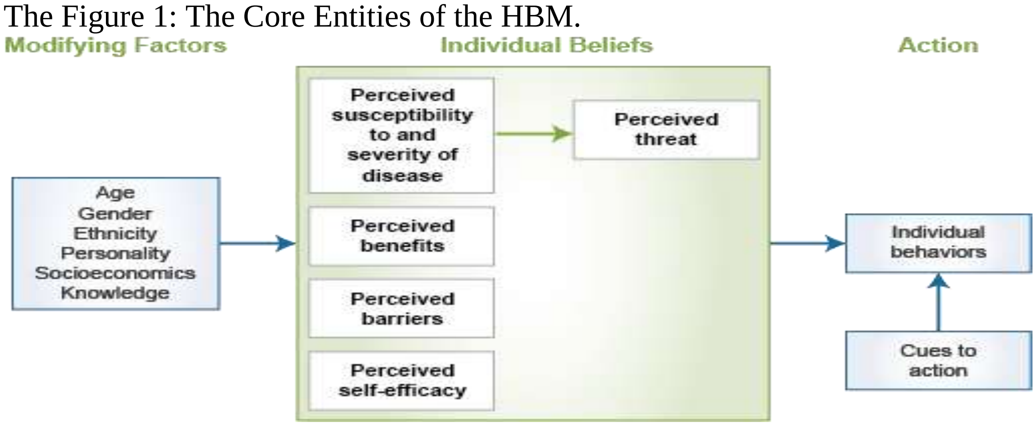
1. H_0^r = Formal education is not significantly related to knowledge about Lassa fever

2. H_1^r = Formal education is significantly related to knowledge about Lassa fever

Theoretical Framework

This study is situated within the framework of the Health Belief Model (HBM) developed by Rosenstock (1966) to help understand and explain why people did or did not use preventive services offered by public health departments in the 1950's, and has evolved to address newer concerns in prevention and detection (e.g., mammography screening, influenza vaccines), as well as lifestyle behaviours such as sexual risk behaviours and injury prevention. The HBM has been most often applied for health concerns that are prevention-related and asymptomatic, such as early cancer detection and hypertension screening where beliefs are as important as or more important than overt symptoms.

The Figure 1: The Core Entities of the HBM.



Source: Glanz K, Rimer BK, Viswanath K, eds. 2008. *Health Behaviour and Health Education: Theory, Research, and Practice (4th ed)*. San Francisco: Jossey-Bass.

As indicated in the diagram above, formal education is one of the socio-economic factors modifying individual beliefs about Lassa fever. Those who have formal education are likely to be adequately informed about the disease and infection process, expectedly to moderate their individual beliefs on its etiology, severity and the threat it poses to the health wellness of humans. This is expected to have positive consequences on their individual risk behaviour relating to their health seeking on Lassa fever.

Methods of Data Collection and Analysis

The study population is the households' heads in all the four Local Council Areas constituting Akoko region in Ondo State. These local governments are Akoko North West, Akoko North East, Akoko South West, Akoko South East. The Akoko region was selected for this study because in recent times, the areas have witnessed new incidences of Lassa infection according to report from the Nigeria Centre for Disease Control (2020)

This study is a social survey of descriptive type employing quantitative data collection and analysis. Respondents were contacted and requested to provide answers to some serially arranged questions on the influence of formal education on the knowledge that expose them to infection with Lassa fever.

A total of 245 respondents were selected using dual sampling technique. All the four local council areas constituting Akoko region in Ondo State were selected on purpose i.e the recent cases of Lassa fever infection reported in the area by the Federal Ministry of Health (2020). Secondly, in each of the local council area, three communities (one urban and two rural) were selected by obtaining the lists of all communities in the region and adopting systematic sampling technique to pick nine communities. Table 1 shows the selected communities and the actual number of respondents sampled from each of the communities. Three levels of manpower were employed to ensure a successful data collection. Field Enumerators (16) for the selected communities, Field Coordinators (4) for each of the local council areas and the Research Coordinator (1).

Table 1: Number of Selected respondents per Local Council area

SN	Local Council areas	Sample Size
1	Akoko North West	60
2	Akoko North East	65
3	Akoko South West	60
4	Akoko South East	60
	Total	245

Source; Author's compilation, 2020

The study adopts the use of a Structured Questionnaire titled 'Lassa Fever Risks Behaviour (LFRB)'. The 42-item instrument is divided into three sections;

Sample Characteristics, knowledge of Lassa Fever & Lassa Fever Risks Behaviour. It contains both open-ended (5%) and closed-ended questions (95%).

The study is a social survey. The traditional heads of all the selected communities were contacted and formal approval obtained to proceed into the communities for interaction with the heads of the selected households. In addition, selected heads of households were asked to indicate their readiness and acceptance to participate in the survey by endorsing a consent form.

Since the data is quantitative in nature, the questionnaires were collected from the field workers, collated, edited and coded for transcription into the various views of the SPSS Window for a comprehensive statistical analysis. The data were run in the uni-variate, bi-variate and multivariate levels, but were presented in descriptive tool (tables). The concerned variable (Education) was cross-tabulated with some other important variables to determine the nature of relationships existing between and among them. Hypotheses were tested with the use of chi-square technique and at the acceptable 0.05 level of significance. Tables were presented alongside their respective discussions for ease of reference.

Results and Discussions

Sample Social Characteristics

One-fifth of the respondents were between 18-31 years of age, 32-44 years, 25.7% and 45 – 51 years, 11.4%, while over half of the total respondents (54.3%) were 52 years and above. The mean age of all the respondents was found at 51.5 years. This indicates that in most of the households in communities where this study was conducted, their respective heads had an average age of 51.5 years. Previous research have indicated that the age at marriage and procreation in most parts of the south west Nigeria ranged between 25 – 30 years, consequently, at age 50 years, an individual is expected to have control over a household. About 69% of the households' heads that participated in this study were males, while the remaining 31.4% were females.

85.7% were Christians, while just 14.3% were Muslims. This finding does not suggest that there are more Christians than Muslims, but that among the participants in this survey, the Christians out-numbered the Muslems. An overwhelming majority 82.9% were of Akoko sub-ethnic group, Ekiti (2.9%), Akure (5.7%), Egin (2.9%) and Ebira (5.7%). About 43% attended and obtained pre-secondary certificate, 31.4% had secondary certificates, while the remaining 25.7% had post-secondary education certificates ranging from Ordinary National Diploma, Higher National Diploma, National Certificates in Education and Bachelor of Science among others. On the current status of marriage, 65.8% were currently staying with their spouses and children, 22.9% had separated from their spouses, while 11.4% had lost their spouses to the cold hands of death. About 8.6% were employees of the government and were distributed as teachers in local primary and secondary schools in the communities, 45.7% had private jobs, Artisans (5.7%), Farmers (26.8%) and 11.4% were self-employed. The data described above is presented in Table 2.

Fertility Behaviour & Dependency Rate

Data presented in Table 3 shows some fertility related variables and dependence rate. Fertility behaviour is measured by the number of live births a couple has at a point in time. Among the selected households head that participated in this study, 28.6 percent of that had between 1 – 2 children, while those who had 3 – 4 children stood at 25,7percent, 5 – 6 children (40%) and those with 7 children and above were 5.7 percent of the total respondents. The mean number of children among the sample stood at 4. The percent distribution of dependent relatives varied based on the number of in-laws, siblings, uncles or cousins relying on them for sustenance and survival at a specific period of time. Responses on this issue are break down as follows; 1 – 2 dependent (57.1%), 3 – 4 dependent (22.9%), 5 – 6 dependent (14.3%), 7 & above (5.7%). Most households head had between 1 – 4 dependent relatives with an average of three. This suggests that at a point in time, an average of three persons lived with and depended on each family for socio-economic sustenance. Further investigations on the number of people living in each household shows that majority (68.6%) harbored a minimum of five persons in their households while the general average was found at 5.4 persons. Over forth-fifth (82.9%) of the households heads lived in three-room apartment and above.

Rooms Occupied/used for sleeping

The nature of houses in the study areas is more of multiple rooms where each grown-up child has a room to him/herself while some rooms are reserved for the prospective visitors. Though the number of people living in the house is relatively high, as shown in Table 4, the number of rooms available in each household seems to be sufficient enough to accommodate the inhabitants. The mean number of rooms occupied by members of the family is about 4 suggesting that other available rooms are prepared and made ready for visitors. In addition, respondents indicated that the number of rooms specifically meant for sleeping was designated from those where properties were kept. Responses showed that the number meant for sleeping was a subject of marital status and the current status of marriage and family size among others. Those with larger family size reportedly occupied higher number of rooms and vice versa.

While most people who live permanently in a house will have a bedroom to themselves or share one with one or two other people, other rooms are often used as bedrooms. The number of people who should sleep in a room will depend upon the amount of air which is available to each person. In some countries like Australia, the law requires that each adult person has at least 13 cubic metres of air and each child has at least 10 cubic metres of air in a sleeping area.

Objective 1: To examine knowledge about Lassa fever

Ever Heard of Lassa fever

Though Lassa fever was discovered in Nigeria about 50 years ago in Lassa village in Borno State, its spread to other parts of Nigeria occurred due to poor disease management, uncontrolled nature of internal migration, and the contagious nature of the disease. It has been reported in almost all parts of the country, including Ondo State. Participants in this study were asked to indicate whether they have ever heard of Lassa fever of not. About three-fifth (57.1%) reported to have ever heard of Lassa fever against about 43 percent, who have never heard of the fever. This data is presented in Table 5.

Sources of Information about Lassa Fever

Those whoever heard of Lassa fever were asked to indicate their sources of information about the disease. The sources were classified as formal and informal. Data obtained showed Table 6 presents the distribution of respondents over informal sources as follows; families (8.7%), friends (8.7%) and religious homes (8.7%) and formal sources such as schools (13%), print media (30.4%), electronic media (65.2%) and health Centre (65.2%). Electronic media most especially, radio remains the main source of dissemination of health related information and mostly at the reach of the people in the rural areas. In the study areas, respondents revealed that the radio is the most available, affordable and reachable medium of information dissemination to the people.

Perceived causes of Lassa Fever

Scientific evidences have confirmed Lassa fever infection with mammoth rats as the disease vector. Respondents were asked to indicate their perceived causes of the disease among the humans. As shown in Table 7, about 4.3% believed the fever is a product of evil attack from the witches and 21.7% indicated that it could be a repercussion of wrong doings against the gods. Majority (69.6%) indicated that Lassa fever is an infection from rat, disease vector. They specifically stressed that with their level of knowledge about Lassa fever, were sure that it is contacted from either direct or indirect contact with mammoth rats.

Objective 2: To determine the behavior which put Households Head on the risk of infection with the Lassa fever

Risk Behaviour

Risk behaviour, an indulgence in any action or activity that can cause potential harm to the individual as a consequence of what he chooses to do. In broader sense, risk behaviour is how people behave before, during and after a given risk occurs. In the etiology and development of Lassa fever, in humans, certain behavioural patterns are considered to put an individual at the risks of infection with and possibly facilitate the spread of the disease to other humans. These behaviours create opportunities for contact with mammoth rat, the disease vendor.

Participants in this study were placed on some related risks behaviour to determine how frequent they engage in such thereby increasing the possibility of infection. On waste disposal mechanism, data on Table 8, the percent of respondents dropped their wastes in the following outlets; Dumpsites (34.2%), Burnt in open air (42.9%), Disposed in the open river (2.9%) and deposited in the waste collector bin (20%). The closeness of the dumpsites to the residential apartment is one of the secondary major determinants of the appearance of rats in homes, since most of these rats feed on the food remnants dumped on the refuse sites. Dumpsites are located in the in bushy land space in the environment that are not far from the residential apartments.

Rats contact related Behaviour

Since rat of mammoth specie in the neighborhood often depend on most of the food remnants from humans, participants in this study were asked to indicate the possibility of these rats accessing food remnants from their households. Popular response (82.8%) point to the fact that there is no gainsaying the fact that rats often gain access to the food remnants in their homes with 81% indicating that they have seen rats either in the living room, kitchen and visitors apartments in their homes. Juxtaposing the data reported earlier that rats had access to food remnants either in the kitchen (81%) and or on the dining (19%) with the 42.9% who indicated that they eat food remnants kept overnight, it can be inferred that this behaviour is risky and has the propensity to increase indirect contacts with mammoth rats and further increase the possibility of spreading the infection as displayed in Table 9. The above scenario, as reported by the data, confirms a high risk behaviour of Lassa fever infection among the respondents through secondary contacts with unfinished food left over overnight either in the kitchen or on the dining sets, since members of the household still fed on the food, the following day. Scientific evidences have linked Lassa fever infection to such behaviour.

Consumption of Bush Meat

Primary contact with mammoth rats by humans is a behaviour that increases the chances of continuous infection. Respondents were asked to indicate if they actually eat bush meat, especially such in the rat family. Almost all the participants in this study (94.3%) reportedly ate bush meat in rat family while just 5.7% declined. With this significant proportion, the risk of infection from the primary host of the disease is high most especially in the communities where most people could not identify a mammoth rat. The situation is made worst when 87.8%ate rats always and 28% ate rats in less than one week prior to the field work and respondents reportedly had the most regular source of meat rat from game hunting (42.7%), vendors (9.7%) from where they obtain rat meat for consumption.

Lassa fever is contracted through the consumption of food exposed to rat droppings, urine or faeces. The disease is an acute febrile illness characterised by vomiting, facial swelling and muscle fatigue. Unlike humans, rats do not fall sick from the virus so they serve as a suitable host for its maintenance and multiplication. Killing rats and keeping them away from homes would be an effective solution to the Lassa fever epidemic. The foods that can be contaminated by the rats include garri, yam, rice and beans, among others. Uncovered foods, taking soaked garri that was not covered and feeding on the foods, that rats have defecated and urinated upon is not good for human consumption in addition to eating leftover foods without properly warming them.

Objective 3: To examine the influence of formal education on Lassa fever risks behaviour

Education/Lassa Fever Risk Behaviour

The data in the table were generated from the cross tabulation of the data on level of education with specific variables on Lassa fever risks behaviour in an attempt to ascertain the influence of the level of education of the households' head specific

Education/Distribution of Family members per Room

In this study, questions have been asked from the respondents on their respective level of education they might have attained. The three broad categorizations, as shown in Table 10, were adopted to accommodate varying levels of formal school attainment. Responses on these three categories; Pre-secondary, Secondary and Post-secondary were cross tabulated with other variables and are discussed below. The first set of discussion dealt with the role of formal education in the nature and type of accommodation occupied by members of the family. The responses discussed measured the importance of education on the distribution of the occupants per room vis-à-vis overcrowding and the possibility of rats, the disease vector of Lassa fever to find a convenient habitation in room exploring every opportunity.

Number of Rooms Occupied by members of the family

About two-fifth of the total respondents of all respondents who occupied only one room had pre-secondary education, secondary (40%), and post-secondary education (20%), Two rooms: pre-secondary (25%), secondary (25%), and post-secondary (50%), Three rooms; pre-secondary (66.7%) and secondary (33.3%). Of all the families who occupied five rooms close to half (47.4%) had pre-secondary education while the remaining 52.6% had secondary & post-secondary education at equal half.

Number of Rooms used for Sleeping

Of all the 77 i.e 31.4% of the respondents who had five sleeping rooms, 63.6% had pre-secondary education, while the remaining 27.3 had post-secondary education. It can therefore be deduced that education is a major determinant of the nature of accommodation/rooms, overcrowding of respondents.

Education/Sources of Information about Lassa Fever

As indicated earlier in table 3, about 57.1% of the total sample who ever heard of Lassa fever were further asked to indicate their levels of education, in an attempt to determine the roles of formal education in the spread of information about Lassa fever. The data on table 10 indicates that 40% of them had post-secondary education, secondary 30% and pre-secondary (30%). This shows that education plays a major role in the dissemination of information about Lassa fever. Data reveals in Table 11, that people with high level of education are likely to be informed about Lassa than those with no formal education.

Chi-square results shows a significantly positive relationship between level of education and knowledge about Lassa fever. Though significant, education plays important roles in the knowledge about the possibility of infection with the fever. The data indicates that the higher the level of education, the higher the tendency to be informed about the infection and vice versa. This shows that people of lower educational background may not be as knowledgeable compared to those of higher education status. Data in the table above shows that 40% of those who were knowledgeable about Lassa had post-secondary education. Formal education remains an instrument of spreading information. Further breakdown of data shows that education (66.7%) remains the second most reported source of information about Lassa fever, below print media (71.4%).

Sources of Information about Lassa Fever

Of all the respondents (140) who have heard of Lassa fever, 10% got the information from the family and all possess post-secondary information. This shows that some elements of health talks and education may have taken place in the family of those who had post-secondary education. The statistics above is similar with those who main source of info about Lassa is friends. All this 14 respondents in this category had post-secondary education. In all 21 respondents representing 15% of those who ever heard about Lassa fever from schools of course had at least secondary form of education, while 33.3% had secondary education 66.7% had post-secondary education. An overwhelming majority (61.5%) of the 91 respondents, who reportedly heard of Lassa fever in their religion houses had pre-secondary education and only 7.7% had post-secondary level of education.

Also, of the 49 respondents whose main source of information about Lassa fever was print media, 71.4% had post-secondary education, while the remaining 28.6% had only secondary education. The print media in this category are newspapers, newsletters and other documentary evidence in black and white circulated for public consumption. This data reveals that the higher the level of education, the higher the tendency to read vital information on the print media because of the ability to read and write. While the number, in frequency, of the respondents who get the info about Lassa fever through electronic media increases, the highest percentage 60% was found on only those who had post-secondary education, 17.1% had secondary education while the remaining 22.9% had pre-secondary education. Half of those who heard the info about Lassa fever from health centre had post-secondary education, 30% had secondary education, while the remaining 20% had pre-secondary education.

Possible causes of Lassa fever

The perceived cause(s) of an illness is one of the major factors influencing health seeking behaviour of an individual who is ill. The responses on possible causes of Lassa fever was juxtaposed with the respondents' level of education, the data is insignificant as only 2.9% of the total respondents who reported that LF could result from evil attacks had a maximum of pre-secondary education. All the remaining respondents (97.1%) indicated that it was impossible for human to contact Lassa fever from an evil attack. Those in support of this assertion further explained that the symptoms of Lassa fever are relatively similar to those of traditional illness inflicted on humans by some traditional idols most especially when an abominable act has been committed by an individual. However, 14.3% of the total respondents argued that infection with LF could result as a repercussion of one's wrong doing. Of this proportion, only 20% had post-secondary education, while the remaining 80% was shared in equal proportion by those who had pre-secondary and post-secondary education respectively.

Education/Possible causes of Lassa fever

Education/Rats as Disease Vectors

Till date, scientific evidence have found that mammoth rats remain the main source of infection with LF, however, in most parts of Nigeria where LF infection has been reported, rats remain the closest neighbor to people, due to the nature of houses as reported earlier in this study. Aside from the facts that some houses are built in bushy environment, the rural nature of most settlements in Ondo North Senatorial District where this study was conducted enhanced the closeness of the animal to human. The belief about the etiology of a particular disease is a factor in preventive cure behaviour to avert infection and ensure adequate health care for the infected.

Data represented in table 13 seem to indicate that education, as a social factor does not influence belief that Lassa fever is caused by rats, as the vector carrier. This is because no significant difference in the percent of responses when distributed across the levels of education among the respondents. As shown in the data, 43.7% had post-secondary education, 25% had secondary education, while the remaining 31.3% had pre-secondary education. There is a general belief among all strata of education that rat has been scientifically proved as the vector of Lassa fever.

Education/Rats Contact Related Behaviour

With the significance acknowledgement of the fact that rat remains the disease vector of Lassa fever, even among the people with low educational background. It is expected, the knowledge will sharpen and influence their engagement in health risks behaviour, most especially as regards contact with the LF vector, mammoth rats. Rats contact related behaviour, as shown in Table 14, presents the responses on the belief that rat is a vector and contact with rat infected food remnants. two relevant variables; education level of respondents and the possibility of consuming rats related food were cross tabulated to determine the possible links i.e whether respondents level of education will influence his/her tendency to eat rat infected food or not. Data in the table below reveals that half (51.9%) of those who reportedly eat rat infected food had pre-secondary education, while 30% had secondary education and the remaining 18% post-secondary education. Considering this data, level of education is inversely related to the possibility and tendency to eat rat infected food. This means that the lower the level of education, the higher the tendency to engage in Lassa fever risks behaviour and vice versa.

Risk behaviour of Lassa fever infection. The data confirms that formal education plays a vital role in the infection with and spread of LF.

Education/Waste Disposal Mechanism

Rats and mice thrive in environments with open drainage system and garbage-filled canals, and this is, unfortunately, the most prevalent form of drainage found in Nigeria. Therefore, until Nigeria can adopt a more hygienic form of sewage disposal, rats will continue to thrive within its contaminated drainage systems. A 2017 research reported a fourfold increase in rat infestation level where homes are less than 20 meters from open drainage systems. Open garbage dumping will always encourage rats and mice. One of the best ways to dispose of rubbish is to keep all rubbish in garbage bins with lids or in plastic dustbin bags. In many urban and rural areas, heaps of rubbish are dumped openly on roadsides and pavements without any concern for the impact this may have on public health.

Even when houses are not built in bushy environs, the mechanism for disposing waste can be an impetus for rats being closer to residential apartment and the possibility of eating food remnants at home. In situation where dump sites are located close to the house, the search for remnants of foods at dump sites that act as pull factors to rats. Could the level of education among the respondents in this study influence waste disposal behaviours? As shown in Table 15, among the 84 respondents who utilized dumpsites, 66.7% had pre-secondary education, 8.3% had secondary education and 25% had post-secondary education. Majority of the respondents in this category indicated that there are specific dumpsites within their vicinities where they are confined to drop their refuse. Open air: pre-secondary (40%), secondary (46.7%) and post-secondary (13.3%). All the respondents who dump their refuse in river channels had a maximum of pre-secondary education. Forty nine respondents dump their refuse in waste collector and respondents' distribution varies directly with the level of education. Those with post-secondary education represent the majority (71.4%), secondary education (20.4%), and pre-secondary education (8.2%). Generally, data direction shows that while those with higher level of education preferred waste collector as a means of dumping refuse, those with pre-secondary education preference for the dumpsite and river is high. Those with secondary education had high preference for burning in open air.

Education/Bushy Land Space

Since rats, the disease vector of Lassa fever, mostly live in the bush, leaving bushy land space close to human dwelling place is a behaviour that is risky and because it may facilitate human direct and indirect contacts with rats. Researchers have found that poor quality housing is often responsible for a high rate of rat infestation. For example, rats frequently gain access to homes through holes in roofs, doors or walls. Hence, badly maintained homes are the most attractive hiding places for rats and mice. Additionally, rodents find it easy to hide in overcrowded homes, and this is why slum areas are characteristically the most common breeding places for rats and mice.

Respondents, based on their different levels of education were asked to indicate if there is an available bushy land space close to their environment that could enhance rats breeding. Over half 53.8% of those who had bushy; land space in their environment had pre-secondary education, 38.5% had secondary education while the remaining 7.7% had post-secondary education as shown in Table 16.

Education/ Frequency of leaving Food Remnant at Home

When different levels of education were cross tabulated with the frequency of leaving remnant food at home, data showed that 35 respondents representing 14.3%of the total sample size dropped food remnants daily, pre-secondary(20%), secondary(40%), and post-secondary(40%) respectively. Data in Table 17 further reveals that among those who dropped remnants at home one in a week, 28.8% had secondary education while the remaining 71.2% had post-secondary education. About 26% of total sample seldom drop food remnants at home with pre-secondary (33.3%), secondary (44.4%) and post-secondary (22.3%).

Education/Possibility of Rats eating from food Remnants

Since the possibility of leaving food remnants at home cut across all the education strata, they were further requested to respond to a question on the possibility of rats eating from the kept remnants. All those who reportedly keep food remnants from indicated the possibility of rats eating from the food remnants, even across all the education strata as shown in Table 18; pre-secondary (33.3%), secondary (53.3%) and post-secondary (13.4%). To further determine contacts with rats through consumption of food remnant, a follow-up question on whether they eat food kept till the following day was asked. Responses confirm the eaters of food remnants across all three education strata; pre-secondary (36.8%), secondary (31.6%) and post-secondary (31.6%). This report further stresses that the risk of indirect contact with food eaten by rats cut across all education strata. Those who ever ate rats cut across all education strata, pre-secondary (37.5%), secondary (12.5%) and post-secondary (50%). In fact, data show that the higher the level of education, the higher the tendency to eat bush meat in rat category. Therefore, it is right to say that educated people eat more of bush meat in rat's category than the uneducated.

Eating rat is directly proportional with the levels of education. While people with low education, as reported by this data, eat remnant food which probably might have been touched by rats, highest proportion of those who eat rats are found among the people with highest level of education. Good to conclude that the higher the level of education, the higher the possibility to eat rats and vice-versa. While the lower the level of education, the higher the tendency to eat remnants of food which must have probably might have been touched by rats. Direct contact with disease vector, rat is more reported among the uneducated, through consumption of rat meat while indirect contact through the consumption of remnants of food which probably would have been touched by rat is common among the people of lower education status. It can be generally deduced here that education status play both infective and non-infective role in infection with Lassa fever.

Conclusion and Recommendations

Education plays a major role in the knowledge about Lassa fever and the information dissemination media have some relationships with the level of formal education because the language of dissemination, mostly, English, is taught in formal education systems, at the expense of the local dialects. This is made possible because some of the terminologies in Lassa fever could not be translated into local dialects to enhance better understanding with the illiterate households' heads. In the information transmission process, heads of households intercept between formal education media and members of the families. This was prominent in rural societies where most people are predominantly engaged in farming and other petty jobs with no formal education. In addition, the patriarchal nature of the social structure made household heads a channel of information dissemination. Consequently, their actions and inactions have significant influence on the exhibition of behaviours that may expose members of the households to the risks of infection with Lassa fever in Ondo State Nigeria.

This study recommends that some programmatic measures must be put in place towards preventing the new incidence and effective management of the infected to prevent further spread among the risky population. These measures include enlightenment campaign through mass media, workshops, seminars and various ministries' communication channels for the household heads. There is the need for collaboration with traditional rulers and other opinion leaders at the grassroots to educate household heads to shun such a notion and realize that rat is the disease's primary vector. The inclusion of Lassa fever education in the curriculum of science related courses in both primary and secondary levels of education will assist to further strengthen knowledge about the disease.

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Appendix: Tables

Table 2: Sample Characteristics

VARIABLES	F	%
Age (in years)		
18 – 24	07	2.9
25 – 31	42	17.1
32 – 37	21	8.6
38 – 44	14	5.7
45 – 51	28	11.4
52 above	133	54.3
Sex		
Male	77	31.4
Female	168	68.6
Religion		
Christianity	210	85.7
Islam	35	14.3
Ethnicity		
Yoruba	217	88.6
Ibo	28	11.4
Sub-Ethnic		
Akoko	203	82.9
Ekiti	7	2.9
Akure	14	5.7
Ondo	7	2.9
Ebira	14	5.7
Highest Level of Education		
Pre-secondary	105	42.9
Secondary	77	31.4
Post-secondary	63	25.7
Marital Status		
Never married	14	5.7
Ever married	231	94.3
Marriage Status		
Currently with spouse	161	65.8

Separated	56	22.9
Widower	28	11.4
Occupation		
Government Employee	21	8.6
Private Employee	112	45.7
Artisan	14	5.7
Farming	70	28.6
Unemployed	28	11.4

Source: Author's Survey, 2018

Table 3: Fertility Behaviour & Dependency Rate

Variables	Responses				
	1 – 2 F %	3 – 4 F %	5 – 6 F %	7 & above F %	Total F %
Number of Children	70 28.6	63 25.7	98 40.0	14 05.7	245 100.0
Number of dependent relatives	140 57.1	56 22.9	35 14.3	14 05.7	245 100.0
Number of people living in the house	35 14.3	42 17.1	63 25.7	105 42.9	245 100.0

Mean No of Children = 3.7
Mean No of Dependent Relatives = 2.87
Mean No of People living in the house = 5.44
Source: Author's Survey, 2018

Table 4: Rooms occupied/used for sleeping

Variables	1 F (%)	2 F (%)	3 F (%)	4 F (%)	5 F (%)
No of rooms occupied by the family	35 (14.3)	28 (11.4)	21 (8.6)	28 (11.4)	133 (54.3)
No of rooms used for sleeping	42 (17.1)	35 (14.3)	49 (20.6)	42 (17.1)	77 (31.4

Mean number of rooms occupied
Mean number of rooms used for sleeping
Source: Author's Survey, 2018

Table 5: Ever Heard of Lassa fever

Have You heard of Lassa Fever	F	%
Yes	140	57.1
No	105	42.9

Source: Author's Survey, 2018

Table 6: Sources of Information about Lassa Fever

Sources of Lassa Fever	Yes		No	
	F	(%)	F	(%)
Families	14	(8.7)	147	(91.3)
Friends	14	(8.7)	147	(91.3)
Schools	21	(13.0)	140	(87.0)
Religious houses (Church or Mosque)	14	(8.7)	147	(91.3)
Print media (newspapers, magazines etc)	49	(30.4)	112	(69.6)
Electronic media (radio & television)	105	(65.2)	56	(34.8)
Health Centre (govt & private hospital)	70	(43.5)	91	(56.5)

Source: Author's Survey, 2018

Table 7: Perceived causes of Lassa fever

Perceived causes of Lassa Fever	Yes		No	
Evil attack	07	(4.3)	154	(95.7)
Repercussion of one's wrongdoing/gods' wrath	35	(21.7)	126	(78.3)
Rats acting as the disease's vector	112	(69.6)	49	(30.4)

Source: Author's Survey, 2018

Table 8: Lassa fever Risk Behaviour

Variables	F	%
Mode of waste disposal		
Dumpsite	84	34.2
Burn in open air	105	42.9
Dispose in open river	07	02.9
Deposited in waste collector	49	20.0
Bush land space close to dwelling house		
Yes	91	37.1
No	154	62.9

Source: Author's Survey, 2018

Table 9: Rat Contact Related Behaviour

Variables	Responses			
	Yes		No	
	F	%	F	%
Possibility of rats eating from remnant of foods	203	82.8	42	17.2
Ever noticed the rats ate part of remnant of foods	203	82.8	42	7.2
Ever seen rats in your house	203	82.8	42	17.2
Ever ate remnants of food	105	42.9	140	7.1
Engaged in game hunting	203	82.8	42	17.2
Ever killed rats in the house	210	85.7	35	14.3
Ever ate bush meat	231	94.3	14	05.7

Source: Author's Survey, 2018

Table 10: Education/Distribution of Family members Per Room

Levels of Education	**Number of Rooms occupied by members of the Family**											
	1		2		3		4		5		Total	
	F	%	F	%	F	%	F	%	F	%	F	%
Pre-secondary	14	40.0	07	25.0	14	66.7	07	25.0	63	47.4	105	42.8
Secondary	14	40.0	07	25.0	07	33.3	14	50.0	35	26.3	77	31.4
Post-Secondary	07	20.0	14	50.0	00	00.0	07	25.0	35	26.3	63	25.8
Levels of Education	**Number of Rooms by members for sleeping**											
	1		2		3		4		5		Total	
	F	%	F	%	F	%	F	%	F	%	F	%
Pre-secondary	21	50.0	14	40.0	00	00.0	21	50.0	49	63.6	105	42.8
Secondary	14	33.3	14	40.0	35	71.4	07	16.7	07	09.1	77	31.4
Post-Secondary	07	16.7	07	20.0	14	28.6	14	33.3	21	27.3	63	25.8

Source: Author's Survey, 2018

Table 11: Education/Sources of Information about Lassa fever

Variables	Levels of Education							
	Pre-secondary		Secondary		Post-secondary		Total	
	F	%	F	%	F	%	F	%
Ever heard of Lassa fever	42	30.0	42	30.0	56	40.0	140	100.0
Sources of Information								
Families	00	00.0	00	00.0	14	100.0	14	100.0
Schools	00	00.0	07	33.3	14	66.7	21	100.0
Religions Houses	56	61.5	28	30.8	07	07.7	91	100.0
Print media	00	00.0	14	28.6	35	71.4	49	100.0
Electronic media	24	22.9	18	17.1	63	60.0	105	100.0
Health centre	14	14.0	21	30.0	35	50.0	70	100.0

Chi-square Results; X^2_C = -38.7, X^2_t = -43.2, df(v) = 2, Level of significance = 0.05

Source: Author's Survey, 2018

Table 12: Education/Possible causes of Lassa fever

Variables	Levels of Education							
Causes	Pre-secondary		Secondary		Post-secondary		Total	
	F	%	F	%	F	%		
Evil attack	00	00.0	00	00.0	14	100.0	14	100.0
Repercussion of one's wrong doing	00	00.0	07	33.3	14	66.7	21	100.0

Source: Author's Survey, 2018

Table 13: Education/Rats as Lassa fever Vendor

Level of Education	Yes	
	F	%
Pre-Secondary	35	31.3
Secondary	28	25.0
Post – Secondary	49	43.7
Total	112	100.0

Source: Author's Survey, 2018

Table 14: Education/Rats contact related behaviour

Level of Education	Yes	
	F	%
Pre-Secondary	69	51.9
Secondary	40	30.1
Post – Secondary	24	18.0
Total	133	100.0

Source: Author's Survey, 2018

Table 15: Education/Waste Disposal Mechanism

Variables	Levels of Education							
Waste Disposal Mechanism	Pre-secondary		Secondary		Post-secondary		Total	
	F	%	F	%	F	%		
Dumpsite	56	66.7	07	08.3	21	25.0	84	100.0
Burn in open air	42	40.0	49	46.7	14	13.3	105	100.0
Water/River	07	100.0	00	00.0	00	00.0	07	100.0
Waste collection bin	04	08.2	10	20.4	35	71.4	49	100.0

Source: Author's Survey, 2018

Table 16: Education/Bushy land space

Level of Education	Yes	
	F	%
Pre-Secondary	49	53.8
Secondary	35	38.5
Post – Secondary	07	07.7
Total	133	100.0

Source: Author's Survey, 2018

Table 17: Education/ Frequency of leaving food remnants at Home

Levels of Education	**Period**											
	Daily		Once a week		Days in month		Seldom		Never		Total	
	F	%	F	%	F	%	F	%	F	%	F	%
Pre-secondary	07	20.0	00	00.0	00	00.0	21	33.3	77	57.9	105	42.8
Secondary	14	40.0	02	28.8	01	14.3	28	44.4	35	26.3	77	31.4
Post-Secondary	14	40.0	05	71.2	06	85.7	14	22.3	21	15.8	63	25.8

Source: Author's Survey, 2018

Table 18: Education/Possibility of rats eating from food remnants

Level of Education	Yes	
	F	%
Pre-Secondary	35	33.3
Secondary	56	53.3
Post – Secondary	14	13.4
Total	112	100.0

Source: Author's Survey, 2018

Social Characteristics and Perception of Terrorism in Borno State, Nigeria

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Abstract

This paper investigates public perception on the influence of terrorism in North East-Nigeria. Survey design was adopted with a total sample of one hundred and eighty (180) from three local government areas of Borno State (Maiduguri, Gambaru and Ngala) using convenient sampling technique. Questionnaire was developed by the researcher and pilot study was conducted to affirm validity and reliability. Four hypotheses were stated and tested with Independent t-test. The study found that males and females differ significantly in their perception on the influence of terrorism in the north-eastern Nigeria. The study further confirmed that Christians and Muslims indicated a statistically significant difference in their perception on the influence of terrorism in the North-East Nigeria.On the contrary the study does not confirmed that old and young respondents do not statistically significantly difference in their perception on the influence of terrorism in the north-east of Nigeria.Finally, a statistical significant diffenece is established on the perception of the influence of terrorism in the north-east Nigeria between people of low and high educational status. The study concludes that there is a negative perception of the public towards terrorism in the north-east Nigeria. Thus recommends that both the States and Federal governments should embark on counter-terrorism strategies that will involve increase adequate policing and timely intelligence acquisition.

Keywords: *Social, Characteristics, Perception and Terrorism.*

Introduction

Indeed, the worldwide manifestation of terrorism and insurgency has been evident not only in Africa, but also in Nigeria. With particular reference to Nigeria, the phenomenon has found expression in the emergence of Boko Haram insurgency since the year 2001. And since its advent, the sectarian insurgency has wrecked immense havoc in the country, especially by explosive and fire arms with gruesome, fatal consequence (Awake, 2006). Awake (2006) further stressed that the ugly face of Boko Haram insurgency has stampede and brought set back to Nigerian psychologically, socially, economically and politically, especially in North-Eastern Nigeria particularly Borno, Yobe and Adamawa States.

Undoubtedly, terrorism and insurgency are globally becoming a household word as there is no nation that is completely an exception from its devastating effect. Accordingly, Rourke (2008) observed and perceived that war, terrorism and other forms of transnational political violence are in many ways more threatening today than ever before as casualties have been on increase. It is however difficult to evolve a single definition for the term "terrorism". The difficulty emanates from the lack of consensus or unified perspective among nations or scholars as to what could be regarded as terrorist act. Hence, terrorism has been described variously as both a tactic and strategy; a crime and a holy duty; a justified reaction to oppression and inexcusable abomination since it is a function of whose point of view is being represented (Awake, 2006).

The alarming level of terrorists' attacks in North-Eastern Nigeria and in different parts of the Country has left unpalatable consequences for the nation's socio-economic and political development (Ewetan, 2013). To address the threats to national security and combat the increasing waves of crimes, the Federal Government of Nigeria in the 2013 Budget made a huge allocation to security, and the National Assembly passed the anti-terrorism act in 2011 (Ewatan, 2013). In April 2018, President Muhammadu Buhari gave approval for the purchase of more equipment for the military, worth $1 billion. This was revealed Wednesday 15th April by the Minister of Defence, Mansur Dan Ali, while speaking with journalists at the end of a security meeting chaired by the president (Premium Times, June 2019).

Despite, the plethora of security measures taken to address the daunting challenges of terrorism and insecurity in Nigeria, the government efforts have not produced adequate and the desired positive result. This has compelled the Nigerian government in recent time to request for foreign assistance from countries such as United States of America, Israel, and European Union countries to combat the rising waves of terrorism and insurgency. Amidst the deteriorating security situation in the country, Nigeria is also confronted with daunting social, economic and political developmental challenges. These developmental challenges include endemic rural and urban poverty, high rate of unemployment, debilitating youth unemployment, low industrial output, unstable and deteriorating exchange rate, high inflation rate, inadequate social and physical infrastructure, very large domestic debt, and rising stock of external debt (Ewatan, 2013).

Some scholars in conceptualizing security, placed emphasis on the absence of threat to peace, stability, national cohesion, political and socio-economic objectives of a country (Igbuzor, 2011; Oche, 2001; Nwanegbo & Odigbo, 2013). Thus there is a general consensus in the contemporary literature that security is vital for national cohesion, peace and sustainable development in all ramifications. According to Oladeji and Folorunso (2007), it is apparent that national security is a desideratum, sine qua non for economic growth and development of any country. They further posited that the areas affected by Boko Haram insurgency have been devoid of virtually all economic activities. In the intelligence community there is a consensus that security is not the absence of threats or security issues, but the existence of a robust mechanism to respond proactively to the challenges posed by these threats with expediency, expertise, and in real time (Oladeji & Folorunso, 2007).

The perception of the public toward terrorism has been seen to have affected Nigeria political, economic and social insecurity of which encompasses all developmental goals and issues being the root of the issue and the solution. Addressing issues of terrorism is crucial in order to execute successful developmental projects. As a goal, it is believed that every country should aspire to reach a point of security by protecting its citizens from structural violence, crime and social insecurity. Indeed, without the safety of citizens, all plans for development, whether economic, political or social, will definitely fail (Ewetan, 2013). Terrorism is a phenomenon that is bedevilling Borno, Yobe and Adamawa States, and affects their policies and development. Any nation striving towards development must reduce the frequency of crime to the barest minimum (Awake, 2006).

Terrorism is the deliberate creation and exploitation of fear for bringing about political change. All terrorist acts involve the use of violence. These acts are committed to non- state armed actors. Terrorists attempt not only to sow panic but also to undermine confidence in the government and political leadership of their target area. Terrorism is therefore designed to have psychological effects that reach far beyond its impact on the immediate victims or object of an attack. Accordingly, Okoli (2014) posited that terrorism is one of the major challenges facing education, most especially for females and people of tender age as they perceive terrorism more dangerous (Okoli, 2014). Okoli (2014) further pointed out that the negative influence of terrorism is perceived and viewed more obvious in people of low educational and economic status than their higher educational and economic counterparts. In most cases, communities, under serious terrorists attack are devoid of school activities; sometimes the schools are either burnt or shut down.

Also, in many terrorist attacks, bread winners of some families are killed or sources of livelihood destroyed, leaving only the males to continue school while the females are mostly withdrawn due to insufficient funds. Ensuring that children have safe, secure environment in which to grow, learn and develop healthy brains and bodies is not only good for the children themselves, but also builds a strong foundation for thriving prosperous society. Science shows that exposure to circumstance that produce persistent fear and chronic anxiety can have lifelong consequences. Fear has potential to affect how children learn, solve problems and relate to others (Oladele, 2014). The nation Nigeria has witnessed brutal confrontation and massive assaults from terrorist group which is undoubtedly the most blood-thirsty and destructive in terms of demonic brutality, mindless savagery and flagrant disobedience to the principles of peace and stability. Nigeria has witnessed insurgency from this terrorist group called Boko Haram from 2001. There is unleashed terror and fear in the minds of every Nigerian. There is wanton destruction of government properties, bombing of churches, mosques and other public places, assassination of prominent individuals, burning of schools occasioned by sporadic shooting of citizens and even abduction of secondary school students in the case of Chibok girls in Borno and Dapchi girls in Yobe State. In Nigeria, what appears to be an act of terrorism can be traced to the October 1st, 2010 bomb blast at the Eagle Square in Abuja. According to Amaka (2014) terrorism today has taken a new dimension. According to her, Nigeria as a nation is now at the mercy of terrorist group known as Boko Haram. Just as it was planned in rapid succession between October 2010 till now, the nation has had countless explosions at different times to tell us that the issue of terrorism is very well alive with us and it has been affecting many lives, social, political, economic, and educational development of Nigeria (Amaka, 2014).

Abadie (2006) conducted a study to find out the causes and the influence of terrorism on the socio-economic and political development. He found that terrorism is attributed to high rate of poverty and low educational status in which case, poverty accounted for 66% while low educational status accounted for 57.6%. He further found that, the 66% level of poverty negatively influence economic development by 70.4%, and negatively influence political development by 49%. Similarly, Bravo and Davis (2006) conducted a study to find out the causes and the influence of terrorism on the socio-economic and political development, and found that terrorism in some ways is a rebellion against government due to inequality in political and economic power sharing. They found that political inequality in terms of power sharing accounted for 61%, while economic power sharing accounted for 68%. In the empirical study, it was also found that inequality in political power sharing negatively influenced the socio-economic development by 75%, while the inequality in economic power negatively influenced the socio-economic and political development by 68.7%.

In the same vein, Krueger and Maleckova (2003) conducted a study with regard to the causes and negative consequences of terrorism on the socio-economic and political development and found that terrorism is attributed to high rate of unemployment and religion. In the study, unemployment accounted for 77.5% while religion accounted for 73.4% respectively. The 77.5% level of unemployment has negative influence on social development by 66%, has negative influence on economic development by 60%, and has negative influence on political development by 52.3%. Also, the 73.4% level of religious problems accounted for 50% negative influence on social development, 49% negative influence on economic development, and 55% negative influence on political development.

Studies by Amaka (2004) found that democracy has both positive and negative relationship with terrorism. This is because of the fact that there are more opportunities for an individual or group to express their political goals through the process of government. On the other hand, government oppression increases the likelihood of being frustrated with the lack of opportunity to participate. It was empirically found that, opportunities to participate accounted for 45% positive development socially, economically and politically while government oppression accounted for 47% negative development socially, economically and politically. In another study conducted by Krueger and Maleckova (2003), it was found that terrorism is a dilemma with the lack of civil rights and supports and said that terrorism is a political and not economic problem, but affects any society both politically and economically.

In a study conducted by Piazza (2007), it was found that terrorism reduces social, economic and political efficiency and performance. Piazza (2008) also found that analysis of the promotion of democracy and free market economics is not a solution to terrorism. It is empirically revealed that a more liberal political system is the more susceptible to the threat of terrorism than a dictatorial regime. Eubank and Weinberg (1994) empirically found that hood of terrorist groups occurring in democracies is three and half times greater than occurring in non-democracies and the negative effect reduces social, economic and political development by 58.8%.

Heymann (2002) conducted a study and found out that terrorism has much negative influence on educational development and also devoid foreign policy and transnational market. He empirically found that burning or shutting down of schools as a result of terrorists attack accounted for social, economic and political imbalance by 51% and absence of foreign exchange and transnational market accounted for economic instability by 53.5%.

The objective of this study is to assess the gender, religious, ages and educational status differences of the public perception on the influence of terrorism in the North East of Nigeria.

Methodology

This research adopted descriptive survey research approach. This design is suitable because the study attempted a survey and description of the social characteristics and perception of terrorism variables being investigated have already occurred and the researcher is only interested in knowing the influence of the predictor variable without necessarily manipulating any of the variables.

A total number of 180 participants were drawn from three Local Government Areas of Borno State that Boko Haram attacks are much prevalent. Out of the 180, 162 questionnaires were correctly filled and submitted. The participants consisted of 77 males and 85 females. Out of which, 62 participants were drawn from Maiduguri local government, consisting of 27 males and 35 females. 50 participants were drawn from Gambaru - Ngala Local Government, consisting of 25 males and 25 females. Similarly, 50 participants were drawn from Bama Local Government, consisting of 25 males and 25 females. All the participants drawn were within the age range of 20-60 years. The participants included both married and single members of the public.

The questionnaire was developed by the researcher and validated by pilot test. The purpose is to measure the public perception on the influence of terrorism in the North-Eastern Nigeria. The questionnaire consists of two sections: Section"A" of the questionnaire was used to elicit the socio-demographic data of participants, such as age, gender, religious affiliation, ethnic group, place of work, marital status and educational background. Section "B" sought to get information from the participants on the public perception on the influence of terrorism in the North-Eastern Nigeria. Section “B” of the questionnaire contains twenty items and each item was followed by four response options; strongly agree, agree, disagree and strongly disagree. Strongly agree was scored =4, agree was scored = 3, disagree was scored = 2, strongly disagree was scored = 1. Both strongly agree and agree are indications that public perception on the influence of terrorism in the North Eastern Nigeria is positive. While both disagree and strongly disagree are indications that public perception on the influence of terrorism in the North East is negative.

Ethical Procedures

Official permission and consent were sought from the participants and the relevant authorities and approval obtained prior to any data collection in this research. The participants who agreed to participate initially read a plain language statement detailing the study and the requirements of their participation should they choose to participate. The participants who willingly agreed to participate were given the questionnaire and were encouraged to read the instructions carefully before responding to the items/statements in section ‘B” of the questionnaire, by ticking one of the options 1,2,3,4, on the right hand side of the statement to indicate how they feel or perceive the public influence on terrorism in the north-eastern Nigeria. The participants were assured that their privacy are protected and confidentiality was highly maintained.

The data collected in this study were analyzed with frequencies, percentages, means and standard deviations to explain the characteristics of the participants. While the inferential statistics Independent Sample t-test was used for the test of significance of the hypotheses, to assess the difference in the public perception of the study variables.

Result and Discussion

Test of Hypotheses

Hypothesis One: stated that there will be a significant difference between males and females in their public perception on the influence of terrorism in the North East of Nigeria. This hypothesis was tested using Independent-sample t-test in Table 1

Table 1: Mean Difference of Males and Females Perception of the Influence of Terrorism in the North-east Nigeria

Variables	N	M	SD	df	t-test	Sig.
Male	77	62.81	14.623	160	1.477	0.142
Female	85	59.47	14.107			

Sig. level = 0.05

Table 1 shows the mean and standard deviation scores between male and female perception of terrorism of the north-east Nigeria, where male (M= 62.81, SD= 14.623) and female (M= 59.47, SD= 14.107). The results further indicated that males and females did not statistically significantly difference in their perception on the influence of terrorism of the north-east Nigeria t(160) = 1.477, *P*> .05. In other words, the hypothesis was not confirmed in this study.

Hypothesis Two: stated that, there will be a significant difference between Christians and Muslims in their public perception on the influence of terrorism in the North East of Nigeria. This hypothesis was tested using Independent-sample t-test in Table 2

Table 3: Mean Difference of Christians and Muslims Perception of the Influence of Terrorism in the North-East of Nigeria

Variables	N	M	SD	df	t-test	Sig.
Christian	94	65.11	15.124	160	4.446	0.000
Muslim	68	55.46	11.244			

Sig. level = 0.05

Table 2 shows the mean and standard deviation scores between Christians and Muslims perception on the influence of terrorism in the north-east of Nigeria; where Christian (M= 65.11, SD= 15.124) and Muslim (M= 55.46, SD= 11.244). Further analysis revealed that, Christians and Muslims indicated a statistically significantly difference in their perception on the influence of terrorism in the north-east Nigeria $t(160) = 4.446$, $P < .05$. In other words, the hypothesis was confirmed in this study.

Hypothesis Three: stated that, there will be a significant difference between old and young in their perception on the influence of terrorism in the North East of Nigeria. This hypothesis was tested using Independent-sample t-test in Table 3.

Table 4: Mean Difference of Old and Young in their Perception of the Influence of Terrorism in the North-east Nigeria

Variables	N	M	SD	df	t-test	Sig.
Old	67	63.43	13.982	160	-1.775	0.078
Young	95	59.38	14.539			

Sig. level = 0.05

Table 4 presents the mean and standard deviation scores between old and young in their perception of terrorism in the north-east of Nigeria, where old respondents indicated a mean of 65.11 and standard deviation of 15.124. While the young respondents indicated a mean of 55.46 and standard deviation of 11.244. Further analysis revealed that, old and young respondents do not statistically significantly differed in their perception on the influence of terrorism in the north-east of Nigeria $t(160) = -1.775$, $P > .05$. In other words, the hypothesis was not confirmed in this study.

Hypothesis Four: stated that there will be a significant difference between people of low educational status and people of high educational status in their perception on the influence of terrorism in the North East of Nigeria. This hypothesis was tested using Independent-sample **t**-test in Table 4.

Table 4: Mean Difference of People of Low and High Educational Status Perception of the Influence of Terrorism in North-East of Nigeria

Variables	N	M	SD	df	t-test	Sig.
Low Education	53	53.74	9.948	160	-4.809	0.000
High Education	109	64.61	14.923			

Sig. level = 0.05

Table 4 presents the mean and standard deviation scores between People of low and high educational status' perception on the influence of terrorism in the north-eastern Nigeria; where people of low education (M= 53.74, SD= 9.948) and people of high education (M= 64.61, SD= 14.923). Further analysis revealed a statistically significantly difference t(160) = -4.809, *P*< .05 in the perception on the influence of terrorism in the north-east Nigeria between people of low and high educational status. In other words, the hypothesis was confirmed in this study.

Discussion of Findings

The result of this research revealed that, there is a negative public perception on the influence of terrorism in the North East of Nigeria. This result supports the finding of Oladele (2014). Accordingly, Oladele (2014) pointed out that, there is wanton destruction of government properties, bombing of churches, mosques and other public places, assassinating of prominent individuals, burning of schools occasioned by sporadic shooting of citizens, and even abduction of secondary school students in the case of Chibok girls in Borno and Depchi girls in Yobe state.

Similarly, the result of this research supports the earlier finding of Amaka (2014). According to her, Nigeria as a nation is now at the mercy of terrorist group known as Boko Haram. Just as it was planned in rapid succession between October 2010 till date, the nation has had countless exploitations at different times to tell us that the issue of terrorism is very well alive with us and it has been affecting many lives, social political, economic and educational development of Nigeria .

The first hypothesis in this study does not receive confirmation as it showed statistically in significant result between males and females in their perception of the influence of terrorism in the North East of Nigeria. The finding of this study supports the earlier finding of Oladele (2014). According to him, the nation has witnessed brutal confirmation and massive assaults from terrorist group which is undoubtedly the most blood-thirsty and destructive in terms of demonic brutality, mindless savagery and flagrant disobedience to principles of peace and stability. And that, the influence is perceived as severe to both gender. However, literature has not shown anywhere that this result contradicts any earlier study.

The plausible explanation for this insignificant difference between males and female in their public perception of the influence of terrorism in North-Eastern Nigeria may be that, both genders as humans, may have in one way or the other experienced the devastating effect of terrorism in the same magnitude. The plausible explanation for this insignificant difference between males and females in their perception of the influence of terrorism in north east may also be that, terrorism is like two edged sword, and as such, does not spare any gender in any way. Therefore, the effect may be felt in almost the same way.

The second hypothesis in this study received confirmation as there is statistically significant difference between Christians and Muslims in their perception of the influence of terrorism in north eastern Nigerian. The finding of this study supports the earlier study of (Maregenere, 2011; Obasi, 2009). Accordingly, they said, religion has been perceived and has been serving and is still serving as an institution or instrument of sustainable peace and social harmony in many developing and developed countries. However, religion has also been serving as a motivation for violence and terrorism. No wonder religion has been regarded as "double edged sword". And that religion and its influence has been perceived significantly across religions.

Similarly, the result of this study supports the earlier study of Reynal-Quero (2002). He discovered that nations that are divided along religious lines are often more prone to intense and prolonged terrorism than the nations that are divided by political territorial and ethnic differences. The extrapolations from this are that religion has influence on terrorism and terrorism has influence on religion. In other words, it has been perceived/viewed that there is a link between terrorism and religion. And that the two major religions have different perception for the influence. However, the result of this present study has not contradicted any earlier study.

The plausible explanation for this significant difference between Christians and Muslims in their perception of the influence of terrorism in the North Eastern Nigeria may be that the two religions have different orientation, teaching and belief. Therefore, they may have different perception with regard to their perception on the influence of terrorism. The plausible explanation for this significant difference between Christians and Muslims in their perception on the influence of terrorism in the North Eastern Nigeria, may also be that the two religions are different in terms of engaging in the act of terrorism, and as such may have different perception with regard to the influence on socio-economic and political development.

The third hypothesis in this study does not receive confirmation as there is statistically insignificant difference between old and young in their perception on the influence of terrorism in north eastern Nigeria. The result of this study contradicts the earlier study of Okoli (2014). According to Okoli (2014), terrorism is therefore designed to have psychological effects that reach far beyond its impact on the immediate victims or object of an attack. Accordingly, Okoli(2014) posited that terrorism is one of the major challenges facing education, economic and political development most especially for people of tender age as they perceive terrorism to be more dangerous. However, in the earlier research, the young people had higher perception on the influence of terrorism in the North East, while in the present research; there is no statistical difference between old and young in their perception of the influence of terrorism in the North East.

This insignificant difference between old and young in their perception on the influence of terrorism in the North Eastern Nigeria may be that the act of terrorism is like death that has no respect/regard for anybody’s life and may claim the lives of both old and young in almost the same way. Therefore, there may be no age difference in their perception of its influence.

The plausible explanation for this insignificant difference between old and young in their perception of the influence of terrorism in the North East may also be that the act of terrorism has destroyed social and economic lives of both the old and young, and as such they may have the same level of perception.

The fourth hypothesis in this study was confirmed as there is statistically significant difference between people of low educational status and people of high educational status in their perception of the influence of terrorism on socioeconomic and political development of north eastern Nigeria. The finding of this research in a way supports the earlier finding of Okoli (2014). Okoli (2014) pointed out that the negative influence of terrorism is perceived and viewed more obvious in people of low educational and economic status than their higher educational and economic counterparts. In the earlier study of Okoli (2014), the people of low educational status had higher perception of the influence of terrorism on socio-economic and political development, while the present study demonstrated that, the people of higher educational status had higher perception of the influence of terrorism on socio-economic and political development. The most important thing is, there is difference in the perception.

This significant difference between people of low educational status and people of high educational status in their perception on the influence of terrorism in the North Eastern Nigeria may be that people of high educational status, being experienced and versatile, may have the ability to predict future's influence on terrorism than their lower counterparts. Therefore, both present and future influence of terrorism may be felt in greater magnitude by the people of high educational status than people of low educational status.

Conclusion and Recommendations

The perception of the public toward insurgency in the north- east Nigeria has been a negative because of the psychological issues it has caused people in the region. Despite, the plethora of security measures taken to address the daunting challenges of terrorism and insecurity in Nigeria, the government efforts have not produced adequate and the desired positive result. Amidst the deteriorating security situation in the country, Nigeria is also confronted with daunting social, economic and political developmental challenges. These developmental challenges include endemic rural and urban poverty, high rate of unemployment, debilitating youth unemployment, low industrial output, unstable and deteriorating exchange rate, high inflation rate, inadequate social and physical infrastructure, very large domestic debt, and rising stock of external debt. The study recommends that:

1. Both the States and Federal governments should embark on counter-terrorism strategies that will involve an increase in adequate policing and timely intelligence acquisition.
2. Measures should be adequately put in place to incorporate the military tactics, techniques and strategy that the governments, military, law enforcement and intelligence agencies can use to combat or prevent terrorism.
3. The government should use foreign defence programs that support other countries attempts to suppress insurgency, lawlessness, or subversion or to reduce the conditions on which these threats to security may develop.
4. Government should ensure mass surveillance of the national population. Home grown terrorist especially lone wolves are often harder to detect because of their citizenship or legal status and ability to stay under the radar. In order to curb that, appropriate government organizations need to understand the sources, motivational methods of preparation and tactics of terrorist groups.
5. The Federal government should adequately engage the use of financial tracking to unveil money transfers which may be sources of sponsorship for terrorism.

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Human Trafficking and Sexual Abuse: Evidence from Female Libya Returnees in Edo State, South-South Nigeria

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Abstract

Human trafficking which is arguably one of the biggest organized crime in the World today has been generating increased global attention and condemnation especially since the beginning of the 21st century because of its dehumanization and exploitative nature. Nigeria has been identified as one of the countries largely involved in this ignominious criminal industry with considerable numbers of her citizens frequently falling prey as victims. This study based on evidence and shared experience from selected female victims of human trafficking returned from Libya by the joint efforts of the Nigeria government and the International Organization of Migration (IOM) explains the harrowing experience the victims go through. In-depth interview was conducted with thirty nine (39) purposively selected female Libya returnees of Edo State origin between January and March 2018. Findings reveal that the victims were sexually abused; fell prey to exploitative labor; engaged in unavoidable 'survival sex'; had unwanted pregnancies and fatherless children. It is recommended, amongst others, that concerted efforts by the government and other stakeholders to work assiduously to lunch a vigorous campaign against gender discrimination and other cultural and societal attitude that portray women and girls as second fiddle and sexual instrument. Full implementation of the anti-trafficking laws to bring traffickers' to book will address some of the major drivers of trafficking.

Keywords: *Returnees, Human Trafficking, Survival Sex, Sexual Abuse, Women/Girls*

Introduction

Victims of trafficking in persons are mostly exposed to various forms of sexual abuse and exploitation. Human trafficking and sexual abuse are both traumatic crimes which are built upon the power, control, abuse and exploitation of another human being. Sexual abuse can take different form which can be verbal, visual, physical or any other form that pushes a person to be subjected to or engage in unwanted sexual interaction (Edosomwan, 2018). This abuse can occur in the form of unapproved touching, rape, attempted rape, fondling, voyeurism, exhibitionism etc. Sexual abuse which may include requests for sexual favors an obscene and suggestive language is not only unlawful in its own right; it can also result in sexual assault. Traffickers and perpetrators of sexual abuse main target the marginalized, oppressed, minorities, economically disadvantaged members of the society (Freedom Network USA, 2015 and Walt & Lee, 2011).

Trafficked women and girls have always complained of abuse especially sexual abuse on their way to and for the period in which they stay in transiting countries. A study conducted by Association Women's Link Worldwide shows that 63% of the women who transit via Morocco affirmed to have suffered abuse in the process of their journey, specifically, 17% suffered from sexual abuse. In 2013 the Spanish authorities reported that traffickers rape their victims or sell them to men in transit countries for sexual service and make their victims to believe that when they were pregnant or had a child in transit countries while attempting to avoid deportation when the cross the Mediterranean Sea to Europe by being under the Art 57, clause 6 of the Organic Law 4/2000 11^{th} January (Pascoal 2017).

United Nations refers to human trafficking as well known transnational organized crime which at present is ranked as the second heinous crime in the world (Gyamfi 2016). According to the UN Office of Drugs and Crime (UNODC), it is estimated that seventy-nine percent of all human trafficking is for the purpose of sexual exploitation, while International Labour Organization (ILO) report indicates that ninety-eight percent of people trafficked for sexual exploitation are women and girls (Christensen 2011). They are usually potential victims to trafficking largely due to the patriarchal nature of the society that attach little/no importance to the value, dignity and worth of the girl child; resulting in lack of employment opportunities and favorable mobility for the female youth.

The nature, custom, tradition and culture in Nigeria and the global society in general hold a negative attitude towards women and girls as second fiddle. They are regarded to be created for sex or sex instrument and domestic work of bearing and rearing children. This explain why the naked body of women and girls are shown in music, films, advert and women and girls are place in front of hotels in order to attract the attention of customers. But when the naked body of a woman or girl is not display in any of these the marketing power/force of such music, films and advert will be very poor and this further make women and girls susceptible to trafficking. Women and girls are mostly traffic victims because of their capacity to render sexual service and they are seen as valuable and marketable sexual commodity in the international market than men. Christensen (2011) posits that each year estimates of four million people are trafficked across international borders and two million of these figures are women and girls. Akor

(2011), Manbe (2016), Okeshola and Adenugba (2018) and other scholars have argued that women and girls are vulnerable to trafficking and traffickers as a result of poverty.

Due to the patriarchal nature of the Nigerian society, the females are already more exposed to poverty with limited choices and discrimination in education, employment and wages. This leaves them with very few options for supporting themselves and their families. Dreaming of a better life in the city, or a foreign country, they become vulnerable to traffickers' false promises of high-paying jobs in Europe. Even though they might feel uneasy about the travel circumstances, despair over their current situation and the prospects and hope for a new life can easily outweigh any sense of danger. According to Phinney (2017), in this way poverty and gender inequality create a large pool of potential and seemingly willing "recruits" for trafficking.

Women and girls are the most economically disadvantage group in the society. They are faced with gender equality in the labour market with income disparity and they are tied to less paid domestic work. Human trafficking has attracted numerous attentions and extensive research has been conducted about the menace of human trafficking as local, national and international problem. However, there is dearth in literature on how abandonment, frustration, been stranded in the trafficking process and in transit countries lead trafficked victims into survival sex and how it expose them to sexual abuse. Also no research has been conducted about human trafficking with a focus on Edo State Libya returnees. Thus, this study is an attempt to fill the identified gap in the literature.
The objective of this study is to examine the challenges returned trafficked victims pass through in their aborted journey through Libya to Europe. Also to find out the factors that predisposed the respondents to fall victims to traffickers

Literature Review

The United Nations Commission on the Status of Women oral statement on eradicating commercial sexual exploitation argues thus: sexual exploitation of women and girls of all ages, including prostitution, pornography, the internet bride industry and sex tourism, is one of the most devastating and escalating practices of gender-based violence assaulting the human rights and dignity of women and girls. Hence, any society that wishes to achieve gender equality should not tolerate and accept sexual commoditization of women and girls

(Ugiagbe 2018). Human trafficking include "forced and child prostitution, domestic servitude, illegal and bonded labour, servile marriage, false adoption, sex tourism and entertainment, pornography, organized begging, organ harvesting, and other criminal activities" (Duru & Maurice 2012).

Trafficking of women and girls is usually motivated by several "push" and "pull" factors. The "push" factors generally refers to those driving forces which influence people to decide to move from a particular location (within or outside their home country) in search of a better quality of life in another country(usually wealthier/developed country). These driving factors include but not limited to the following: deep-root poverty, domestic violence, separation from spouse, divorce, accompanied with broken marriage, gender inequalities, devaluation of local currencies such as the Nigerian Naira, unfriendly socio-economic environment, family pressure etc. The "pull" factors are the attractions in countries of destination which includes: favourable socio-economic opportunities, available job opportunities with higher wages and good working conditions, low skilled labour etc. (Edosomwan 2018).

Sexual and other Related Abuse and Health Implications

Traffickers have control over victims because of the ceaseless physical, sexual, emotional violence and manipulation they are subjected to. Some may be subjected to forcible rape, prostitution, unprotected sex, unsafe termination of pregnancy (TOP), sexual humiliation, and coerced misuse of oral contraceptives or others. These various form of sexual abuses experience by victims of trafficking is also accompanied with serious health implications such as: sexually transmitted infections, urinary tract infections, irregularity in menstrual cycle, acute or chronic pain during sex, vaginal injuries, unwanted pregnancy, and complications from unsafe abortions (Shandro; Chisolm-Straker; Duber; Findlay; Munoz; Schmitz; Stanzer; Stoklosa; Wiener & Wingkun 2016). During trafficking, some victims initially hired for domestic work are sexually abused by their traffickers or they decide to sell them for sexual services to brothel owners in order to make more money (Russell 2014). The brothel owners mostly employ coercion, physical abuse and repeated threat to compel trafficked victims into submission. This practice serves as a link way between trafficking and HIV due to the fact that physical and sexual abuse may increase the incidence of HIV disease. This results through direct injury to the vagina, causing mucosal breaks and irritation that increase the tendency of disease to occur as a result of exposure.

This act can also have a devastating effect on the victims' self-esteem, potentially undermining both her motivation to protect her health and her ability to effectively discuss on the use of condom. For instance, a study conducted in West Bengal, India, found 2-fold increase odds of HIV disease among female sex workers who had experienced sexual abuse within a short time of joining the sex trade (Wirth; Tchetgen; Silverman & Murray 2013). Also the result of a study conducted in South Africa agreed with this relationship in a general population of young adult women. The result reveals that, women who experienced multiple episodes of sexual abuse were 50% more likely to acquire HIV. The age at which sex-trafficked persons enter prostitution may also contribute to higher HIV infection rates. Sex-trafficked women tend to be younger than those who enter the industry voluntarily, and young women may be more vulnerable to HIV due to larger areas of cervical octopi (i.e., immature epithelium of the cervix) (Wirth et al; 2013).

Effort towards the Eradication of Human Trafficking in Nigeria

Human trafficking is a social phenomenon that has existed for centuries, but it has only recently come to the forefront of social, political and media attention (Russell 2014). In an attempt to combat the scourge of human trafficking, several efforts have been initiated at the national and international levels. At the international level, Nigeria ratified the UN protocol to prevent, suppress and punish trafficking in persons, especially women and children in 2001 and this led to the enactment of national law against trafficking entitled "Trafficking in persons (prohibition) Law Enforcement and Administration Act of 2003 (Duru & Ogbonnaya 2012). This law led to the establishment of the National Agency for the Prohibition of Trafficking in Persons and other related matters (NAPTIP) charged with the responsibility of enforcing, administering and managing the law prohibiting human trafficking and other related matters. The agency was also empowered with the legal capacity to sue and be sued in its corporate name (Okojie 2005). The functions of the Agency as stated in Section 4 of the Act include:

i. The enforcement and administration of the provisions of the Act;
ii. The coordination of and enforcement of all existing laws on trafficking in persons and other related offences;
iii. The adoption of measures to increase the effectiveness of eradication of traffic in persons;

iv. The facilitation or encouragement of the presence or availability of persons in custody who consent to assist in investigations or participate in proceedings relating to traffic in persons and other related offences;
v. Enhancing the effectiveness of law enforcement agents to suppress traffic in persons;
vi. Establishing, maintaining and securing communication to facilitate the rapid exchange of information concerning offences; conduct research and improve international cooperation in the suppression of traffic in persons by road, sea and air;
vii. Reinforcing and supplementing measures in such bilateral and multilateral treaties and conventions on traffic in persons as may properly be adopted by Nigeria to counter the magnitude and extent of traffic in persons and its grave consequences;
viii. Taking such measures and or in collaboration with other agencies or bodies that may ensure the elimination and prevention of the root causes of the problem of traffic in any person;
ix. Strengthening and enhancing the effective legal means for international cooperation in criminal matters for suppressing the international activities of traffic in persons;
x. Taking charge, supervising, controlling and coordinating the rehabilitation of trafficked persons and participating in proceedings relating to traffic in persons (Okojie 2005).

In addition to these legal frameworks, economic empowerment and reintegration programmes have been introduce to stem the tide of human trafficking in Nigeria. There have also been several awareness-raising activities. At the Non-Governmental level, Nigerian NGOs are involved in efforts to combat human trafficking. Some of which includes: National Council of Women Societies (NCWS), International Federation of Women Lawyers (FIDA), Coalition Against Trafficking in Women (CATW), The Women Consortium of Nigeria (WOCON) and WOTCLEF (Geshinde & Elegbeleye 2011; Duru & Ogbonnaya 2012).

Theoretical Orientation

This study adopted the Albert Bandura perspective of social learning theory propounded in 1961. According to social learning theory, certain behaviours are learned because previous actions have been rewarded. This implies that crime results in the society because most unacceptable acts and actions has been increasingly rewarded in time past or presently than social approved behavior. This explain the reason some persons turn out to become criminals and others do not because no two person on earth went through the same socialization process and not all persons are expose to the same anti-social situation of reinforcement.

The main argument of this theory is that members of the society decide to commit and not to commit crime based of their belief. The same can be said of those persons that engage in human trafficking and some other kinds of crime based on their orientation, socialization and moral upbringing the crime is considered a counter-culture, while those that commit crime do so out of their free will because of the rewards it brings to them and their associates regardless of the pain and danger it poses to the society.

Social learning theory posits that behavior is reinforced not only by reward and punishment as in operant learning, but also by modeling after the behavior of others. Bandura, classifies reinforcement into three categories: external reinforcement-which is the foundation of operant conditioning; vicarious reinforcement-which is acquired via the observation of other persons being rewarded or punished and self-reinforcement- which is concern with the feeling of pride and achievement. Members of the society via vicarious reinforcement get attracted to trafficking because of the good life and the assumed wealth the traffickers is able to showcase to entice 'there would be victims'. This is so because of the decrease in societal values where people who acquire wealth through illegitimate means are celebrated and are refer to as the true son of the land with all manner of questionable titles and awards. This has eroded the feeling of accountability, transparency, honesty and positive attitude to hard work. People involved in human trafficking and its deals return home wealthy and have enough money to share to friends and relatives and they are label as heroes and rewarded with chieftaincy titles and all kinds of awards. This development as perceived by this theory as reinforcement because other members of the society will like to join in the business of human trafficking to be equally rewarded and respected in the society, hence the cycle continues.

Methodology

This study adopts a cross-sectional research design. Data were collected from 39 female participants. Although trafficking affects both male and female gender, our concentration on female respondents in this study is because they are more involved in this ignominious trade. For instance, females constitute 80% of the approximately 800,000 people trafficked yearly, with 70% of them involved in the commercial sex activities (Cree 2008 cited in Edosomwan 2018). The selected participants were returnees from Libya to Edo State by the joint efforts of the Federal Government of Nigeria and International Organization of Migration between January and March 2018. We were able to access the returnees for interview after due approval by the head of the Edo State task force on human trafficking and illegal migration at their temporal shelter for profiling. The participants were selected with the help of purposive sampling technique because the research population was not well known and defined and also some of the participants were not willing to participate. All the returned female migrants that stayed in the shelter were included in the population of the study, while the males were excluded because they did not fit into the particular profile of the research (Lavrakas 2008). At the end of the field work, 39 respondents participated in the interview and the data was analyzed manually following Walcot (1994) three models of analysis which includes: description, analysis and interpretation. This enabled us to have a clearer understanding of the study and to also integrate other forms of observation and prior readings into the findings.

Result and Discussion

Table 1**:** Socio-Economic and Demographic Characteristics of Respondents

	Frequency N = 39	**Percentage**
Age		
15-19	2	5.1
20-24	29	74.4
25-29	8	20.5
39 and above	0	0
Total	39	100
Marital Status		
Single	27	69.2
Married	6	15.4
Divorce	3	7.7
Separated	3	7.7
Total	39	100
Religion		
Christian	35	89.7
Muslim	4	10.3
Total	39	100
Level of Educational Qualification		
Primary School Not Completed	5	12.8
Primary School Completed	10	25.6
Secondary School Not Completed	9	23.1
Secondary School Completed	10	25.6
Tertiary Education Not Completed	3	7.7
Tertiary Education Completed	2	5.1
Total	39	100

Employment status		
Formal Employment	4	10.3
Informal Employment	7	17.9
Unemployed	15	38.5
Apprentice	13	33.3
Total	39	100

Source: Field Work, 2018

The analysis of the social-economic and demographic characteristics (as shown in table 1 above) revealed that majority of the respondents (74.4%) were between the ages of 20-24. This results supports others studies which stipulates that considerable numbers of people engaged in irregular migration and victims of human trafficking are between the ages of 15 to thirty years(see Okah-Donli 2018). On marital status, 69.2 % of the respondents were single. The table also reveals that a substantial number of the respondents (87.1%) did not have more than secondary education while only 25.6% completed their secondary and 5.1% tertiary education respectively. This result reveals that poor education and its attendant problems of illiteracy, poor information and awareness are driving factors of trafficking in Edo State. In terms of employment status, table one reveals that only 10.3% of the respondents are employed in the formal sector, while 38.5% are unemployed.

Traffickers shared experiences

Data reveals that the respondents who were victims of human trafficking were sexually abused; fell prey to exploitative labor; engaged in unavoidable 'survival sex'; had unwanted pregnancies and fatherless children. Other findings reveals that majority of the victims are from poor socio-economic background and were largely driven into trafficking by combine factors of family and peer pressure in addition to forces of globalization which gave them access to information to compare their living standard with those other people in other climes especially in developed countries (Asserate 2018, Appadurai 2005).

Majority of the respondents traveled from varying routes within Nigeria to get to the Nigeria-Niger border. Unlike some other trafficked girls who went through a host of West Africa countries like Ghana, Mali, and Senegal before entering destinations like Libya, Morrocco and Algeria (Edosomwan 2018) all of the respondents most of whom travelled in the last two years agreed to have passed through similar routes in Nigeria to Niger through the Sahara desert to Libya before attempting to cross the Mediterranean sea to Europe. This supports other findings which posit that the political crisis in Libya since the death of former leader Muamer Gaddafi have contributed immensely to the large influx of migrants en route Libya and Mediterranean to Europe (Gerasimos 2017,Hammond 2015). The experiences of the migrants journey is summarized in three folds: First, the life threatening experience of passing the Sahara desert to Libya; the second is the dehumanizing experience in the hands of Libya militants and others including the migrants' facilitator they call "Burger". The last was the life threatening experience which many 'called escape from death' when they attempted to cross the Mediterranean Sea. Although not all the respondents experienced these three stages before they were returned to Nigeria as some were earlier arrested, imprisoned and kidnapped before they could attempt to cross the sea.For instance, one of the respondents Lady J. recounted her experience as follows: "The experience on the road to Libya was very bad, some trucks had accidents, and there was hunger and no water". She went on to say of her experience in Libya as follows:

> "…it was very bad. Libya people are very bad; they kill people during fights between different groups. I had a gun injury on my head and my friend died during the process. We were constantly raped by Libya Police, while those who refused were beaten and not given food. On New Year day five people died of hunger in our detention".

Another respondent lady K., narrates her experience as follows:

> "The journey was hell, it was very bad. Many people lost their lives. We were 24 people that left Agadez to Saba, but only 18 arrived Saba, others died of dehydration because of lack of water, while others fell from the hilux..., when we got to Saba (Libya), I was recommended for a house helping job by some Arabo's, where I worked for four months at the end of the four months I was not paid any money and was taken to the deportation camp by my oga".

Similarly, the migrants were randomly kidnapped by the Libya militants and sold for sex and forced labor without pay. A respondent Lady D recounts that she was kidnapped two times and beaten at the detention camp before she could raise 250,000 and 300,000 Naira (currently about 700 to 800 US Dollars) respectively for her release. For lady B., her experience was not different. According to her, the first eight months she spent in the "camp" waiting to board the boat to Europe was very deplorable without good food and water. She added that on the day they embarked on the trip to cross the sea to Europe their boat was deflated on the high sea, before they were rescued by the Libya coast guide and sent to the deportation camp. Other reports corroborate these findings. For instance, as at June 2018, almost 2000 African migrants had been rescued in the Mediterranean Sea (Olukomaiya, (2018) by the Libyan coast guide alone with over 60,000 recorded deaths since year 2000 (Dada. 2018).

Furthermore, as stated above and shown in table 1, most of the respondents fell victims to traffickers and engaged on a perilous journey to Europe because they have poor socio-economic background (Ogajic-Veljanoski &Stewart 2007). Osadolor (2018) puts it thus: “ The key drivers of youth migration and trafficking include escape from poverty and the desire for better living conditions and the inability of Africa leaders to provide basic infrastructure for job and wealth creation”(p.14). In addition to the general poor socio-economic situation in the country we found out that pressure/influence from friends as was the case of Lady F. is another major driver of trafficking. According to Lady F., she got knowledge of the journey from her friend who introduced her to a trafficker resident in Italy and had an agreement to pay back 3 Million Naira upon arrival in Europe. She entered into the agreement without the knowledge of her mother whom she said would have disapproved of the trip. She explained that she left with 6 other girls who had different ‘madam’ (traffickers).

Conclusion

This paper espoused empirically the problems of human trafficking and sexual abuse of trafficked victims based on shared experiences of selected Libyan returnees to Edo State in the first quarter of 2018. The findings reveal the excruciating experiences including torture, sexual abuse, kidnapping and force labor that the trafficked victims passed through en route the Sahara Desert and Mediterranean Sea to Europe. It was revealed that different factors including poor economic background of the victims, harsh or unfavorable socio-economic situation in the country in addition to Peer pressure made them vulnerable to trafficking. Lastly, the paper recommends active government intervention in the area of policy formulation and implementation of anti- trafficking and irregular immigration laws in addition to massive reorientation of the youth against the culture of get rich quick syndrome.

Recommendations

The move at eradicating female trafficking must begin with policy context and implementation of government intervention (Osadolor 2018). This should include amongst others;

a. Concerted efforts by the government and other stakeholders to work assiduously to lunch a vigorous campaign against gender discrimination and other cultural and societal attitude that portray women and girls as second fiddle and sexual instrument.
b. As stated above they should also implement fully the anti-trafficking laws to bring traffickers' to book.

Address some of the major drivers of trafficking such as poverty, unemployment and illiteracy. In this regards, there should be massive empowerment of the youths and young people for them to be able to actualize their potentials and position them to be actively involved in nation building efforts. To achieve these, vigorous efforts must be made towards reorienting the youths away from the problem of "get rich quick syndrome" and craze to lead flamboyant life at all cost.

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Barriers in Accessing Healthcare Services by Patients with Disabilities in Nigerian Hospitals

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Abstract

Disability has turned several disabled individuals into popular patients easily to be identified, when moving or interacting with other members of society. Disability is not a problem associated with people of a particular nationality, but across the globe and sufferers are rendered incapacitated. The condition of these patients make them perpetual visitors to the hospital for treatment of the existing health challenge, injuries caused by accidents or new symptoms from other diseases. This paper employed qualitative research and analytical approach to gain an insight into the barriers experienced by PWDs in Nigerian hospitals. The source of data was solely secondary, accessed from various academic journals including online articles relevant to the issue. Findings revealed that systemic barriers and attitudes of the healthcare providers affect the access and quality of healthcare services received by PWDs. It was also revealed in this paper the level of healthcare providers' adherence to the ethics of consent is abysmally poor. The paper recommends the removal of barriers through adequate training of medical staff, proper monitoring of activities, adequate distribution of medical resources, positive attitudes towards patients, among others.

Keywords: *Abuse, Attitude, Health Provider, Healthcare Services, Patients, disabilities*

Introduction

Disability is a global issue, renders the sufferers powerless and exposes them to several challenges in all spheres of life. The concept of disability has been used to discuss impairments resulting from diseases and injuries including physical and mental functional difficulties experienced by persons within their environments and how such conditions restrict their participation in all spheres of life. The World Health Organisation (WHO, 2011), notes that the concept of meaning and understanding of disability is beyond a physical or medical perspective and has taken into account a person's physical, social and political context. This understanding is generated from the interaction between a person's health condition and their environment. The report of WHO (2013), revealed that more than a billion people, constituting about 15% of the world's population, have some form of disability. In Nigeria, the report of WHO (2011), shows that about 25 million people in Nigeria have one form of disability or the other. The figure accounts for at least 15% of Nigeria's current population of 200 million. The World Bank (2020) reports that persons with disabilities face several barriers including transportation problem, lack of assistive technologies and devices and non-adapted means of communication. The reports also showed that service delivery, discriminatory prejudice and stigma were more pronounced against PWDs, while accessing medical services and demanding for full social and economic inclusion.

In Nigeria, Ojo (2017) acknowledged that patients with disabilities feel disjointed for being treated as people in need of social support and charity, particularly, basic needs of life. The disjointed feeling aligns with an obvious lack of access to public infrastructure, ICT infrastructure, public policies, electoral system, transport systems, employment, education, housing and health care delivery. The lack of these basic needs and social amenities prevents the enjoyment of the privileges and full rights as citizens, is capable of hindering them from living a productive life. Conversely, people with disabilities are subjected to various forms of abuse both at home and in the public. Ojo (2017) claims that patients with disabilities are living witnesses to social, economic and political barriers that have impacted their abilities to harness their potentials in life. Accordingly, there are extraordinarily talented persons with disabilities who are denied opportunities and more likely to fall into poverty. However, the barriers caused by individuals and organisations make life difficult for these patients, not only in the hospitals but also in all spheres of life.

In Nigeria, with no doubt, several barriers await persons with disabilities in the hospitals, preventing them from accessing quality healthcare services, actualising their dreams and full potentials. Unfortunately, the healthcare providers, charged with the responsibility of promoting health, complicate it through systemic and attitudinal means. The attitudes of the health professionals have impacted mental health and psychosocial disabilities by rendering the disabled disadvantaged and vulnerable to various forms of abuse, injuries and diseases. Guaranteeing the mental wellbeing, protecting the fundamental human rights and ensuring the social inclusion of patients with disabilities are uncertain. It is a common practice among healthcare providers to apply medication on patients with disabilities without recourse to their consent, which is against the ethics governing their conduct. Additionally, patients are treated as fakers of symptoms which may associate with their insufficient knowledge on how to handle patients with disabilities. This implies that disabled patients experience violence from those entrusted to take care of them either consciously or unconsciously, directly or indirectly.

Human Rights Watch (2019) reports that persons with disabilities are more likely to experience violence from a caregiver. The violence may be physical, sexual or psychological and can intimidate, threaten or coerce the disabled persons to misbehave or act violently towards their caregivers. The barriers experienced by patients in the hospitals prevent them to enjoy adequate healthcare like other non-disabled patients. These barriers lead to neglect in terms of failure to provide medication, supervise medical or dental care that could expose the patients to undue risk through unsafe environments or practices. Negative attitudes of the health providers can contribute to withholding or failure to provide the necessities of life, wilful deprivation of assistance to and restricting social, intellectual and emotional wellbeing of the patients with disabilities. The barriers created in the hospitals are capable of leading to a serious disregard of responsibility by the healthcare providers and exploitation, injury or harm of the patients with disabilities.

The awareness, lamentation and agitation of the persons with disabilities who are educated, enlightened, cosmopolitan and high net worth individuals, brought the strident voice for the eradication of barriers created not only in the hospitals but also in all areas of life. Ojo (2017) identified organisations like National Association of the Blind, Centre for Citizens with Disabilities, Association of Lawyers with Disabilities in Nigeria, Joint National Associations of Persons with Disabilities, among others, as the means through which the voices of the disabled persons are heard and barriers are removed. The 2018 Act on Discrimination Against Persons with Disabilities (Prohibition), which Nigeria's President, Muhammadu Buhari claimed that he had not received as of January 17, 2018 on national television was later signed on January 23 after 9 years of relentless advocacy by disability rights groups and activists.

The law "prohibits discrimination based on disability and imposes sanctions including fines and prison sentences on those who contravene it. It also stipulates a five-year transitional period for modifying public buildings, structures, and automobiles to make them accessible and usable for people with disabilities". The law will establish a National Commission for Persons with Disabilities, responsible for "ensuring that people with disabilities have access to housing, education, and healthcare where it will be empowered to receive complaints of rights violations and support victims to seek legal redress amongst other duties". With the implementation of these laws and several campaigns carried out to make the patients with disabilities have equal access to quality healthcare services as non-disabled patients, they are, however, restricted by the barriers which are systemic and attitudinal in nature.

This paper sets to examine the behaviours of healthcare providers on the assumption of symptoms faking by patients with disabilities; to explore healthcare providers' level of adherence to the ethics of consent while treating and applying medication to PWDs; to determine the attitudes of health providers towards the wellbeing of PWDs; to identify how healthcare providers' knowledge can influence access to quality healthcare services; to highlight the forms of abuse and neglect perpetrated against PWDs by health providers; and to find out the systemic barriers against access to quality healthcare services by PWDs.

Methodology

The paper adopted qualitative approach of data collection and thematic analysis. The justification for this approach is to produce contextual real world knowledge about the behaviours of the healthcare providers towards PWDs. The adoption of this approach was to enable the researcher contribute to knowledge through reviews and interpretation of secondary data including journal articles, internet information, and several empirical works on disabilities. The analysis and submission of this work reflected the happenings in Nigeria

Healthcare Providers' Assumption of Symptoms Faking by Patients with Disabilities

In hospitals, patients with intellectual disabilities e.g. deaf and dumb persons, are disrespected when they complain of any health challenge. Their condition makes it hard for them to holistically discuss their problems with doctors and several hospitals lack the facilities to ensure equal treatment of all patients. Perry (2018) asserts that doctors find it hard to believe patients diagnosed with an intellectual disability. Accordingly, medical workers are fond of carelessly assuming that symptoms and illnesses are faked by persons with intellectual disabilities. This can infuriate patients who have a hard time discussing their conditions and can also cause the medical staff to demand psychiatric evaluations of the patient. It is so unfortunate that patients with disabilities are readily judged mentally imbalanced when visiting hospitals for treatment or diagnosis. Patients with disabilities indeed face challenges in accessing routine care for managing the symptoms of their co-occurring genetic conditions and are sometimes ignored and disrespected by the medical staff based on the assumption that their condition may not be real as claimed. On this assumption, patients are subjected to derogatory words and get discouraged to access medical care when the need arises. The concept of mental retardation has been used to describe persons with intellectual disability to render their voices impotent and that is considered abuse on the part of such patients.

It is common for the medical personnel to keep patients, most especially patients with disabilities waiting for a longer period, while seeking medical assistance or healthcare when they are assumed to be faking symptoms. This action against the patients can metamorphose into several other health challenges depending on the problems experienced by the patients. Take, for instance, the condition of a person suffering from autism, who has visited a hospital for complaints, and is kept in the emergency room for long hours due to inability to communicate through speech, may worsen if the person experiences shaking of the body, chattering of teeth or sweats profusely (Perry, 2018). This condition can be best attended to where the patient can write their experience on a piece of paper before the situation worsens beyond normal.

Perry (2018) observes that several types of research have revealed that the risks for patients with disabilities were higher and that the outcomes were worse in the hospitals. The suspicion of the patients with disabilities by the medical personnel has contributed to the mislabelling, misidentification, dehumanising and ignoring of patients in the hospital settings. The routine diagnosis of patients with disabilities can be fraught with suspicion by medical personnel most especially when an autistic patient is extraordinarily fluent in medical knowledge, passionate, articulate, and extraordinarily well-educated. As such, the patient can be accused of faking ailments or wrongly diagnosed for factitious disorder or psychosomatic disorder or both. Perry (2018) further notes that it is common to discharge patients with disabilities from hospitals before full health recovery with the notion that they will be fine on their own. Patients, who are conscious of their conditions, take the case of persons on wheelchairs, are dissatisfied with such hurried discharge. The patients may require in-patient treatment rather than home treatment. Where reverse is the case, they are wheeled out of the hospital environments to the door of the homes.

Patients' Treatment and Medication Application without Consent in Hospitals

Hospitals have been reported to administer medications and attend to patients with disabilities without adequate compliance to consent which is contrary to the ethics of medicine. The Human Rights Watch (2020) reports that it is a common practice among health practitioners to administer medication forcibly to persons with cognitive disorders especially those living with schizophrenia, without obedience to their consent. In psychiatric hospitals and government-run rehabilitation centres, medical workers are known to give both oral and injectable medication without the consent of patients suffering from mental problems. The administration of medication without consent happens when health professionals fail to learn and understand the signs and symptoms of the peculiarities of their illnesses, most especially understanding their communication or allow them to speak up before administration of treatment.

The administration of electroconvulsive therapy (ECT) on patients with cognitive problems has also been reported where it is adopted and applied on patients without due diligence to their acceptance, knowledge or consent. The ECT is a medical treatment commonly used for treating patients with depression or bipolar disorder that is severe and has failed to respond to other treatments. The ECT involves a brief electrical stimulation of the brain while the patient is under anaesthesia. The conditions of the patients may warrant medication to be applied by a team of trained medical professionals without their consent. This action amounts to the abuse of the patient's consent, although, such abuse is termed warranted abuse. However, it is important that where such consent cannot be sought, medical personnel inform the guardian of the patient.

Children with disabilities are treated without consent seeking by doctors with the belief that their privacy and dignity are not important during treatment. It is believed that examining their bodies or exposing it during treatment does not make them feel embarrassed. Patients with learning disabilities or mental health conditions are not giving enough attention by the health professionals and as such, they may not be properly consulted about their health needs and wrongly or poorly treated because of prejudice or wrong ideas about their physical health problems. For instance, a patient with a learning disability who finds it difficult to understand things may be required to go for a risky operation, sign a consent form without due understanding which no one has taken the necessary time to explain. The inability to give consent puts the patient at a disadvantage even though it is understood and allowed by the significant others of the patient.

Attitudes of Health Providers and the Wellbeing of Patients with Disabilities

The attitudes of health providers are key determinants to the general well-being of not only patients with disabilities but for all categories of patients. Where the attitudes are negative, it impacts negatively on the health of the patients. Sanchez et al. (2000) observed that the poor attitudes of the healthcare providers towards patients with disabilities significantly deter good quality care and that many physicians saw nothing wrong with their perception of disabilities and attitudes towards the disabled. On this note, Antonak and Livneh (2000) claimed that the negative attitudes of the physicians towards patients with disabilities create several difficulties and mirror the perception of society in general. It is indicative that attitudes of health professionals are key determinants to access quality health services for patients with disabilities, influence physicians' judgments and interventions and can also have profound effects on the treatment process. Poor judgement or attitude can make a person's disability to be perceived as a negative trait, an abnormality or even an illness.

Perceiving disability as an illness by the health professionals is disrespectful to the disabled who perceive it as a condition of life (Jorgensen, 2005). Both illness and disability often co-exist, but they generate different responses from clinicians. According to McColl et al. (2008), illness implies an acute, curative response, which does not apply to a disability that is part of patients' everyday life. McColl and Bickenbach (1998) submit that the concept of illness inappropriately defines the "sick" role and disempowers patients with disabilities who are already being challenged by their disabling conditions. The report by Veltman et al. (2001) showed that adequate account of disability was not taken by one-fifth of doctors, and that fifth of them attributed everything to the disability. This, therefore, is responsible for the failure to thoroughly explore new complaints as warranted. Iezzoni et al. (2003) observe that misunderstandings and discordant expectations between disabled patients and health professionals exist regarding patients' overall health, the potential for recovery and even life expectancy.

The challenges experienced by patients with visual impairments have also been documented. Health professionals hardly look at the direction of patients with visual impairments with the perception that it does not add any value to their treatment. Doctors are known for leaving them in the offices for other services without prior notice. There is no doubt that such behaviour could result in disorientation. Some nurses are not well trained on how to handle blind patients. While assisting blind patients with canes, some nurses fail to offer their arms on the patients' free sides. Nurses are fond of walking at an abnormal pace with or faster than the patients. McColl et al. (2008) observed that the nonchalant attitude of the health personnel against patients with disabilities, cannot be dissociated from the time required to transfer, position and undress the patients. This implies that doctors were less likely to examine disabled patients and more likely to accept their verbal report of a problem. The role of undressing patients with disabilities during appointment and examination may not be considered doctors' primary responsibility but as ordinary assistance that cannot be forced on them.

McColl et al. (2008), in their study, claimed that the attitudes of the health professionals towards disabled patients fail to accommodate their special needs in the practice. Based on this, disabled patients are required by several physicians to bring an attendant to assist with special functions like transferring, dressing and undressing, communication and follow-through. Particularly, disabled patients face challenges while trying to find an assistant or family member who will be available on the scheduled appointment. Where patients fail to secure assistants, they are forced to unnecessarily postpone scheduled appointments and when they finally come to the hospital without an assistant, they are left untreated or poorly attended to by healthcare practitioners. It should be noted that the requirement of disabled patients to come along with an assistant to the hospital during appointments enhances access to the office and equipment, and access to a high standard of primary care), however, it also impedes confidentiality and full disclosure because of the lack of privacy between patient and doctor.

Reports have it that healthcare providers are fond of prolonging or changing the appointments of patients with disabilities. This attitude exposes the patients with disabilities to all sorts of health challenges, abuse and neglect. Healthcare professionals have been found to giving short time to patients with disabilities in their offices while attending to their health problems even though, non-disabled persons are giving sufficient and longer hours. By implication, patients that demand more time and attention are influenced to give incentives, exorbitantly charged and exploited at the benefit of the physicians. McColl et al. (2008) acknowledge that several disability groups have rejected the use of incentives by patients with disabilities to access the same standard of care provided to non-disabled patients. The emphasis here is that primary care is considered an entitled service for all patients, hence, patients with disabilities need not explicitly reward for service provision. The fact that patients with disabilities are equal to other citizens, they deserve to be treated equally but not like other patients because their conditions require special treatment. McColl and Shortt (2006) asserted that disabled patients remain the most users of healthcare, hence, they experience considerable unmet needs within the healthcare system.

Knowledge of Health Providers and Access to Quality Healthcare Services

Health care personnel at the rural community level lack adequate basic mental health and psychosocial skills for effective task sharing and task shifting to effectively manage the conditions of patients with mental disorders without abusing or violating the fundamental human rights of the patients or the ethics guiding medical practice. Persons with learning disabilities experience various forms of discrimination and abuse in hospitals due to the difficulties in understanding things connected to their disabilities. This can render the medical staff who are not conversant with this condition incapacitated and unable to make reasonable adjustments.

In the case of patients with cerebral palsy, having speech impairment, health professionals do fail to ask them to repeat the complaints they do not understand. They assume that the condition is well understood without asking the patients for the repetition of the information. By this, they wrongly attend to the patients and fail to address the challenges reported. Sometimes, patients with cerebral palsy are neglected in hospitals when they request assistance from nurses. It is also common to address adult patients with mental retardation as kids by healthcare assistants. Also, while giving instructions or directions to patients with mental retardation, health professionals usually speak too lengthy, fast and sometimes unclear to the patients. This undermines their patients' status and the etiquette for attending to patients. Patients with hearing impairments can hardly be attended to without the presence of their significant others. It is based on this that they are attended to through third parties.

In a study conducted by McColl et al. (2008), it was discovered that many health professionals lacked the adequate knowledge to diagnose and address, had no training on how to relate with or assist patients with disabilities and experienced personal discomfort while treating them for the avoidance of perceived potential professional liability e.g. an incident such as a fall. Corroborating this, Bernatsky et al. (2006) claimed that expertise-related problem primarily impacts on the standard of care delivered through the inability to diagnose disabling conditions accurately and to anticipate further disabling consequences. There is no doubt that such a problem significantly deters high-quality primary care.

McColl et al. (2008) note that many physicians interviewed in the study revealed that they had adequate knowledge on primary care but lacked more information about disability, because the practice passed through while learning, contained only a few patients with disabilities. Therefore, it would be difficult for doctors to develop an understanding of the issues related to disabilities. Affirmatively, Claxton (1994), in a study conducted among doctors, revealed that medical practitioners had relatively little exposure to adult disability in medical school or residency training, and were more familiar with the concept of disability in their elderly patients. By implication, it justifies the compelling case for the absence of special attention to disability-related issues.

Abuse and Neglect of Patients with Disabilities by Health Providers

Deep-rooted problems in Nigeria's healthcare and welfare systems leave most Nigerians unable to get adequate mental health care or support in their communities. There is a perception among Nigerian people that disability e.g. mental illness, is caused by supernatural forces and is contagious. Stigma and misunderstanding about mental health conditions, including the misperception that they are caused by evil spirits or supernatural forces, often prompt relatives to take their loved ones to religious or traditional healing places as against medical centres. It is believed that medical practitioners usually fail to address patients' mental illness, maltreat them, and subject the families and the relatives of the patients to financial exploitation. Among some health practitioners, patients in wheelchairs or who are mentally ill, are sometimes treated with no respect and their conditions are considered contagious. Convincingly, such patients can be abused, treated poorly or poorly assisted. Patients in wheelchairs are troubled by being forced or conditioned to look up repeatedly while discussing with health professionals who are standing or not ready to kneel or sit down. This can strain their necks.

Patients with disabilities are abused every day in hospitals consciously or unconsciously by medical practitioners including physicians, nurses, radiologists, virologists, psychiatrists, anaesthesiologists, among others. Patients with disabilities most especially the children, are vulnerable to poor treatment from medical personnel. Thus, they are more likely to experience abuse not only in the hospital environment but also at home than non-disabled children. Children with disabilities are often maltreated and abused by healthcare practitioners who see nothing wrong in it and consider it normal while managing the health of these individuals. There are practices in the hospitals shrouded under normal clinical routines and continue unchallenged but construed as abuse. People with a mental health condition may be disadvantaged when accessing and using health services. This challenge can make them aggressive towards medical personnel, especially when they become aware of the abuse and poor treatment given to them.

Human Rights Watch (2019) reported that patients at psychiatric hospitals were found chained in some Northern hospitals in Nigeria. The report shows that the staff of some of the hospitals refuted chaining patients but wards were discovered where people had iron shackles around their ankles. Olawale (2019) observes that several hospitals classified illegal treatment centres exist in the country where patients with disabilities, most especially those with mental illnesses, are maltreated while receiving treatment. Accordingly, the treatments given to these 'inmates' are unorthodox mental health care and psychosocial services which particularly violate the rights of persons with mental health and psychosocial disabilities. Getting the attention e.g. speaking with the patients, is very much difficult, hence, health professionals are forced to tap them on the shoulders or wave in their direction. However, it is often common to see these patients being insulted or abusively tapped by health practitioners while seeking their attention.

Disability Rights California (2020) notes that incidents of abuse or neglect of patients with disabilities exist in hospital settings including nursing homes or board and care homes. Accordingly, patients lacked insight into the abuse subjected to by the hospital personnel. In some cases, patients with mental illness, are subjected to using buckets as toilets, served on outdoor picnic tables during rainy or dry periods and their meals are cooked and prepared in open spaces. Disability Rights California (2020) reports that aggressive patients with disabilities are injured by medical staff while trying to apply medication. Accordingly, several incidents such as unexpected/suspicious deaths and sexual assault allegations of patients with disabilities perpetrated by medical staff have been reported to law enforcement agencies.

Physical and sexual abuses are perpetrated by medical professionals and hospital workers against patients with disabilities. Long (1992) discusses a case of a nurse convicted and sentenced to two years in prison for indecent assault on two 13-year old boys and at Booth Hall Children's Hospital in Manchester. Similarly, Westcott (1993) reveals that adult patients with disabilities interviewed, who had spent a long time in hospitals and psychiatric institutions, reported having been abused by doctors in the hospitals as children and as adults. In a study conducted by Robin (1982), it was discovered that patients in psychiatric hospitals in the US were abused through depersonalised rules and regulations, isolation and seclusion, the use of locked doors, and the use of drugs for the management of disruptive behaviour.

Systemic Barriers against Patients' Access to Quality Healthcare Services

There are several barriers obtainable in the hospitals which are indicative of the way and manners the patients with disabilities access healthcare services. These barriers pose challenges in accessing medical services and contribute to inequality in the system of treating patients. In Nigerian hospital settings, there is inadequate information in Braille and large print on disease prevention and signs and symptoms identification that can be easily read and understood by persons with vision impairments. Therefore, such patients can hardly understand the trends of health challenges and take measures to prevent the contraction of diseases. Centres for Disease Control and Prevention (2019) observes that access to medical services consists of both communication and physical access which have rendered the services given by the health professionals to patients with disabilities, most especially the deaf or those with a speech, vision, or intellectual disabilities ineffective. Materials like pencils and paper handy to communicate with the patients are also not provided for patients with hearing impairment. Most Nigerian hospital surfaces are slippery and uneven in structure. This poses problems for people walking with assistive devices like canes, wheelchairs, etc.

Healthcare providers (hospitals and private clinics) make their services inaccessible to and discriminate against patients with disabilities. McColl et al. (2008), reported that the challenges experienced by patients with disabilities in hospitals are systemic in nature, which is caused by the policies and administration of hospital owners. There are shortages and mal-distribution of physician human resources in hospitals which often lead to difficulties in accessing quality and qualified doctors and long wait times due to large caseloads of patients. These challenges are experienced by all patients but more common in patients with disabilities. Barros (2003) agrees that patients with disabilities are considered an economic liability because they take more time than the standard ten-to-fifteen-minute appointment. McColl et al. (2008) express that having more patients does not add any other financial incentive to the agreed pay given to physicians by their employers. The challenges of the patients with disabilities are compounded by the absence of supports or assistance from physicians most especially those with complex patients in small practices. The lack of health professionals or even administrative staff to fulfil some of the functions that are not strictly medical but required by the patients with disabilities exposes them to several barriers, abuses, discrimination and even exploitation.

McColl et al. (2008) observe that several barriers (physical, attitudinal, expertise-related and systemic) exist in the hospitals which confront patients with disabilities. These barriers prevent to access primary care like finding a doctor, getting an appointment, entering and using the facilities in the practice, and receiving a reasonable standard of care and ultimately prevent them from accessing quality healthcare. McColl (2006) asserted that disabled patients are systematically excluded from special treatments by hospitals because of the burden they are perceived to impose on the physician's time. Patients with disabilities face a lot of systemic barriers in accessing good health and several studies have shown that they are more likely to report cases of abuse and health challenges including poorer overall health, less access to adequate health care, risky health behaviours, smoking and physical inactivity than non-disabled people. Private hospitals are insufficiently staff, hence, there is a lack of enough staff on duty to deal with patients with disabilities. The conditions pose stressful experiences to patients with disabilities in the hospitals and could discourage them from visiting the hospital for health issues which may also compound or worsen their health problems. It is no doubt that such an experience is an infringement upon the fundamental human rights of the patients.

The hospital settings are also not designed to accommodate patients of all statuses as some of them lack the installation of automatic doors or ramps and accessible toilet facilities to enable them to move freely, access medical services and gain comfort while in the hospitals. McColl et al. (2008) reported in their study that several physicians interviewed acknowledged that their offices were not designed to accommodate wheelchairs, and lacked special facilities to accommodate cognitive disabilities. The findings showed that physicians were aware of the challenges faced by patients with disabilities in the hospital environments but lacked the correct manner to provide physical assistance to them and where there was a solution to this challenge, many of the health professionals showed a reluctant attitude to assist.

The hospital settings in Nigeria do not provide room for doctors to maintain eye contact with patients with hearing impairment and who depend on speech-reading to understand conversation due to an insufficient number of doctors to a significant number of patients. Where other patients wait for doctors, they easily get distracted and while discussing with others, speech-reader patients may think the conversation is over. The life of patients with hearing impairment is made difficult when health professionals are not familiar with sign language/reading or hospitals lack sign interpreters. Centres for Disease Control and Prevention (2019) also notes that many healthcare professionals lack the knowledge to attend to the special needs of patients with disabilities, hence, they are poorly treated. Also, the structure of the country creates transportation difficulties for patients with disabilities which are experienced in the hospitals while seeking medical care. Health providers lack available and accessible medical equipment like scales, examination tables, or chairs, for patients with disabilities. Also, the timing allotted to examining patients with disabilities is short, compared to non-disabled patients for all sorts of reasons, in the normal course of medical practice.

McColl et al. (2008) revealed in their study unequivocally that patients with disabilities took more time during the examination and were more complex. Accordingly, physicians astutely claimed that taking care of patients with disabilities in the hospitals was more like social care rather than strictly medical care. The findings also revealed that disabled patients suffered basic primary care physical examinations and preventive health measures. They eluded these challenges to logistical difficulties and constraints on physicians' time. At the community level, the primary health care lacks mental healthcare services for enhancing effective and qualitative mental health, psychosocial services and discourage community participation. House of Commons Health Committee (1997) reported that the problems associated with disabilities are influenced by a shortage of resources such as beds and medical staff, which are capable of compromising quality healthcare and leading to unnecessary delays and even death. Accordingly, inadequate services for patients with disabilities, lack of priority given to them, and geographical inequalities in the provision of medical services are caused by the irresponsibility o owners and managers of hospital environments.

Conclusion and Recommendations

Centres for Disease Control and Prevention (2019) reports that persons with disabilities are more susceptible to health problems that would have been prevented, if not disabled and such status could decrease their overall health and quality of life. Accordingly, they are also prone to experience fatigue, pain, obesity and depression as a result of the disabling condition. The health disparities in the country and other health challenges caused by the disabling conditions of the persons with disabilities restrict their access to health care facilities and equipment and increase poverty among them. The implication for short timing is that doctors would not have the room to adequately educate the patients on how to live a long and healthy life, listen attentively and respond swiftly to the patient's health concerns. Similarly, patients will lack the information needed to prevent or treat a health problem. Communication with the patients becomes unclear, understanding questions and instructions of the physicians are ambiguous and incoherent to the patients with intellectual disabilities.

This paper argues that the challenges created by the hospitals and its workers through their action and inaction can subject patients with disabilities to health, economic, social, emotional problems arising from malnutrition, unsafe working conditions, inadequate access to education and health care, a polluted environment, and lack of access to safe water and sanitation. Additionally, poor attention to the conditions of patients with disabilities can complicate their conditions by resulting in a lack of employment and education opportunities, increased cost of living, lower wages and other forms of disabilities. Ojo (2017) reveals that problems experienced by patients with disabilities in the hospitals can lead to long-term physical, mental, intellectual, or sensory impairments which as well interact with various barriers hindering their full, effective and equal participation in society with others.

Nigerian healthcare providers must be aware that access to basic healthcare services is a precondition to equal opportunities in life and is essential for being valued and considered as productive members of society. In Nigeria, patients with disabilities are subjected to inequality, discrimination, and abuse in the course of accessing healthcare services as a result of barriers that are attitudinal and systemic in nature. The negative attitudes of the health providers toward the patients with disabilities are complicated by healthcare staff's lack of special training or interpreter package to handle the medical care of persons with disabilities, most especially patients with hearing or vision impairments (Oliver, 1998). Nigeria is known for lack of equitable health services including health promotion and disease prevention services for patients with disabilities (Paris, 1993). Also, across the spectrum of Nigeria, there is a lack of health insurance or coverage for services like assistive technology, durable medical equipment to guarantee both specialty and long-term care and care coordination.

Awareness must be created that the challenges experienced by the patients with disabilities in the hospitals go beyond health problems and metamorphose into poverty, discriminatory attitudes, poor communication, lack of understanding and education. This paper also notes that inadequate knowledge of healthcare providers on how to handle patients with disabilities contributes to the challenges experienced while accessing healthcare services. It is recommended that healthcare providers are well trained on how to handle any forms of disabilities and their patients. Nigerian healthcare providers should treat patients with disabilities equally with the general public. The ministry of health should be committed to ensuring the provision of fair and equitable health service, responsive to the needs of disabled patients. There is no doubt that such commitment will positively impact productivity, quality of life and general well-being of the disabled persons in Nigeria. Foremost, the Nigerian government should put in place favourable policies to protect persons with disabilities, particularly, human rights laws to ensure access to quality healthcare services and remove all barriers.

It is recommended that the use of covert video surveillance in hospital settings to document life-threatening abuse be encouraged. Awareness should be raised among health providers and their managers on the complexity of disability and the required attitudes needed to promote patients' health. Hospital owners and managers should heavily invest in medical human resources by allocating resources commensurate with patients' needs. Measures should be taken to identify and stop both intentional and subtle abusive practices through changes in attitudes by medical staff. Medical staff should be of the highest quality and this can be achieved through rigorous procedures in selecting, assessing and training.

Measures should be taken to ensure that doctors meet the basic needs of patients with disabilities. Ultimately, there should be external systems of inspection, monitoring and standards.

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Healthcare Seeking Behavior and Utilization of Maternal Healthcare Services among Women of Reproductive Age in Northwest, Nigeria

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Abstract

Maternal health outcomes and indicators in Northwest, Nigeria are some of the worst in the world, with many women and girls losing their lives or becoming incapacitated as a result of pregnancy and childbirth complications. Maternal morbidities and mortalities are preventable with the availability and regular utilization of functional maternal healthcare services. As one of the major determinants of the utilization of maternal healthcare services, maternal health seeking behavior goes beyond individual decision, but a complexity of socio-cultural and economic factors determining women's utilization of such services in the Northwest. Relying on literature on the health seeking behavior of women in the region, this paper offers theoretical and contextual explanations for women's low utilization of maternal healthcare services in the region. The Northwest region is a predominantly Hausa and Muslim society, with a culture that is entwined and guided by the Islamic injunctions. Lack of autonomy in decision making, high adherence to cultural belief and practices, illiteracy, distance and poor access to maternal healthcare services are among the major factors impeding utilization of maternal healthcare services among women in the region. The paper thus, recommends that, in addition to making education more accessible to lactating women, interventions towards increasing utilization of maternal healthcare services must inevitably target husbands, being the key actor in determining healthcare seeking behavior within the households.

Keywords: *Maternal Health, Healthcare, Behavior, Northwest, Nigeria.*

Introduction

Globally, maternal health indicators are among the health indicators that reflect the greatest disparity between developed and developing countries (World Bank Report, 2013; African Progress Panel, 2010). Poor maternal health is said to be an indicator and cause of extreme poverty, which is why United Nations (UN) through the Millennium Development Goals (MDGs) (World Health Organization, 2005) and later the Sustainable Development Gals (SDGs) adopted improving maternal health with the target of a global estimated Maternal Mortality Rate (MMR) of fewer than 70 maternal deaths per 100,000 live birth by 2030.Yet Nigeria is still a long way from the said the target, with a MMR of 512 per 100, 000 live birth (National Population Council, 2019). Nigeria has an annual estimate of 40,000 maternal deaths, accounting for 14% of the global burden of maternal mortality, which makes it the second largest contributor to maternal mortality after India (African Population and Health Center, 2017).

Maternal mortality is said to be the extreme consequence of poor maternal health, yet despite the grim statistics, maternal mortality is just an aspect. For each death, 30 to 50 women suffers from maternal morbidities (World Health Organization, 2013; Koblinsky, Chowdhury & Ronsmans, 2012). Pregnancy and childbirth continue to be a major source of death and disabilities among women of reproductive health in developing societies, northwest Nigeria inclusive. Pregnancy is a natural process, however, many pregnancies often end up with life threatening, high risk, and at times - chronic or other serious health complications. The situation is worst in Northern Nigeria, which despite the global decline in maternal mortality, the MMRacross four states (Katsina, Zamfara, Yobe and Jigawa) in the northwest and northeast Nigeria was estimated to be 1,271 per 100, 000 lives (Doctor, Findley & Afenyadu 2012), further declining to 1,012 per 100,000 live birth for Jigawa state, which is still higher than the national average (Sharma, Brown, Kainuwa, Leight, & Nyqvist, 2017).

The leading causes of maternal deaths in northern Nigeria are hemorrhage (heavy bleeding), sepsis (infection), unsafe abortion, eclampsia (hypertensive disorders), obstructed labor, malaria and anemia (Federal Government of Nigeria and UNDP, 2013). It was reported Nigeria has the prevalence of Obstetric fistula at 3.2 per 1000 birth with an estimates of 13,000 new cases annually (FMoH, 2019). The cases of Vesico-Vaginal Fistula (VVF) are attributed to early marriage and pregnancy which is more prevalent in the northern parts of Nigeria (Amodu, Salami and Richter, 2018; Ijaiya et al, 2014). Apart from VVF and RVF, cases of eclampsia and pregnancy induced hypertension are also high (Yarzever, 2013), which has serious physical and psychological consequences on affected women.

A look at all the causes of maternal mortality and morbidity will show that they are all preventable only if women had access to timely obstetric and maternal healthcare and utilize the services. The problems of maternal morbidity and maternal mortality are particularly acute, among the rural women and women in northern Nigeria (African Population and Health Research Center (APHRC) 2017; Hassan, 2016; Yar'zever 2014; Basirka, 2012; Wall, 1998). Pregnancy and childbirth has been known to be influenced by the social settings in which it took place because societies vary in the way they treat pregnancy and also, in their ability to deal with the complications that often come with it (Wall, 1998). The Hausa society is a pro-natalist society where children are seen as a gift from God, as such pregnancy is often seen as miraculous - something no human can control. Moreover, traditionally, certain actions or herbs have always used to ensure successful pregnancy.

Data from NDHS (2018) shows that while there has been a steady increase since 2008 on the number of women receiving ANC from a skilled provider in Nigeria, there are still 46.1% in the North West who did not. For delivery care, while 82% births in the South East were in a health facility, only 16% reported having skilled assistance during birth in the North West. As for the postnatal care, which is the period where complications are most likely to arise, 76.8% of women in the North West region had no postnatal care, while only 19.2% did not in the South West (NPC, 2019). Considering the fact that the same DHS shows that the lifetime risk of maternal death in Nigeria indicates that 1 in every 30 women will die as a result of pregnancy complications, being pregnant is dangerous in northern Nigeria. In most cases, maternal morbidity or pregnancy related complications does not only affect the physical condition of a woman but also her sexual, psychological, social and economic wellbeing (UNFPA, 2013).

This paper offers theoretical and contextual explanations on maternal health seeking behavior in Northwest Nigeria, taking into consideration, the socio-cultural complexity of the region, thereby offering recommendations to tackle the issue.

Theoretical Underpinnings

The Anderson socio-behavioral model was first developed by Anderson (1968), but was first modified in 1973. Initially, the model was developed to study the healthcare seeking behavior of the whole family, however due to the criticism about the heterogeneity of family members; the model was later adapted to focus on the individual rather than the family as a unit of analysis. Since 1973, the model has been modified to accommodate its criticism. However, the core assumption for Anderson (1968) socio-behavioral model is that, the decision to patronize a particular medical channel (whether the healthcare facilities or the traditional healthcare services) is influenced by a variety of socio-economic variables, sex, age, the social status of women, the type of illness, access to services and perceived quality of the service. For him, three variables influence the use of healthcare services:

1. Predisposing factors include race, age, and health beliefs.
2. Enabling factors include family support, access to health insurance and the individual's community.
3. Need represents both perceived and actual need for healthcare services.

The model was also criticized for not paying enough attention to culture and social interaction but Anderson modified the model in 1995 and argued that those factors are included in the predisposing characteristics component, he also included demographic factors such as sex, marital status and past illness; and social structure which are, are education, ethnicity, occupation, family size, religion and residential mobility including social networks and culture (Andersen, 1995). Culture encompasses an individual's value concerning health, attitudes and the individual's knowledge of the condition. The enabling factors were also expanded to include community factors. Family factors include income, health insurance, type of service regularly used; access to regular source (e.g. hours of availability, distance to source, waiting lists). Andersen suggests that quality of social networks, or social support, are also part of the enabling factors. Community factors are the ratios of health personnel and facilities to the population, differences in the price of health services, region of the country, and the rural or urban character of the region. These groups of factors are significant, especially for health care utilization in developing societies such as northwest Nigeria. The third variable 'Need', can be differentiated into perceived need and evaluated need. Perceived needs are the personally experienced need while evaluated needs are the professionally established need. The perceived need is an interaction of probable biologically active disease and the perception of the patient influenced by health beliefs, experience, etc.

The 1995 version of Anderson's model has been criticized for its lack of dynamic character. Another criticism was the overemphasis of the need and at the expense of health beliefs and social structure. However, Anderson argues 'need' itself is a social construct. That is why it is split into perceived and evaluated. The Anderson model best describe utilization of maternal healthcare in north west Nigeria as all those variables are significant in influencing whether a pregnant woman would either have ANC, delivery care and PNC in healthcare facilities or visit a TBA or none.

Salient Issues in Healthcare Seeking Behavior and Utilization of Maternal Healthcare Services

Maternal Healthcare

Maternal healthcare encompasses the healthcare a mother receives during pregnancy, delivery and postnatal periods, from trained healthcare providers. It has been described as the overall comprehensive wellbeing of women at the stage of pregnancy and children below the age of five years (Olonade, Olawande, & Imhonopi, 2019). It includes antenatal care (ANC); Delivery care includes delivery by skilled birth assistants and availability of emergency obstetric care and postnatal care.

Antenatal care: This encompasses early detection and treatment of diseases and complication in pregnant women; immunization and micronutrient supplementation; birth preparedness and complication preparedness; health counseling including information and sensitization on proper nutrition and sanitations. Early detection of complications during ANC leads to timely treatment and referral which can a long way in reducing the risk of maternal morbidity. ANC does not only identify risks and mal-presentation, provides information on recognition of danger signs and symptoms but also play a critical role in establishing confidence between the woman, the family and the healthcare provider (Inam & Khan, 2002).

In Nigeria, the ANC policy was adopted after the World Health Organization approach, which rather than advocating for higher frequency of antenatal visit, emphasized the quality of care during each visit. For the WHO, At least four ANC visits are recommended for women with no complication. During the 2008 NDHS, it was found that, it was found that 58% of women received ANC from a skilled health care provider, 3% received ANC from TBAs and 38% did not receive ANC at all. It was also found out that mother's level of education is related to the use of skilled ANC and women with their first birth received more ANC from a skilled health provider than women with higher birth order. However, there is little improvement in the ANC utilization in the 2013 NDHS, 34% women in Nigeria who had no ANC during pregnancy, the situation is worst in the North West region as 55.4% of women who delivered during the five years preceding the national demographic health survey, had no ANC compared to the 4.2% and 5.7% in the South East and South West respectively.

Delivery care: Delivery care includes delivery by skilled birth assistants and availability of emergency obstetric care. Skill birth assistants include doctors, mid wives and nurses who were educated and trained in skills required to manage normal pregnancies, childbirth and the immediate postpartum periods, including trained traditional birth attendants (TBAs). The conditions for delivery care are: first should be assisted by trained health workers who are able to identify the signs of complications and act appropriately when a problem occurs. Second referral facilities should be available to deal with obstetrics emergencies once they have been identified, and on arrival at the referral facility, women should be observed immediately. In addition, for delivery care to be effective there is also the need to have a transport system that will get the women to the facilities in time (Thaddeus & Maine, 1994).

However, in developing countries, there are several socio-economic and institutional factors militating against the effectiveness of delivery care. These include: inadequate supply of equipment, materials and drug; inadequate blood supply and the absence of blood bank in most maternities and surgical consumables (Griffiths & Stephenson, 2001). In addition, the inability of the health personnel to incorporate the preferences of women such as childbirth in a squatting position rather than the norm in the hospital which is laying down are also contributing factors to the ineffectiveness of delivery care in the Northern parts of Nigeria (Kisseka, 1992). Medical evidence has shown that the squatting position also has its advantages which include: it is could be more comfortable and relieve backache, widens pelvic outlet and it may enhance rotation and descent in a difficult birth (Fraser, Cooper & Nolte, 2006). According to NPC (2014), only 38% of women in Nigeria had their childbirth by skilled birth assistants, 36% of which are in health facilities. Four in five births in the South West and South East are attended by a skilled health provider as compared to the 12% in the North West region; only 12.9% of women who delivered in Kano state for instance were delivered by skilled birth provider.

Postnatal care: Postnatal care includes postnatal checkups; immunization for both the mother and the new born; and family planning services and counseling for those who have experience obstetric complications. Postnatal period is defined by the World Health Organization (1998) as the period beginning one hour after delivery of the placenta and continuing till six weeks after delivery. It is recommended that a woman and the child she bore are assessed within the first hour of birth and again after discharge for births in a health facility. The first assessment should target the first 24 hours after delivery for births that occur not in health facilities. Follow up contacts are also recommended at least 2-3days, 6-7days and at 6weeks. However, according to a report from Safe Motherhood (2002), the majority of women in developing countries receive almost no postpartum care after delivery as only 5% of women in sub-Saharan Africa received postnatal care (Safe Motherhood, 2002).

Health seeking behavior

Health seeking behavior refers to the actions an individual or group of individuals takes towards being healthy and maintaining that health. Igun (1988), describe health seeking behavior from two major perspectives; the first is viewing it in as a 'single still picture of events', in other words, seeking for factors which may influence decisions and actions during a particular illness episode. The second sees health seeking behavior as a process which enfolds during a particular illness episode. Whether as an event or a process, it all boils down to taking actions using things at one's disposal to seek and maintain health. Erinosho (1998), on one hand, refers to health seeking behavior as the interplay between socio-cultural, economic, psychological and spatial factors on one hand and the patterns of utilization of health services on the other. Thus, health seeking behavior is the "way by which symptoms are perceived, evaluated and acted upon by a person who recognizes pain, discomfort and other signs of organic malfunction" (Mechanic, 1960).

*Health seeking behavior are influenced by a complex web of determinants (*Culture, economics, access, perceptions, knowledge, belief in efficacy, age, gender roles, and social roles*) and it is difficult to isolate the most influential determinants* in the decision to utilize health care. prevention and treatment of illness (Rebhan, 2015). These determinants may be similar across the globe but they have unique interactions, manifestations and influence on individual's or group's lives depending on the individual's or group's peculiarities (Prosser, 2007).

Maternal mortality

Maternal mortality according to the World Health Organization (2019), is the death of a woman during pregnancy, delivery or within 42days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. Maternal mortality is among the health indicators that reflect the greatest disparity between rich and poor. The main causes of maternal mortality are severe bleeding, infection, unsafe abortion, eclampsia, and obstructed labor. While every woman is at risk for experiencing sudden and unexpected complications during pregnancy, childbirth and following delivery, adequate antenatal, obstetric and post-natal care can reduce the risk of death considerably.

Maternal morbidity

Maternal morbidity is complex and difficult to define not as clear as mortality. It ranges from mild, to acute and could also be chronic depending on the criteria adopted by the researcher (Hassan, 2016). The complexity of the definition of maternal morbidity is connected to the difficulties in its diagnosis. However, maternal morbidity according to Koblinsky et al (2012), is "an overarching" term that describes the physical or mental or disabilities associated directly with pregnancy and child birth which can be classified into two (2) categories: acute maternal morbidity and obstetric complications. Acute maternal morbidity refers to the acute problems suffered during pregnancy up to 42 days, which is the standard postpartum period. Other researchers may refer to this category as 'Absolute Maternal Indications (AMIs)', 'Severe Acute Maternal Morbidities (SAMMs)' or "near miss" which is a term that is used for women who survived acute and severe pregnancy complications and escape death by receiving timely, appropriate care. They include obstetric fistula, uterine prolapse, chronic urinary tract infection and uterine rupture. Obstetric complications on the other hand, refers to complications that may directly cause maternal mortality, not only do these complications leads to death but also cause serious chronic maternal morbidity such as those described above (McCarthy and Maine, 1992). These complicated cases include ante partum or postpartum hemorrhage, prolonged or obstructed labor, postpartum sepsis, complications of abortion, pre-eclampsia and eclampsia (United Nations Children Fund; WHO; UNFPA, 1997) including caesarean delivery. These complications can occur at any time during pregnancy or childbirth, often without warning and requiring immediate access to emergency obstetric care for its management (Safe motherhood Reports, 1997).

Women health seeking behavior in the Northwest, Nigeria

Hausa culture is rooted in their religion which is Islam, which is reflected in their health seeking behavior. However, it is also shaped by certain traditional beliefs and practices as well as commonly accepted cultural understanding on the nature of disease and illness. Pregnancy therefore is often regarded as a natural process but very serious and life threatening. In fact, pregnant women are said to have one leg on earth and the other in heaven; implying that anything can happen in pregnancy. As a result, it is a general belief that nothing can be done except to wait for God's will. Pregnancies among Hausa women tend to occur at a younger age because of early marriage. Early marriage among Hausa women is quite common despite the increase in girl child enrolment in formal schools. Some of the reasons given for early marriage include the desired to avoid dishonoring the family name by ensuring that the girl child was not had sexual relations before marriage; low level of girl child enrolment in schools, economic reasons resulting from dowry; including the need to reduce the burden on the parents (Shehu, 1992).

Before pregnancy, there is what is termed as the *gishiri disease*. The word *gishiri* is usually used to describe a wide range of ailments related to the reproductive system. Studies have shown that the following symptoms resulting from specific medical conditions have been erroneously classified as the *gishiri disease*, they include: pruritis vulvae, amenorrhoea (absence of menstruation, infertility, obstructed labor, painful intercourse, vaginal atresia, imperforated hymen and menopausal syndrome. Other symptoms which are associated with anemia and malaria such as headaches, fainting attacks and oodema are also considered as signs of *gishiri*. During pregnancy, certain physiological changes that occur such as hypertrophy of the vaginal muscle coat, the softening of the pelvic floor, the increased vaginal discharge are all attributed to the disease.Hausa women's health seeking behavior is also influenced by male dominance in decision making. A woman choice is dependent on male partner as she needs his permission for spatial mobility even in the case of obstetric emergencies (Kisseka et al, 1992). This is also connected to the aversion of a male health worker seeing a woman's nakedness.

According to Adamu (2010), there also some specific dos and do nots of pregnancy among Hausa women; some of which include: sleeping on the right hand side rather than on the back; eating beans and vegetable; drinking lots of water; and exercise. The do not of pregnancy include: going out at night; laughing at an ugly person; taking sugary things; and taking water that is very cold.

TBAs are called *anguwanzoma* in Hausa language. Their main function is to assist women during delivery. They however, also provide ANC and PNC services. In a study that involves 15 TBAs and 165 women within the reproductive years, it was discovered that TBAs place a significant in maternal healthcare. The TBAs provide ANC medicine and during labor encourage women to deliver in squatting position as they believe that only this position brings about faster delivery. They also advice women not to push too hard so that they won't have *episiotomy* (tear). If that should happen, the TBAs advise the women to treat it with hot water. After delivery, they perform the ritual disposal of the placenta and the treatment of the umbilical cord (Muazu, 1992).

Factors affecting the utilization of maternal health services in Northwest, Nigeria

Poverty: Poverty is one of the major factor predisposing women to maternal morbidity. Approximately 99% of maternal deaths occur in poor countries and it is even higher among women living in the rural areas compared to those who reside in the urban areas (Kristof & WuDunn, 2009). Poverty is wide spread in West Africa especially the northern part of Nigeria where majority are Hausas. This is most especially for the Hausa women. In some societies, women are not given equal opportunities that men have to education and economic liberation because in such societies it is believed that exposing women to western education is a waste of resources when in the long run she will be under the protection of a husband (Okoye, 2011).Poverty limits women's access to quality life. It affects women accessibility to healthcare and exposes women to malnutrition, disease, unhygienic environment such as overcrowding and unclean water, and accessibility to information including limiting women's of getting educated. In addition, poverty also has grievous effect on the entire household of the ill (OECD reports, 2003). The cost of health care services is associated with maternal and infant mortality as it is the cause of the health care service that determines where women deliver their babies. Women from lower socio-economic status and poor educational background can hardly afford modern health care services (Adamu & Salihu, 2000). According to the UNDP human development report, 2006, a significant amount of Nigerian women delivers without the help of medical care providers because they can't afford their services as 12% of the poorest 20% of Nigerian women have no access to skilled medical care during child birth (UNDP, 2006).

Distance from health facilities: Shehu (1992) argued that the distance to the hospital is a major deterrent in hospital attendance and delivery having found that distance account for 42.3% of the maternal deaths in Usman Dan fodio Teaching Hospital (UDUTH) between April and July 1987. In a study conducted in Abidjan, Ivory Coast in 1986, it was found out that the maternal mortality rate for women who has been refers to the urban zones are 2000/ 100,000 deliveries and 3000/100,000 deliveries for those suburban areas and 6000/ 100,000 in the rural areas. Another study in Aden hospital, where 73% of maternal deaths were women from the rural areas who had a long way to travel, show clearly acute is the problem in the rural areas. 10% of these women were died on arrival and another 15% died within an hour of arrival.

Mother's level of education: Education is an important factor which determines development in general. It is associated with fertility, use of health care facilities and use of contraceptives. For every one thousand girls who get an additional year of education, two fewer women will die in childbirth (World Bank Reports, undated). Generally, in the northern Nigeria, there are high percentages of women who do not have access to education beyond secondary level, especially in the rural areas; even at the primary school level, difference exists between girls and boys in favor of boys (DFID, 2002). According to NPC (2013), women with no education marry earlier; at least 6 years earlier than those who have had at least secondary school education, with their median age at 15.5 years and 21.5 years respectively. Also the Contraceptive Prevalence Rate (CPR)of women with no education is far lower than women with at least secondary education with 3% and 37% respectively.

Many researchers have also attributed maternal ill health and death to illiteracy. This is because according to Rayston (1989) educated women are likely to have more understanding of the physiology of reproduction and are less likely to accept the complications and risks of pregnancy as inevitable when compared with the uneducated or illiterate women. Educated women are also more likely to utilize modern health care facilities than those who are not. Education is directly connected to utilization of ante-natal care (ANC) services; as 97% of all women with more than secondary education received care from a skilled health worker compared with 38% of those with no education (NPC, 2013). There is also found a positive association between educational attainment and the decision of whether to opt for hospital delivery or home delivery (Bala, 2009). Education also empower women, educated women are more likely to have paid jobs, that enables them to afford health care when needed (Kristoff & WuDunn, 2009). However, in some societies, women are not given equal opportunities as men; in terms of education and economic liberation. In such societies, it is believed that exposing women to western education is a waste of resources, when in the long run she will be under the protection of a husband (Okoye, 2011).

Women's lack of decision-making power within the family: The significant role men play, as the sole providers and head of the family, in patriarchal societies such as the Hausa society; gives them strong dominance and control over household decision making (Duze & Muhammed, 2006; Wall, 1998). This dominance extends over to their health seeking behaviour, as men decide whether their wife/wives will patronize orthodox healthcare services or not. In a study of factors associated with maternal mortality in three remote villages of Gwaram Local Government Area in Jigawa State, Northern Nigeria; it was found that husband's permission is necessary before a woman can utilize the health facilities and in situation whereby this permission is delayed or denied, the woman stand the risk of maternal morbidity or in extreme cases, maternal mortality. The study also found out that in most cases, husbands often denies granting such permission because of the financial cost of patronizing such facilities (Basirka, 2012). In another study also conducted in the northern parts of Nigeria, Borno state to be precise, Abdulkarim, Kawuwa and Kullima(2008) found out that, husband's refusal to allow their wives to attend clinics is among the factors responsible for the prevalence of maternal mortality in the area.

Aversion to hospitals: Another problem responsible for the escalation of cases of maternal morbidity is the reluctance of women, especially those from the rural areas to patronize modern healthcare facilities. Women at times, prefer to deliver at home. The risk is that, home delivery can result in complications which more often than not, require emergency obstetric care. This avoidance can be the result of the fear of caesarean delivery, or the loss of child during a previous caesarean delivery, which is associated with mother's fear of repeated occurrence (Konje, Obisesan and Ladipo, 1990). The avoidance of hospital is also attributable to religious or cultural beliefs. In some societies such as the Hausa society, modesty or what is refers to as *'kunya'* can prevent a pregnant woman from seeking antenatal care or delivering in hospital, especially for first pregnancy (Wall, 1998). At times this aversion is because of the fear of exposing genitals to strangers, especially the opposite sex.

Institutional determinants: Accessibility to maternal healthcare facilities is a factor inhibiting qualitative maternal health, especially in this part of the world.

Accessibility in this regard encompasses availability of service, knowledge of service, financial strength, quality of care, or proximity to qualitative healthcare (McCarthy & Maine, 1992; Maine, 1991). The healthcare, a woman receives during pregnancy, delivery and postpartum is very crucial to the survival and wellbeing of both mother and child, because early detection of problems, results in more timely treatments and referrals (NPC, 2009). Nigeria's high rate of maternal, new born and child mortality including morbidities; is associated with lack of emergency obstetric care, inadequate health facilities, lack of transportation to institutional care, inability to pay for health services and resistances among rural population to modern health care as well as cultural attitude and practices that discriminate against women and girls (UNICEF, 2009). According to the WHO (2012) facts sheet Reports, more than 99% of cases of maternal mortalities and maternal morbidities occur in developing countries and more than half of that occur in sub-Saharan countries indicating that lack of adequate and available health resources is a major factor. The Nigeria health system has a weak referral system (FMoH, 2010). The referral system between the various types of facilities is non-functional or ineffective. This weak referral system usually leads to the inappropriateness of the use of referral hospital and self-referrals in developing countries. This usually result in theoretical explanations of maternal healthcare seeking behavior.

Conclusion and Recommendations

Factors such as age; age at first marriage; education; lack of autonomy in decision making; proximity to the healthcare facilities and financial constraint affects maternal health seeking behavior and utilization of maternal healthcare facilities. Poverty and limited access to appropriate mat care pose major challenges to improving maternal health and reducing maternal mortality. Improving education of women is important both from long term perspectives of enhancing decision making, and acquisition of knowledge and positive attitude towards utilization of maternal healthcare; including their health seeking behavior. Interventions towards increasing utilization of maternal healthcare services must inevitably target husbands, being key actors in determining healthcare seeking behavior within the households.

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Business Ethics and Organizational Sustainability: A Study of Micro, Small and Medium Scale Enterprises in Asaba, Delta State.

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Abstract

The study examines the relationship between business ethics and sustainability of Micro, Small and Medium Scale Enterprises in Delta State, Nigeria. The study employed cross sectional research design in examining seventy-three (73) firms. The population of the study is made up of owner-manager of SMEs (Hotels and Guesthouse) in Asaba metropolis. Census was adopted in which all the seventy copies of the questionnaire distributed to the respondents. Data were analyzed with the aid of Spearman's Rank Correlation Coefficient to examine the relationship existing between the study variables. Findings revealed the existence of significant relationship between the dimensions of business (transparency and integrity) and the measures of organizational sustainability given as economic, social and environmental sustainability. From the results of the finding, the study concludes that business ethics undoubtedly influences organizational sustainability. Thus, it was further recommended among others that, the right strategies and policies should be put in place to align corporate goals and objectives in the dimension of business ethics to achieve organizational sustainability. Also, organizational leaders/managers should give apt orientation to organizational members to imbibe ethical practices into all organizational processes, this will positively affect firms' sustainability.

Keywords: *Business ethics, Organizational, Sustainability, Transparency, Integrity, Economic, Social, Environmental*

Introduction

One of the purpose of business is profit making through customers' patronage and firms in the process of creating value for customers, achieves other objectives like market shares, growth, good public image and so on. Though, most organizations place so much emphasis on profit maximization to the extent of relegating other core issues that leads to organizational survival, interrupting the status quo as well as controlling turbulence to attain long term objectives through innovation, transparency, commitment, accountability and responsibility becomes of utmost importance to firms' sustainability. Sustainability implies continuation and in the process of thriving for continuous operations firms need to realign business and investment practice to ensure long-term prosperity. As opined by Hahn and Scheermesser (2006), firms do face constant changes in the environment as well as experience difficulties from legislation and society, forcing them to seek alignment with sustainability. Thus, the need to equip organizations with individuals (workforce) and structure necessary to operate successfully in the twenty-first century becomes of utmost concern to firms' sustainability.

Organizational sustainability hinges on the principle of strengthening the environmental, social as well as the economic systems within firms' operation (Chartered Institute of Personnel and Development, 2012). This principle is considered been important, as Colbert and Kurucz (2007) views the concept of sustainability relatively with continuous business operations as well as assisting firms prosper without devaluing organizations' future needs (Boudreau & Ramstad, 2005). For organizations to keep functioning, they must be financially, institutionally and morally strong, thus it is essential for Management, leaders as well as employees to act and be perceived as been ethical in their roles.

Organizations earmark large amount of resources (time and money) creating policies in regulating employees' conducts regarding how expense reports are fill, as well as the kind of gift considered acceptable and what (gift) constitute bribes. The motive of doing this, is identifying and communicating what constitute appropriate and inappropriate behaviour expected of employees, as it ensures social order and make society flourish if business practices and operations are built on the foundation of justice and rules of conduct. Though, the classical economists viewed human behaviour primarily on the basis of self-interest, behavioural economists reveals that humans are not only less rational than what the classical economist thinks but are moral as well. Thus, the cravings for most individuals to work for an ethical organization indicates that people do care about ethics and would feel good about themselves and their work for engaging in ethical practice. As opined by Schwartz, Dunfee and Kline (2005), in the context of ethics, perceptions of an organization's actions may have more of an impact than an organization's words. This could be ascertained through transparency and integrity shown in organizational relationship with its stakeholders.

However, ethics are codes of values and principles upon which individual or group of individuals' actions are regulated regarding what is considered right as well as what is deemed wrong (Levine, 2011). Dombin (2012) opined that organizational culture and structures are created on the foundation of ethics. As pillar to firms' culture and structure, organizations are expected to adhere to ethical practices in their routine operations with stakeholders, as unethical practices like bribery, dishonesty, lack of equity in interpersonal and professional relationship, falsification and misrepresentation of records just to mention but a few, creates bad reputation to businesses as well as has adverse effects on any economy. Though, from an economic point of view, businesses seem to be powerful, as the size and profits makes some organizations richer than some nations, contrarily these organizations stand the chances of losing their powers if they don't use it responsibly. According to Nelson and Trevino (2011) using power responsibly denotes being concerned about the interest of various stakeholders as well as parties who are affected by the business and its actions.

Micro, small and medium enterprises (MSMEs) contributes to the economic wellbeing of many countries around the world, as their size is far greater than large firms, thus becoming a huge employer of labour. Though, in the Nigeria these businesses are generally defined by the number of employees possessed which range between 1 and 250 employees, the number are often different based on the size, as the number possess by Micro Enterprise range between 1 and 9 employees. Small Enterprise ranges between 10 and 49 employees while Medium size enterprise ranges between 50 and 249 employees. Statistics form Federal Ministry of Industry, Trade and Investment in Nigeria indicates that MSMEs contributes 84 percent of the total jobs in the country as well as 48.5 percent of the gross domestic product.

Businesses operating within this category (MSMEs) are expected to render products and services in a just and equitable manner consistent with societal expectation as such guarantees good public image and eventually leads to firms' growth and sustainability. The continuity as well as the operational efficiency of most companies that have lasted for centuries around the world, are been attributed to sound ethical practice and conduct. Though, business failure has universal phenomenon around the world, as there is an indication that most SMEs' are been threatened by forces within their operational environment, and most often not survive their fifth years of operation (Holland, 1998; Watson, 2003). Buttressing this, Almed and Seet (2009) averred that despite the geographical location (nation), SMEs encounter similar difficulties which have adverse effect on their operational performance and survival rate. However, in Nigeria, particularly Asaba, Delta state, there is an observation that most MSMEs do not continue operations after some years of establishment. Though, factors such as paucity of resource (finance), stringent government policy, inadequacy of infrastructure, lack of research and development, inability to use ICT tools as well as lack of internet connection and location of business etc., affect MSMEs operations, most businesses (MSMEs) engaged in various forms of unethical practice like bribes, under-declared sales, pilferage, dishonesty, lack of equity in interpersonal and professional relationship and so on. This has eventually leads to high level of corruption, unfair competition, inflation and high level of unemployment etc. thereby resulting into unexpected business failure.

Though, several studies exist on business ethics and organizational sustainability (Ugoani, 2019; Akhtar, Bin Arshad, Mahmood & Ahmed, 2015; Quarshie, Salmi & Leuschner, 2016; Tormo-Carbo, Segui-Mas & Oltra, 2018), none have been done (researched) on business ethics and organizational sustainability in Asaba metropolis, Delta state, Nigeria. Based on the foregoing the study intends to empirically investigate the impact of business ethics on organizational sustainability, particularly in Asaba, Delta State.

The main objective of the study is to investigate the link between business ethics and organizational sustainability of micro, small and medium scale enterprise in Asaba, Delta State. The specific objectives of the study are to ascertain the influence of transparency and the impact of integrity on organizational sustainability of micro, small and medium scale enterprise in Asaba, Delta state.

Literature Review and Conceptual Framework

Conceptual Review

Business Ethics

In today's business world, information spreads rapidly beyond unimaginable distance than ever before due to technological advancement that have made the world a global village. In the global business arena, emphasis now lies on 'doing well by doing good'. In other words, in business transaction, emphasis is on just and equitable treatment or dealings with all concerned as way of enhancing and building good public image than profit-maximization as the economic perspective of business. As opined by Anam (2011) firms make decision based on the perception of what society would accept as ethically correct standard. However, it will be of utmost importance to ascertain various perception of ethics before clarifying the construct of business ethics.

Ethics originates from the word "ethos" denoting one's character as well as moral nature in Greek (Greek-English Lexicon, 1889). It is the part of philosophy that involves systematizing, defending as well as recommending ideas of what is deemed right and wrong behaviour (Verst, Kampmann, Eilers & Franz-Josef, 2015). Ethics denotes a generally held morality in societies which defines the rules that governs individuals' behaviour, the rules that society should enforce as well as the quality deemed improving in human's existence (George, 2005). Similarly, in the words of Trevino & Nelson (2011), ethics refers to the principles, norms, and standards of conduct regulating either individual or group of individuals. In other words, ethics is concerned with individual character and the moral rules that govern and limit human conduct. Proper functioning of society, requires rules regulating individual's conduct in all sphere of human endeavor relatively to what is considered right and wrong, duty and obligation as well as moral responsibility. Since businesses create value that satisfy human's need and is influenced by society, it becomes necessary to considered ethical aspect in all dealings with stakeholders.

Business ethics are the set of moral principles or values applied by firms in directing the conduct of the organization itself as well as its workforce relatively in all business undertaking internally and externally (Cole, 2002). Similarly, as opined by Sexty (2011), business ethics are the rules, norms or codes that serve as guide for morally acceptable behavior decided by management relatively to organization's operations and its relationship with stakeholders. Furthermore, Steade, Lowry, Dan and Raymond (1984) as cited in Dwiharto, Nirwarto and Manan (2018) view business ethics as the ethical standards relatively to the goals and how businesses make decision. Business ethics emphasizes on the knowledge of the procedures for setting up and managing ideal business why considering the universality of norms and morality and its application socially as well as economically (Velasquez, 2005). Business ethics enhances firm's public image, as customers are willing to patronize business whose products and services meets their requirement. Also, suppliers grant trade credit to business (MSMEs) who are transparent and trustworthy in business transaction over time. Buttressing on the foregoing, Long and Driscoll (2008) opined that ethical policies and procedures permits external stakeholders gain organizational legitimacy, thus promoting trust in the management of the organization.

Nevertheless, Adenubi (2010) averred that behaviour consistent with ethical manner, connote an aspect of firms' social responsibility, which itself dwells on the believe that firms ought to affect society in a manner other than profit maximization. Though, several concepts have been used as proxies for business ethics by various researchers and author, this study adopts integrity and transparency as the dimension of business ethics. These dimension are part of the indicators used by Suherman (2011) which include: trust, honesty, promise accuracy, reliability task and transparency.

Transparency

Stakeholders (customers, owners, shareholders, suppliers, government, creditors, analyst, producers/manufacturers as well as the general public) demand organizations to be more open and accountable in their operations. This could be in a form of information disclosure to stakeholders in relation to firm's products and services, manufacturing processes as well as their decision making processes. As opined by Bentele and Seidenglanze (2008) and Van Riel (2000), in business, trust, legitimacy and reputation often develop on the foundation of transparency. Though, the concept of transparency has been use in several fields of human endeavor like in journalism, politics, sociology, philosophy etc. (Baudrillard, 1993; Han, 2012; Allen, 2008), in business studies as opined by Holmstrom (2000) transparency is viewed as organizational practice consisting ethical programmes, dual communication, bridging strategies and openness. In addition, Jahansoozi (2006) viewed transparency as confidence, responsibility, collaboration as well as cooperation in relation to responsible form of organizational behaviour. Pratt and Adamolekun (2008) portray transparency contrarily to manipulative and biased information.

Though, most scholars conceptualized transparency relatively to openness and disclosure of information, contrarily Rawlins (2009) opined that it is not just openness and disclosure, but the enhancement of understanding. As opined by Gower (2006), information transparency denotes improvement in understanding between parties who have stake in business undertakings as well as in organization's decisions. Transparency from the perspective of MSMEs requires enhancement in understanding between firms and stakeholders relatively on information about prices (i.e. information about current market price, quotes and historical price), information about the features and quality of products as well as information about internal management and production processes. These are important to the plans and objectives of users on the receiving end. Contrarily, firms through distortion, bias or opaque intentionally decreases transparency (Granados, Gupta & Kauffman, 2006).

Integrity

Integrity is the inner sense of wholeness derives from quality such as honesty and consistency of character. As opined by Krishna (2011), an individual is said to have possess the virtue of integrity if the person's action is based upon internally consistent framework of principles. As opined by Kirsch (2011), integrity is what human do in the absence of people around or what firms consistently do and how they do it. It involves concepts like continuous consistency in value, expectations, methods, actions, measures, outcomes, and principles. Consistency is the key to establishing integrity and the consistency of a business's actions will determine the trust a consumer will place in it.

Integrity in business can be classified differently. It can be interpreted in terms of behavior that is illegal or immoral. It could connote behavior that is considered inappropriate by members of the community. Lastly, it presents a behavior that serves as a model for others. It stands out as exceptionally positive. It goes beyond norms of decency. Others perceive it as contributing to the safety and well-being of the community. Levine (2010) opined that in business, integrity is the same as trust and that customers need to trust firms they transact with in order to retain them, thus assuming every responsibility is absolutely vital. Levine opined that every responsibility must be owned up to, not occasional choice ones.

Organizational Sustainability

Sustainability is a process that constantly interrupts the existing state of affairs as well as harnessing environmental disorder to realizing long term goals of the firm through continuous innovation, transparency, commitment accountability and responsibly (Mehra, 2010). In the views of Brundlandt (1987), sustainability means meeting the needs of the present generation without compromising the ability to meet the needs of future generations. Though, the concept of sustainability has various roots which results to diverse meanings, the focus here is on the organizational point of view.

Business sustainability simply means the business of staying in business (Doane & MacGillivray, 2001). Business sustainability refers to the process through which businesses manage their financial, social as well as environmental risk, obligation and opportunities. This approach is simply referred to as managing the three Ps (People, Planet and Profit). Similarly, Organizational sustainability from the perspective of stakeholders to firm's level means fulfilling both direct and indirect stakeholders' (employees, customers, shareholders, pressure group, community, government etc.) requirements without compromising firms' ability to fulfill the needs of future stakeholders (Dyllick & Hockerts, 2002). This definition, is in relation to the broader perspective of Brundlandt notion of sustainability. Furthermore, sustainability relatively in organizational context can be viewed from the Triple-P point of view, as developed by Elkington (1997). The triple P, denotes people, planet as well as profit and is based on the notion that organization is sustainable if a certain minimum performance is achieved relatively in the areas of people, planet as well as profit. This perspective on organizational sustainability emphasizes the need for organizations to maintain a balance between economic objective (profit) as well as the objective of the social (people) and ecological (planet) environment rather than focusing on profits alone because firms are equally liable to the social and ecological environment.

In addition to the Triple-Bottom Line approach to organizational sustainability, McDonough and Braungart (2002) and Kainuma and Tawara (2006) put forward a more advance approach to organizational sustainability known as the 'Zero waste approach'. The approach suggest that products needs to be created or designed in a manner that during its life cycle, it enhances the natural environment as well as the social environment. In other words, the approach suggest that product should be design in such a way that at the end of the its life cycle it becomes usable or reuse as a raw material to the development of a new product. They termed this approach as 'cradle to cradle' which supports considerably the Triple P as well as Es (Profit, People and Planet also known as Economy, Equity and Ecology) not as a 'Triple-bottom line', that is after the fact, but as 'Triple top line' which means an integral part of firms' strategy and design procedure.

Economic Sustainability

Economic sustainability emphasizes on financial/economic achievability relatively in the areas of competition, job offer, profit as well as new market penetration. It is firms' ability to present cash flow that assures the essential liquidity and is responsible for the creation of wealth as well as indicating the ability to perform business undertakings in a responsible manner while ensuring profitability (Dyllick & Hockerts, 2002; Munck, Munck & Souza, 2011). According to Azapagic (2003), economic viability is the core, as it creates profit and jobs which generally contribute to social welfare. Measures of economics sustainability comprises sales, profits, return on investment, tax paid, monetary flow and jobs created (Savitz, 2013).

Social Sustainability

Social sustainability emphasizes on equity, empowerment, participation, sharing, Cultural identity, accessibility as well as institutional stability. The aim is to preserve the environment through economic growth and poverty alleviation. It compels firms to internalize the social costs, maintains and provides social capital development; avoid exploiting the individual, giving incentive to auto-renewable structures; support democracy, amplifying the scope of personal choices and impartial distribution of resources and property rights (Dyllick & Hockerts, 2002). It also emphasizes on the expectation of various groups relating to organization, issues relating to human development, equity and ethics (Dyllick & Hockerts, 2002). Measures include: Labour practice, community impacts, human right and product responsibility (Savitz, 2013).

Environmental Sustainability

Environmental sustainability lay emphasis on ecosystem integrity, carrying capacity and biodiversity. Serageldin (1993) averred that environmental sustainability demands maintaining natural capital as both a provider of economic inputs referred to as 'source' and an absorber known as 'sink' of economic output called 'waste'. Goodland (1995) opined that at the 'sink site', waste sent out or produced from industrial operation must be controlled so that they don't exceed the capacity of the environment to absorb them without impairment. Organizations aligned with Environmental Sustainability only consume natural resources at a rate below its natural regeneration capacity, or below the production rate of substitutable resources (Dyllick & Hockerts, 2002).

Theoretical Framework

Theory of Utilitarianism

The study hinges on the theory of utilitarianism propounded and developed by Jeremy Bentham and J. S. Mills in 1863. It is based on the notion that generally most humans seek ultimate good that brings happiness and pleasure. In other words, the desire of most individuals naturally aims towards pleasure and avoid pains. Though, the theory is classified into three types such that there exist Act utilitarianism (which emphasizes on individual action rather than the moral rules of the action), Rule utilitarianism (emphasizes on the consequences of keeping certain rules than judging the consequences of each individual's action) and Preference utilitarianism (which emphasizes on the preference of all those concerned in a specific course of action). These categorizations all aimed at the ultimate good of the society.

As opined by Bentham, the principle of utilitarianism usually results in the establishment of general rules which in some exceptional situation might be violated, while evaluating the outcome of individuals' action, the general rule should be acknowledge. Bentham opined that virtue such as truthfulness and honesty should be incorporated as part of individual's habit because these virtues provide society the means of securing the greatest happiness for the large number of people.

The practical implication of this theory to the study is that organizations while providing goods and services to the society, need to acknowledge the moral aspect of their operation to the society at large. This is established in a form of rules guiding the conduct of individuals and organizations (MSMEs). This could be in form of what is deemed morally rights and wrong practice generally either accepted or rejected by the generality of humans in a given society where firms operate. Thus, firms need to ensure that their services and products satisfy the needs of consumer which eventually leads to the overall happiness of the greatest number of users, as any act of business practice contrarily to what is generally acceptable in the society can damage firm's reputation and makes them lose their economic power.

This is achievable when firms disclose information in a transparent manner to stakeholders. For instance, where there is improvement in understanding between firms and their stakeholders relatively on information about the feature and quality of products as well as price, consumers make informed decision about their purchase which eventually leads to higher level of customers' satisfaction.

Similarly, since utilitarianism emphasizes on the greatest good to the greatest number of persons, MSMEs are expected to engage in sustainable development practice while managing the social, economic and environmental risk, obligations as well as opportunities. This will not only benefit the needs of direct and indirect stakeholders at present, but it will also fulfill the needs of future stakeholders to the ultimate good of the society.

Methodology

The study adopted a cross-sectional survey because these studies involve human beings that lack the true major attributes of experimentation. This choice of design originates primarily from the nature of the study, which is basically quasi-experimental and within a non-contrived settings (Baridam, 2001). The population consists of small and medium scales enterprises (SMEs) particularly owner-managed hotels in Delta State, Nigeria. The study population is seventy-three (73).

The choice of these SMEs is based on the classification of SMEs by the Central Bank of Nigeria (CBN) as well as the National Association of Small & Medium Enterprises (NASME). The research utilized the census sampling, meaning that the population is adopted as the sample size. Questionnaire was used as the research instrument. The Spearman rank order correlation coefficient was used for data analysis to test the null hypotheses proposed with the aid of Statistical Package for Social Sciences (SPSS version 20).

Data Presentation and Analysis

A total of seventy-three (73) copies of questionnaire were distributed to the owner-managers of the Hotels in Delta State; seventy (70) were reported as valid and usable and were thus analyzed.

Table 1: Dimensions of Business Ethics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TRANSPARENCY	70	4	20	14.21	4.492
TY1	70	1	5	3.55	1.123
TY2	70	1	5	3.55	1.123
TY3	70	1	5	3.55	1.123
TY4	70	1	5	3.55	1.123
INTEGRITY	70	5	20	17.17	4.065
IY1	70	1	5	4.29	1.016
IY2	70	1	5	4.29	1.016
IY3	70	1	5	4.29	1.016
IY4	70	1	5	4.29	1.016
IY5	70	1	5	3.64	1.349
Valid N (listwise)	70				

SPSS output, Version 20 – Field Survey, 2021

Table 1 illustrates the result for the data distribution for the dimensions of business ethics (transparency (TY), integrity (IY); the results point out that the dimensions all bear high and substantial mean values, resulting from the high mean scores for each of their statement items; this is suggestive of strong affirmative response to the construct from the respondents.

Table 2: Indicators of Organizational Sustainability

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ECO.SUS	70	4	20	15.65	5.429
ES1	70	1	5	3.91	1.357
ES2	70	1	5	3.91	1.357
ES3	70	1	5	3.91	1.357
ES4	70	1	5	3.91	1.357
SOCIAL. SUS	70	5	20	14.53	5.472
SS1	70	1	5	3.63	1.368
SS2	70	1	5	3.63	1.368
SS3	70	1	5	3.63	1.368
SS4	70	1	5	3.63	1.368
SS5	70	1	5	4.01	1.148
ENVIRON. SUS	70	5	20	14.58	5.357
ENS1	70	1	5	3.66	1.308
ENS2	70	1	5	3.63	1.359
ENS3	70	1	5	3.64	1.349
ENS4	70	1	5	3.64	1.349
ENS5	70	1	5	4.01	1.148
Valid N (listwise)	70				

SPSS output, Version 20 – Field Survey, 2021

Table 2 illustrates the result for the data distribution for the measures of organizational sustainability (economic sustainability (ES), social sustainability (SS) and environmental sustainability (ENS); the results point out that the indicators all bear high and substantial mean values, resulting from the high mean scores for each of their statement items; this is indicative of strong affirmative response to the constructs as elicited from the respondents.

Bivariate Level Analyses

This section is concerned with testing hypotheses stated earlier; using Spearman's rank order correlation coefficient statistical tool and the p-values obtained; hence the decision rule; reject null hypothesis if p-value obtained is less than the alpha value of 0.05 and accept the null hypothesis when p-value is greater than the alpha value (0.05).

$H0_1$: There is no significant relationship between transparency and economic sustainability of Small and Medium Scales Enterprises in Delta State.

Table 3 Correlation between transparency and economic sustainability

			TY	ES
Spearman's rho	TY	Correlation Coefficient	1.000	.912
		Sig. (2-tailed)	.	.000
		N	70	70
	ES	Correlation Coefficient	.912	1.000
		Sig. (2-tailed)	.000	.
		N	70	70

SPSS output, Version 20 – Field Survey, 2018

Table 3 presents Spearman's rank order correlation coefficient to find out the relationship between transparency and economic sustainability as reported by seventy (70) respondents. A strong positive correlation coefficient value was reported between transparency and economic sustainability which was statistically significant (rho = .912, p = .000 < 0.05 (alpha value) this suggests that there is significant relationship between the variables.

$H0_2$: There is no significant relationship between transparency and social sustainability of Small and Medium Scales Enterprises in Delta State.

Table 4 Correlation between transparency and social sustainability

			TY	SS
Spearman's rho	TY	Correlation Coefficient	1.000	.916
		Sig. (2-tailed)	.	.000
		N	70	70
	SS	Correlation Coefficient	.916	1.000
		Sig. (2-tailed)	.000	.
		N	70	70

SPSS output, Version 20 – Field Survey, 2021

Table 4 presents Spearman's rank order correlation coefficient to find out the relationship between transparency and social sustainability as reported by seventy (70) respondents. A strong positive correlation coefficient value was reported between transparency and social sustainability which was statistically significant (rho = .916, p = .000 < 0.05 (alpha value) this suggests that there is significant relationship between the variables.

$H0_3$: There is no significant relationship between transparency and environmental sustainability of Small and Medium Scales Enterprises in Delta State.

Table 5 Correlation between transparency and environmental sustainability

			TY	ENS
Spearman's rho	TY	Correlation Coefficient	1.000	.711
		Sig. (2-tailed)	.	.000
		N	70	70
	ENS	Correlation Coefficient	.711	1.000
		Sig. (2-tailed)	.000	.
		N	70	70

SPSS output, Version 20 – Field Survey, 2021

Table 5 presents Spearman's rank order correlation coefficient to find out the relationship between transparency and environmental sustainability as reported by seventy (70) respondents. A strong positive correlation coefficient value was reported between transparency and environmental sustainability which was statistically significant (rho = .711, p = .000 < 0.05 (alpha value) this suggests that there is significant relationship between the variables.

Decision: The null hypotheses ($H0_{1-3}$) are rejected and we state that there is significant relationship between transparency and the measures of organizational sustainability (economic, social and environmental sustainability) of Small and Medium Scale Enterprises in Delta State.

$H0_4$: There is no significant relationship between integrity and economic sustainability of Small and Medium Scales Enterprises in Delta State.

Table 6 Correlation between integrity and economic sustainability

			IY	ES
Spearman's rho	IY	Correlation Coefficient	1.000	.872
		Sig. (2-tailed)	.	.000
		N	70	70
	ES	Correlation Coefficient	.872	.872
		Sig. (2-tailed)	.000	.000
		N	70	70

SPSS output, Version 20 – Field Survey, 2021

Table 6 presents Spearman's rank order correlation coefficient to find out the relationship between integrity and economic sustainability as reported by seventy (70) respondents. A strong positive correlation coefficient value was reported between integrity and economic sustainability which was statistically significant (rho = .872, p = .000 < 0.05 (alpha value) this suggests that there is significant relationship between the variables.

$H0_5$: There is no significant relationship between integrity and social sustainability of Small and Medium Scale Enterprises in Delta State.

Table 7 Correlation between integrity and social sustainability

			IY	SS
Spearman's rho	IY	Correlation Coefficient	1.000	.853
		Sig. (2-tailed)	.	.000
		N	70	70
	SS	Correlation Coefficient	.853	1.000
		Sig. (2-tailed)	.000	.
		N	70	70

SPSS output, Version 20 – Field Survey, 2021

Table 7 presents Spearman's rank order correlation coefficient to find out the relationship between integrity and social sustainability as reported by seventy (70) respondents. A strong positive correlation coefficient value was reported between integrity and social sustainability which was statistically significant (rho = .853, p = .000 < 0.05 (alpha value) this suggests that there is significant relationship between the variables.

$H0_6$: There is no significant relationship between integrity and environmental sustainability of Small and Medium Scale Enterprises in Delta State.

Table 8 Correlation between integrity and environmental sustainability

			IY	ENS
Spearman's rho	IY	Correlation Coefficient	1.000	.716
		Sig. (2-tailed)	.	.000
		N	70	70
	ENS	Correlation Coefficient	.716	.716
		Sig. (2-tailed)	.000	.000
		N	70	70

SPSS output, Version 20 – Field Survey, 2021

Table 8 presents Spearman's rank order correlation coefficient to find out the relationship between integrity and environmental sustainability as reported by seventy (70) respondents. A strong positive correlation coefficient value was reported between integrity and environmental sustainability which was statistically significant (rho = .716, $p = .000 < 0.05$ (alpha value) this suggests that there is significant relationship between the variables.

Decision: The null hypotheses ($H0_{4\text{-}6}$) are rejected and we state that there is significant relationship between integrity and the measures of organizational sustainability (economic, social and environmental sustainability) of Small and Medium Scale Enterprises in Delta State.

Discussions

The study investigated the link between business ethics and organizational sustainability of Micro, Small and Medium Scale Enterprises in Delta State. Six (6) hypotheses were stated and tested thus;

The result of the tested $H0_{1\text{-}3}$ revealed the existence of a significant relationship between transparency and the measures of organizational sustainability; (rho = .912, p = .000; rho = .916, p = .000; rho = 711); this agrees to the study of Sisman, Yozgat, Abunaz and Ozarslan (2015) who maintained that transparency is very essential for the successful operations in the public sector in addition to all other organizational management practice and it is consider the most essential for public sectors due to humans.

As opined by Kolk (2008), transparency is highly essential in improving firms' operations and grants stakeholders the opportunity to get acquainted with firm's undertakings in order to ascertain if it is appropriate in achieving objective or not. Furthermore, Kolk (2008) viewed transparency from a dual perspective. Transparency could be viewed relatively to accountability required in corporate governance like staff related ethical aspects of corporate governance. On the other perspective, it could be seen relatively in terms of sustainability reporting like ethical/social issues, community and employees related issues, organizational structure established to control them as well as the financial facets.

The tested $H0_{4\text{-}6}$ revealed the existence of a significant relationship between integrity and the measures of organizational sustainability; (rho = .872, p = .000 < 0.05; rho = .853, p = .000 < 0.05; rho = 716, p = .000); this agrees to the study of Biggemann (n.d) who posited that integrity increases business sustainability. Integrity strengths the links between actors in a network, reduces costs to build and maintain relationship and also reduced motivation for opportunistic behaviour. Integrity has positive effects on the parties' perception about value creation and how this is shared within the network.

Integrity is built on consistency, trust and pride, which are concepts that allow for a clearer understanding of integrity. Consistency keeps integrity stable (McFall, 1987), trust decreases the perception of risk when interacting with other party, and pride is about having high praise and dedication towards the values that products and services stand for, as well as having pride in the work you are doing and the relationships forged throughout the value chain.

Conclusion and Recommendations

From the results of the findings, the study concludes that business ethics generally influences the sustainability of micro, small and medium scale firms in Asaba, Delta State. Specifically, the study concludes that transparency significantly effects the measures of firms' sustainability (economic, social and environmental) in the study areas. Also, the study concludes that integrity has a strong influence on the measures of firms' sustainability (economic, social and environmental) in Asaba, Delta State. Thus, from the study's perspectives, ethics of firms explain organizations' disposition to quality practice which in turn, affects firms' sustainability positively.

Based on the findings and conclusion drawn from the study, it was further recommended that business organizations should be more open in the manner in which they provide information about their products and services (i.e. the features and quality), price and productions process to consumers as well as the general public, as stakeholders primarily rely on accurate and clear information in making informed decision. This will further enhance firms' profitability and overall performance. Also, micro, small and medium scale firms should ensure transparency while developing and enhancing the social conditions of workers, communities as well as society in general, as challenges such as poverty, unemployment, social exclusion and social problems related to safety, inequality, health and working conditions are seen barriers to advancing sustainable development. Similarly, the right strategies and policies should be put in place to align corporate goals and objectives in the dimension of business ethics to achieve organizational sustainability. Lastly, organizational leaders/managers should give apt orientation to organizational members to imbibe ethical practices into all organizational processes, this will positively affect firms' sustainability.

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