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Corruption and Public Sector Auditing: A Review of Related Literature

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Abstract

In both industry and academics, there has been a lot of discussion on how auditing might lessen corruption. The current study's goal is to evaluate the most recent developments and knowledge gaps on the relationship between public sector auditing and corruption. It is based on assessments of the academic literature we thus make broad generalizations about the state of the most recent discoveries. The earlier writing on corruption emphasized political and economic viewpoints. There is still a significant knowledge vacuum in this field, particularly with regard to the practical role of public sector auditing in corruption detection and deterrent in developing countries, despite the fact that data suggests that it aids in the fight against corruption. Furthermore, there is a paucity of literature that explains in detail how audit types conducted by the Supreme Audit Institution (SAI) may contribute to a reduction in corruption, as well as which audit types are more effective. There is also very little in-depth discussion of the difficulties that public sector auditing faces in detecting and preventing corruption. The study therefore recommends that the role of auditing should be given much attention on how to combat corruption; auditors' independence should be strengthened and sustained in public sectors, most especially in developing nations which is certain to provide the liberty and lack of restrictions the auditors need from undue influence and interference from any party and to remain unbiased in discharging their audit obligations.

Keywords: corruption, public sector auditing, supreme audit institution (SAI)

Introduction

The media's increased focus on corruption over the past 20 years shows that developing nations are particularly vulnerable at this time. According to the Corruption Perception Index (CPI), developing nations require efficient anti-corruption tools. In fact, a significant number of the G20 countries and more than 66% of the world's nations suffer from the negative effects of corruption (Enste & Heldman, 2017; Othman, Aris, Mardziyah, Zainan, & Amin, 2015). Corruption is not a recent societal phenomenon; in fact, it predates government itself and must

be noted (Othman, Shafie, & Zakimi, 2014; Klitgaard, 1988). The United Nations lists combating corruption as one of its seventeen sustainability development goals; recognizing it as a serious worldwide problem. It is essential due to the debilitating effects of corruption, which hinder a nation's development by skewing public spending and markets, slowing down economic growth, undermining the rule of law and democracy, and degrading the standard of living (Enste & Heldman, 2017; Othman *et al.*, 2015). According to the Dye (2007), it has deep roots in political and administrative institutions, and depending on the country context, it has different effects on development. While corruption has detrimental impacts in rich countries as well, these effects are felt most acutely there (Rady, 2016), and there is considerable worry about how to address this epidemic's threat in poor nations (Othman, Shafie, & Zakimi, 2014).

According to Everett, Neu, and Rahaman (2007), some significant institutional actors have recently become actively involved in the fight against corruption. These developments may be observed in the International Convention against Corruption, which entered into force on October 31, 2003 (Transparency International, 2005; United Nations, 2004). Moreover, international interests in battling corruption and enhancing accountability in the public sector led to the creation of a significant organization, the International Organization of Supreme Audit Institutions, as early as 1953. This organization, which oversees the affairs of the community of government auditors, has 190 full members. In order to ensure that knowledge is shared, auditing is practiced, and professional capacities are enhanced, the institution has over many years developed a solid foundation for government auditing. It is encouraged for Supreme Audit Institutions (SAIs) members to develop within their own nations (INTOSAI, 2015). As a cornerstone and crucial component in the fight against corruption in the public sector, good public sector auditing is shown in the literature to have a significant impact on domestic levels of corruption (Hay & Cordery, 2018; Gustavson & Sundstrom, 2016). The public also expects the auditors to play an effective role in reducing, if not completely eliminating, corruption (Otalor & Eiya, 2013). This expectation results from the belief that the audited data is fairly accurate, comprehensive and objective. An essential part of accountability is auditing since it validates the data that forms the basis of formal and financial accountability (Power, 1997). As a result, the audit profession aids public sector organizations in achieving accountability and integrity, enhancing operations, and fostering public trust. In order to prevent and identify public corruption, one of the responsibilities of the public sector auditor is to act as an organization regulating how public sector

organizations behave, particularly with relation to public funds (Goodson, Mory, & Lapointe, 2012; Guthrie, Petty, & Johanson, 2001). In order to combat corruption in the public sector, the populace expects auditors to play a crucial role.

In Nigeria, there is evidence of weak accountability in the public sector (Appah, Onowu, & Adamu, 2021). In order to accomplish effective control and management of public funds, this necessitates proper and comprehensive auditing as well as efficient execution of the government's defined rules, procedures, and activities. The public sector audit is a method for determining the genuine financial standing of governmental organizations (Ferry, Radcliffe, & Steccolini, 2022; Appah *et al.*, 2021). Although public sector auditing plays a crucial role in ensuring accountability, this has not been sufficiently demonstrated in most developing Nations. In order to achieve financial accountability and performance, the Nigeria government has committed significant financial and non-financial resources to the public sector organizations. Sadly, financial theft, misallocation, and embezzlement continue to plague public sector organizations (Appah *et al.*, 2021). Moreover, little research has been done on how public sector auditing affects corruption (Gustavson & Sundstrom, 2016). Additionally, many of these scant studies fail to address why corruption is still on the rise in certain developing nations that have SAIs, which are in charge of auditing the public sector. Few studies have examined how public sector auditing combats corruption, including the difficulties it faces and the benefits each style of auditing brings (Al-Sadig; 2009).

This article is based on the analysis of three types of literature: academic and scientific works on corruption, works on public sector auditing, and works that link corruption and public sector auditing. This sort of analysis will highlight any gaps in the body of knowledge and suggest new research ideas.

Literature Review

Public Sector Audit: Concept

According to Gekula and Isanzu (2020), a public sector audit is an examination of the performance of the public sector that looks at specific financial operations as well as every aspect of governmental operations, including organizational and administrative structures. However, Appah (2017) asserted that public sector auditing comprises looking at financial and non-financial data that public sector

organizations are expected to have audited. It is done to make sure that sufficient financial records are kept in order to support correct accountability, public stewardship of public funds, prevention of misappropriation of public funds, compliance with proper norms of behavior, and support public sector enterprises in achieving value for money (Appah & Zibaghafa, 2018; Appah, 2017).

Corruption: Description

Despite being a long-standing problem (Othman *et al.*, 2014), corruption has grown internationally, causing poverty by interfering with social, economic, and political systems (Otalor & Eiya, 2013). It has gotten out of control and is now an epidemic that harms society, undermines democracy and the rule of law, skews markets, and lowers quality of life (United Nations, 2004). However, Growth and development are inversely correlated with corruption (Papaconstantinou, Tsagkanos, & Siriopoulos, 2013; Rady, 2016). Due to the higher entry costs and functioning in a corrupt environment, corruption also contributes to a decline in both domestic and foreign investment (Ahmadi & Homauni, 2011; Myint, 2000). According to Jetter, Agudelo, and Hassan's (2015) research, democracy may reduce corruption in wealthy nations, while increasing it in less wealthy nations due to disparities in income levels. Political instability results from corruption, which decreases public confidence in democratic government institutions and imperils the authority of the executive branch (Nwabuzor, 2005). Gounev, Dzhekov, and Bezlov (2012) made the argument that high levels of corruption promote the growth of bribery and nepotism in the delivery of public services by lowering the quality of bureaucratic processes. Without regard to the effectiveness, capacity, or credentials of the person being hired, employment in public service institutions may itself be based on bribery or nepotism.

Unbelievably, corruption may also affect how government budgets are generated and used in terms of revenue and expenditure. For example, it has an impact on how customs duties, taxes, dues, and fees for public services like power and water supply are collected (Myint, 2000). Purchasing excessive amounts of weaponry under the guise of preserving national security is only one example of how corruption persists and can be deceiving (Myint, 2000; Shleifer & Vishny, 1993). Investment in public infrastructure, which requires additional funds, can be put on hold, resulting in production of worse quality (Everett, *et al.*, 2007; Tanzi & Davoodi, 1998). As they believe there is less chance for fraud in programmes for rural development, textbooks, teacher salaries, training and development, and

preventive healthcare, officials frequently prefer to spend money on infrastructure instead of health or education projects (Myint, 2000).

Corruption and Public Sector Auditing

Auditing is a crucial component of fighting corruption, as has already been demonstrated (Otalor & Eiya, 2013). Khan (2006) states that, auditing is crucial in battling corruption in the public sector, and auditors and the audit profession in general play a vital role in lowering fraud and corruption. This also supports the idea that improved public sector auditing appears to have a substantial impact on lowering overall corruption levels in a country (Dipietro, 2011). Ionescu (2014) makes a similar case that government should create an effective auditing system that can be utilized for checks and balances as well as for fraud detection. Such systems should aid government auditors in spotting corrupt practices and preventing major potential economic deficits.

The International Standards of Supreme Audit Institutions (ISSAIs) goals serve as a representation of the role of public sector auditing by SAIs. According to the Fundamental Principles of Public-Sector Auditing published by ISSAI, public sector audits share similar goals, albeit the precise goals and results can vary depending on the type of audit being conducted (Appah, Onowu, & Adamu, 2021). Four guiding concepts are, nonetheless, present in all public sector audits. First, public sector auditing offers all possible users unbiased, impartial, and trustworthy data based on enough and pertinent evidence pertaining to public bodies. Second, it promotes accountability and transparency, fostering ongoing improvement and maintained confidence in the effective use of public resources and management. Thirdly, it increases those bodies' capacity for action within the framework of the constitution. Last but not least, it provides information, in-depth analysis, and well-supported suggestions for improvement to encourage change (ISSAI 100, 2013).

As it supports the governance functions of insight, foresight, and supervision, to which they added detection and prevention, auditing, according to Goodson *et al.* (2012), is a basic component of effective government. Since the public sector's success is primarily determined by its ability to effectively provide services to the general public and carry out its programmes in an equitable manner, it is crucial that the activities of public sector audit are focused on assessing the level of compliance with financial programmes and measuring the efficiency, effectiveness, and economy of those activities. The primary principles of government, which benefit all citizens, must be safeguarded by the auditors.

According to a large body of research, auditing plays a significant part in the battle against corruption in the public sector (Rana, Steccolini, Bracci, & Mihret, 2022; Themsen & Skærbæk, 2022; Khan, 2006), and in particular, higher-quality auditing in the public sector has a noticeable impact on lowering national corruption (Dipietro, 2011). According to Tara, Gherai, Droj, and Matica (2016), SAIs boosts governmental organizations' productivity and lower perceived levels of corruption. In a different study, Gherai, Tara, and Matica (2016) found that as SAIs increase the scope of their activity, corruption declines. Government auditors should identify corrupt bureaucracies, according to Ionescu (2014), by doing competent auditing within the framework of checks and balances and fraud detection.

In their panel data study, Liu and Lin (2012) determined that the amount of anomaly found in government records by auditing is directly and strongly correlated with the level of corruption. This suggests that there is a greater chance that anomaly will continue to be found by regional audit agencies the more corruption there is in the government authorities. These results suggest that audit in the public sector plays a crucial part in identifying corruption there (Rana, Steccolini, Bracci, & Mihret, 2022; Themsen & Skærbæk, 2022; Assiotis & Sylwester, 2014; Kumlin & Esaiasson, 2012; Chang & Chu, 2006; Bowler & Karp, 2004; Anderson & Tverdova, 2003). The public sector audit is one of the tools for combating corruption, according to Otalor and Eiya (2013), and it is effective in lowering, if not completely eliminating, corruption. Therefore, the fight against both internal and international corruption should centre on auditors (Kassem & Higson, 2016; Everett *et al.*, 2007).

The recommendation made by Albrecht, Albrecht, Albrecht, and Zimbelman (2012) that possibility for fraud to be committed should be eradicated and this will serves as a preventative strategy against corruption in the public sector. By establishing reliable internal controls, reducing public officials' and citizens' collaboration, and clearly communicating the government's anti-fraud regulations to vendors and other contractors, such chances can be avoided. The monitoring of employees through hotlines (whistle-blowing systems) for anonymous tips and the establishment of a punishment expectation will take place. According to Khan (2006) putting a performance audit into place can help to lessen corruption by acting as a deterrent to such behaviour. Thus, performance audits can be a unique and effective tool for preventing corruption (Otalor & Eiya, 2013).

Khan (2006) contends that while auditors can identify potential areas for corruption, they are unable to assist in its detection because corrupt individuals frequently hide any evidence of their actions in official records. According to Albrecht *et al.* (2012), auditors must assist in identifying red flags or indicators of fraud and further explore these indicators to determine if they are a result of genuine fraud or are the result of other causes. Nevertheless, it is regrettable that a number of fraud signs frequently go unrecognized and those that are identified are not always rigorously followed. It is crucial to note that if fraud signs had been looked into sooner, many frauds would have been discovered. These fraud red flags or signs might take the form of accounting irregularities, internal control issues, anomalous data, expensive lifestyles, strange behaviour, tips and complaints (Albrecht *et al.*, 2012).

Khan (2006) concluded by saying that the SAI is one of the most crucial organization that can aid in lowering corruption in the public sector. The SAI itself must be reliable and well-funded for this purpose. So that the SAI can effectively play its part in the fight against corruption, he suggests eight measures for its improvement: fostering its independence; enhancing its authority; implementing participatory auditing; reviewing procedures and auditor training; establishing and upholding an ethics code; improving the SAI's performance; and cooperating and coordinating with other parties.

Methodology

The study adopted qualitative research approach (Kothari, 1990); more particularly, a content analysis of prior research on public sector auditing and corruption. This method helped the researcher systematically examine a body of material to identify public sector auditing and corruption patterns. The study identifies peer-reviewed journal publications published in consonant with Public Sector Auditing and Corruption between 1983 and 2022. The modus operandi was chosen to make it easier to explore the literature that is currently available on Public Sector Auditing and Corruption.

Discussion of Findings

Majority of studies describe the connection between corruption and the economy, according to a review of the literature. Some studies found that corruption impedes or dampens economic growth and national development (Rana *et al.*, 2022; Thomsen & Skærbæk, 2022; Appah *et al.*, 2021; Assakaf, Shamsiah, & Othman, 2018; Enste & Heldman, 2017; Borlea, Achim, & Miron, 2017; Ata &

Arvas, 2011; Al-Sadig, 2009; Lambsdorff, 2005; Myint, 2000). Additionally, it might alter how the government spends its money (Lambsdorff, 2005; Myint, 2000) and decrease tax collections (Friedman, Johnson, Kaufmann, & Zoido-Lobaton, 2000; Tanzi & Davoodi, 1998; Johnson, Kaufmann, & Zoido-Lobaton, 1998). The political system, public trust in the government, and democracy are all negatively impacted by rising levels of corruption (Assiotis & Sylwester, 2014; Kumlin & Esaiasson, 2012; Chang & Chu, 2006; Bowler & Karp, 2004; Anderson & Tverdova, 2003). Political instability may result from these factors (Assiotis & Sylwester, 2014; Nwabuzor, 2005; Treisman, 2000).

There were several suggestions for reducing corruption discussed. Ionescu (2016), for instance, investigated the relationship between corruption and information and communications technology (ICT), e-government, and both. Ionescu's findings, which are based on data from a survey of the top 20 nations according to the UN's 2012 E-Government Readiness Index, show the effectiveness of ICT-related e-government as an anti-corruption strategy. Similarly, Kim, Kim, and Lee (2009) discovered that e-government anti-corruption systems have a beneficial effect on the decline in corruption.

Murphy (2004) said that corruption occurs when there is a lot of room for it to happen. As a result, organizations fighting corruption must employ a multifaceted strategy that tries to lessen the possibilities and rewards for corruption, while raising the expected cost of dishonest behaviour. According to Shleifer and Vishny (1993), political and economic competition can lessen corruption's prevalence and damaging effects. Olken (2009) came to the conclusion that the average person today lacks the ability to adequately monitor local politicians and spot corruption without any outside help. This demonstrates the importance of transparency since it increases the ability of the public to spot and condemn wrongdoing at all levels.

The public sector auditing out of corruption cases has been the subject of numerous studies (Hay & Cordery, 2018; Goe & Singh, 2012; Schelker, 2012; Saito & McIntosh, 2010; Schelker & Eichenberger, 2010; Gendron, Cooper, & Townley, 2007; Ma, 2007; Santiso, 2007; Waring & Morgan, 2007; Neu, 2006; Zhao, 2005; Yoshimi, 2003; Gendron, Cooper, & Townley, 2001). For instance, Zhao (2005, cited by Liu & Lin, 2012) proposed a fairly comprehensive framework of characteristics that classifies the variables influencing the calibre of government audit into three groups: technical variables (professional competence,

auditor size, and audit hours), independence variables (audit fee, auditor reputation, and organizational design of audit institutions), and administrative variables (determining the nature of irregularities, making the right decisions and checking on rectification results). When measuring the quality of government audits in empirical studies, researchers frequently utilize only one of these traits as a proxy. For instance, Saito and McIntosh (2010) used auditing time as a direct indicator of auditing effort. On the other hand, Ma (2007), cited by Liu & Lin, (2012) revealed that professional skill, experience, and educational background are highly associated to the financial effectiveness of government auditing.

State audit budgets and indices of political rivalry showed favourable associations when Baber (1983) analyzed cross-sectional data from state governments. These findings are in line with the concept that contracts between public officials and their supporting interests are what motivate them to do audits. In a similar spirit, Gendron *et al.* (2001) asserted that the Canadian Office of Auditing strengthened its ability to persuade politicians and other public officials of the virtues of its particular interpretation of what accountability ought to entail. However, when an Office gains in strength, concerns regarding a perceived lack of executive independence against it also increase.

In order to understand the function and effectiveness of government external audit agencies in the management of the budget and the oversight of public finances, Santiso (2007) examined the connections between external auditing and fiscal governance. He discovered a connection between the level of governance's credibility and the external audit agencies' credibility. It was also determined that deeper dysfunctions in the systems of fiscal management are the root cause of accountability gaps in public finances. According to Schelker and Eichenberger (2010), such audits increase transparency and offer crucial information on how policy ideas would affect resources in the common pool, which reduces wasteful expenditure. They also discovered that there was a considerable decrease in overall taxation and public spending when auditors were able to assess and criticize policy ideas prior to policy choices. The importance of financial statement auditing in the public sector was finally explained by Hay and Cordery (2018) using a historical study. They came to the conclusion that agency theory and management control explanations are congruent with the public sector auditing functions.

Studies linking auditing to corruption have been published in the public sector auditing literature (Gherai *et al.*, 2016; Gustavson & Sundstrom, 2016; Kassem & Higson, 2016; Tara *et al.*, 2016; Othman *et al.*, 2015; Ionescu, 2014; Neu, Everett, & Rahaman, 2015; Neu, Everett, & Rahaman, 2013a; Neu, Everett, Rahaman, & Martinez, 2013b; Otalor & Eiya, 2013; Liu & Lin, 2012; Blume & Voigt, 2011; Dipietro, 2011; Ferraz & Finan, 2011; Dye, 2007; Everett *et al.*, 2007; Olken, 2007; Khan, 2006; Dye & Stapenhurst, 1998). The value of public sector audits in preventing corruption has been empirically examined in a number of studies. In order to study the relationships between the existence and operation of the Supreme Audit Institutions and the prevention of corruption, Gherai *et al.* (2016) used a statistical technique. According to their findings, the SAIs' work contributes to reduce corruption and is positively correlated with a higher quality of life the more extensive it is. That report didn't go into detail about how SAI works to lessen corruption in the public sector or the techniques employed to detect and prevent it. In order to investigate the methods of fraud and corruption detection and prevention in Malaysia's public sector, Othman *et al.* (2015) used structured questionnaires. The study's conclusions showed that the operational audits, Whistle-Blowing system implementation, improved audit committees, staff rotation improved internal controls, fraud hotlines, and forensic accountants are some of the most efficient fraud detection and prevention methods used in the public sector. Othman *et al.* (2015) did not distinguish between the mechanisms used in detection and the mechanisms employed in prevention. They also did not go into great detail on the state of affairs in which each mechanism was used or the difficulties that each faced. In a similar vein, Gustavson and Sundstrom (2016) looked into the effect of SAI audits in the public sector on the level of corruption. According to their findings, the level of corruption in the public sector is positively impacted by effective auditing carried out by SAIs. They also discovered that a number of factors, such as SAIs' independence from the government, the professionalism of SAIs through hiring personnel with the necessary training and education, and SAIs' public disclosure of audit findings, all contribute to the reduction of corruption in the public sector.

In order to demonstrate that better auditing lowers corruption, Dipietro (2011) conducted cross-sectional research from several nations. In other words, higher quality auditing appears to have a significant impact on lowering national corruption. On the other side, Liu and Lin (2012) concentrated on rectification and suggested that it is even more crucial to address errors following an audit than the fraud detection procedure itself. They stated that the identification of

abnormalities without a plan for how to fix them prevented government auditing from serving as a potent system of accountability. They assert that rectification, which includes "asking for accountability," is successful in lowering corruption. Government auditing can increase the transparency of public policy and decrease unnecessary spending, according to Blume and Voigt (2011) and Schelker and Eichenberger (2010). An earlier study by Olken (2007) on the monitoring impact of government audits in Indonesia found that when village road projects were more likely to be audited by the government, corruption (excess spending on these projects) dropped by 8%. Similar to this, Ferraz and Finan (2008, 2011) discovered that government auditing reports can point out corrupt practices, which consequently have an impact on the outcomes of political elections.

Additionally, numerous researches have conceptually supported the significance of public sector audits in the battle against corruption. For instance, Ionescu (2014) concluded that audit institutions cannot sufficiently reduce corruption in government institutions by exposing wrongdoing during the audit of government accounts. Governmental wrongdoers can be deterred from engaging in corrupt behaviour by enforcing violations and correcting errors. It was therefore stated that where such rectifications are made, with an emphasis on efficiency, the rate of corruption can be successfully minimized. Otor and Eiya (2013) added that audit could be a tool for preventing corruption by highlighting those places where the potential for wrongdoing exists. Additionally, they confirmed that the performance audit is a potent tool that may be utilized to fight corruption. Murphy (2004) showed that in order to effectively combat corruption in the public sector, anti-corruption programmes must work to lessen or eliminate the incentives and opportunities for it, while also raising the costs associated with it and influencing public perceptions.

Conclusion and Recommendations

There is little doubt that many studies individually explore corruption, its causes, and its motivations. Nevertheless, the majority of the research on corruption concentrated on the results and repercussions from an economic perspective. The role of auditing is generally not given much emphasis in research on how to combat corruption. The literature on public sector auditing focuses predominantly on the standards, independence, professionalism, and auditing input of government auditing agencies; and how these aspects affect the standing and effectiveness of governmental departments (e.g., Schelker, 2012; Saito & McIntosh, 2010; Raman & Wilson, 1994; Baber, 1983). Additionally, it was

discovered that majority of empirical research on corruption were carried out in industrialized nations as opposed to those that actually deal with the issue, such as Neu *et al.* (2013a, 2013b). Also, majority of these research lack empirical data (e.g., Ionescu, 2014; Otalor & Eiya, 2013; Dye, 2007; Khan, 2006; Dye & Stapenhurst, 1998). Few, if any, made a significant effort to explore in depth the challenges that public sector auditing faces in its role of detecting and preventing corruption, particularly in developing nations. No one attempted to answer the question of how public sector auditing detects and prevents corruption in depth. In order to close this significant gap in the literature, further study should be conducted.

Hence, the study therefore recommends that the role of auditing should be given much attention on how to combat corruption; auditors' independence should be strengthened and sustained in public sectors, most especially in developing nations which is certain to provide the liberty and lack of restrictions the auditors need from undue influence and interference from any party and to remain unbiased in discharging their audit obligations.

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Sustainability Reporting and Corporate Financial Performance of Quoted Telecommunication Companies in Nigeria

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Abstract

This study examines the link between sustainability reporting and telecommunication companies' corporate performance on the Nigerian Stock Exchange. The specific objectives of the study were to determine whether sustainability reporting - economic, social, and environmental disclosures - has an impact on the corporate performance of telecom companies listed on the Nigerian Stock Exchange, using profit margin (PM) as a measure of corporate financial performance. Since the sector has just three companies, the study considered the entire population. An ex post facto research design was used and the study used secondary data from the companies' annual reports for the relevant years considered (2012-2021). Panel regression techniques were used to examine the relationship between variables. This study found that economic performance disclosure and social performance disclosure has a significant positive effect on net profit margin, while environmental performance disclosure has no significant impact on the net profit margin of companies listed on the Nigerian Stock Exchange. In general, this study concludes that there is a significant correlation between sustainability reporting and the corporate performance of telecom companies listed on the Nigerian Stock Exchange. The study, therefore, recommends, among other things, that companies should strive not only to improve these disclosures, but also to improve the quality of these disclosures.

Keywords: sustainability, corporate, reporting, disclosures and performance

1.0. Introduction

All enterprises aim for steady growth, long-term viability, and maximization of shareholder value. Due to the fact that companies do not function in a vacuum, the effects of their operations frequently extend to the environment and society as a whole. The majority of the time, these businesses' operations have negative effects on both the local community where they are located and the environment as a whole. This indicates that in order for these organizations to effectively and efficiently accomplish their objectives, they must make the necessary adjustments to the immediate environment in which they function. Environmental developments including global warming, health care, and poverty have presented the world with significant difficulties in recent decades. Welford (1997) refers to

these as concrete environmental crises (severe global water shortages, declining fish catches, and global food insecurity).

According to Viek and Steg (2019) and Ezeabasili (2009), the quality and quantity of environmental resources are steadily declining as a result of rising material use, expanding manufacturing technologies, and an expanding population. So, it follows from the foregoing that numerous businesses are making an effort to contribute to the answers to these environmental problems. Welford (1997) contends that companies appear satisfied to watch while the natural system of the globe deteriorates, individuals go hungry, and social systems break down. As business is the root of the issue, it must also be the root of the solution. Sustainability has recently raised significant concerns across the globe.

All companies must immediately increase their transparency regarding how they manage corporate governance issues, how they treat their employees, and how they interact with communities. According to Unerman et al. (2007), large multinational corporations in particular are increasingly making efforts to take environmental, social, and economic performance into account. More generally, the idea of sustainable development has emerged as a key organizational concern in contemporary society, which is a remarkable accomplishment for an idea that is typically believed to have burst onto the political scene with the release of the Brundtland Report in 1987. "This follows the creation of the World Commission on Environment and Development in 1983 by the Secretary-General of the United Nations to study the magnitude of the problem of mounting evidence of global environmental damage caused by human activities.

The commission investigated global environmental and economic issues and discovered a close relationship between ecology and economics on a global scale. The destruction of the environment and its effects on people's lives have drawn a lot of attention from people all around the world. Sustainable development is crucial for the future wealth of nations and individuals, according to the Brundtland Report (White, 2009; Edwards, 2005). Concerns about sustainable development typically center on how human activities can be planned and directed to meet physical and emotional demands, while not jeopardizing the social, economic, or environmental underpinnings that allow those needs to be met (Unerman et al., 2007). According to Hart (2007), corporations are the only organizations with resources, technology, global reach, and ultimately the motivation to achieve sustainability.

Several businesses state that they acknowledge their social and environmental duties in addition to their economic responsibilities and that they aim to manage and account for these activities in accordance with their sustainable development policies and procedures. The majority of businesses are now embracing this expanding corporate reporting system because corporate sustainability reporting has grown to be such a significant concern. This surge in sustainability reporting is reflected in statistics from the Global Reporting Initiative (GRI). The number of companies worldwide writing sustainability reports based on the GRI framework increased from 150 in 2002 to 750 in 2005. From January 1 to December 31, 2010, the number of those registered on the list of GRI reports increased sustainability reports by 22 percent (GRI, 2011). “

The telecommunications industry is an industry that should be socially and environmentally responsible for its environment. This is because they engage in activities that generate electromagnetic radiation that is dangerous to human health as it can lead to life-threatening diseases such as cancer, heart ailments, etc (Dahal, 2013). This study, therefore, focused on sustainability reporting and the corporate financial performance of listed telecom companies on the Nigerian Stock Exchange.

It is common knowledge that numerous businesses all around the world are implementing sustainability reporting methods. Examining the link between sustainability reporting and financial performance from a methodological standpoint raises questions about the direction of this relationship and suggests that it did not perform well in terms of attaining convergence. Majority of studies on financial performance and sustainability reporting have produced results that are either unclear or contradictory, sometimes claiming favorable outcomes. Considering research done in Nigeria, researchers such as Beredugo and Mefor (2012), Akinlo and Iredele (2014), Onyekwelu and Ekwe (2014), Olanyinka and Oluwamayowa (2014), Nze et al., (2016), Nnamani et al., (2017) found that sustainability reporting has a positive and significant impact on the financial performance of publicly traded companies; while others such as Oyewo and Badejo (2014), Shehu (2011), Asuquo et al., (2018), Erhirhie and Ekwueme (2019) found that corporate sustainable development practices are negatively associated with the profitability of public companies (not significant effect). Based on these conflicting empirical results, it seems obvious that the question of whether or not sustainability reporting influences company performance remains an open question and therefore warrants further investigation.

2.0 Literature Review

2.1 Conceptual Clarifications

2.1.1 Sustainability Reporting

Organizations can think about how they affect a range of sustainability concerns by reporting on them. As a result, people are able to be more open about the dangers and chances they confront. The main channel for expressing sustainability performance and impact is sustainability reporting. In its simplest form, a sustainability report is a summary of the environmental and social performance of a business. A sustainability report is a document that a company or organization publishes that details the economic, environmental, and social effects of its regular operations, according to GRI (2011). The organization's principles and governance structure are also presented in a sustainability report, demonstrating the connection between its strategy and its dedication to a sustainable global economy. There are a variety of benefits that a company can derive from reporting on its sustainability activities. These advantages can include enhancing customer loyalty, staff trust, and investor confidence. Market analysts frequently consider a company's sustainability disclosures to judge management effectiveness and quality, and reporting can give businesses better access to finance (Dhaliwal, et al., 2011).

The idea of sustainability reporting is related to other distinct ideas, such as B. Triple Bottom Line Reporting and Corporate Social Responsibility (CSR) Reporting, which explain the disclosure of information on economic, environmental, and social implications. Companies who aim to offer their stakeholders value and information about the effects of their operations and activities on society and the environment voluntarily produce sustainability reports (Garg, 2015). " According to Epstein (2008) (Dembo, 2017), this additional knowledge will offer the organization a number of advantages, including financial ones like cheaper capital costs and stock exchange premiums; benefits that are tied to customers, such as increased market share and improved reputation; operational advantages include higher resource yield and novel processes; advantages for the organization, including decreased risk and enhanced learning.

2.1.2 Corporate Financial Performance

The outcome of a task is an achievement. The total of all the outcomes of an organization's work activities and processes is its organizational performance

(Robbins & Coulter, 2005). Management must supply a tool for tracking and evaluating business performance. Financial reports offer financial data that managers can use to evaluate their performance in managing the business and that is advantageous to others when they make financial decisions (Viek & Steg, 2019). A company's overall success is determined by how well it does on its key performance indicators, which are often shareholder, market, and financial performance. "The net profit margin is the metric used in this study to assess how well businesses are performing financially. Net profit margin, also known as profit margin or net profit margin, is a financial metric used to calculate the percentage of profit a company makes from its total sales.

2.1.3 Social Performance Disclosure

In corporate social responsibility management, there are two strategies that can improve social performance, like two sides of the same coin. On the one hand, the social performance improvement strategy aims to fulfill legal obligations towards stakeholders. This prompted the company as a state to carry out the management of positive and negative business impacts according to the state regulations, namely CANDY SOE No. 05 / MBU /2007.

On the other hand, the strategy of improving social performance is realized through the principle of stakeholder involvement (stakeholder inclusivity) and community development. In this case, sustainable development practices aim to meet the needs of stakeholders that depend on the capabilities of the company, including respect for the right of the community, knowledge of the community's characteristics of interaction, recognition of the value of work in partnership and investment in social networks to create value for the community. The results of the literature study provide a relevant understanding of the concept of Corporate Social Performance (CSP) emanating from the writing developed by Carroll (1979). Corporate Social Performance (KSP) is a multidimensional construct that includes four components: 1. Responsibility economy towards consumers and investors. 2. The legal responsibilities to the government or the judiciary; 3. The responsibility of ethics to the public (society) and 4. Responsibility policy to the community.

2.1.4 Economic and Environmental Performance Disclosure

The economic dimension of sustainability is concerned with how an organization affects the financial health of its stakeholders and the overall local, national, and international economic system in the framework of the GRI Standards. " The

Economic Series (200) standards talk about how money moves between various interest groups and what major economic effects an organization has on society. The topic of economic performance is covered in GRI 201. This encompasses the financial effects of climate change, the economic value generated and dispersed by an organization (EVG&D), its defined benefit plan commitments, and the financial support it receives from the government. The disclosures in this Standard can provide details on how a business manages its impacts on economic performance.

Environmental disclosure is a form of corporate accountability to stakeholders that relates to environmental disclosure initiatives the business has taken in the past, is currently undertaking, and will likely take in the future. Environmental disclosure initiatives are a result of the business' environmental management decisions. Although environmental disclosure by a corporation is not yet mandatory, any manager working for an agency or serving on its board of directors will make an effort to provide any information provided by the company regarding its environmental management. Hence, an organization's environmental disclosure will result in future value creation for the organization (Ezhilarasi, 2009).

2.2 Empirical Review

Abdulsalam et al. (2020) studied the effect of corporate social costs on the profitability of oil marketing firms in Nigeria. The information was gathered over a fifteen-year period from three sampling organizations audited financial statements and reports (2004 to 2018). Economic, social, environmental, and health expenses were employed as stand-ins for sustainability reporting throughout the panel regression analysis of the data. The research demonstrates that corporate social responsibility positively and significantly impacts the profitability of the organizations under investigation. Based on this discovery, they advised businesses that place a high priority on returns to make significant expenditures on social issues.

Abdulsalam and Babangida (2020) conducted a study with the aim of empirically examining the significant influence of turnover and company size on the sustainability reporting of oil and gas companies in Nigeria. "The newspaper population consists of 24 oil and gas companies that are significant players in the upstream, midstream, and downstream of Nigeria's oil and gas industry. Panel regression techniques were utilized to examine data taken from financial

statements and stand-alone reports from the sample companies, which were chosen as the study's sample size across a fifteen-year period (from 2004 to 2018). The findings indicate that firm characteristics such as revenue growth and leverage have a negative significant impact on sustainability reporting and profitability of Nigerian oil and gas companies, whereas company size has a positive significant impact. The study, therefore, recommended that oil and gas companies consider a mix of common stock, preferred stock, and retained earnings as a form of capital structure, rather than a preference for debt financing. Okolie and Igaga (2020) examined the use of sustainability reporting for evaluating the financial performance of listed deposit money banks in Nigeria. The study mainly focused on the financial performance of Nigeria's deposit-taking banks from 2012 to 2018 utilizing return on assets, return on equity, and earnings per share as proxies for the economic, environmental, and social elements of sustainability reporting. Only seventeen deposit-taking banks out of the twenty-one banks registered on the Nigerian Stock Exchange were included in the study's sample (as of December 2018). The necessary information was gathered from the selected depository institutions' period sustainability reports and audited annual accounts. For the study, descriptive and least-squares regression analyses were performed to compare the performance proxies chosen with banks' sustainability reporting procedures. The study found that the sustainability reporting practices of banks in Nigeria have a significant impact on the financial performance of deposit-taking banks in Nigeria. The study recommended that appropriate legislation be enacted to mandate enhanced sustainability practices at all deposit-taking banks in Nigeria and allow for meaningful assessment and measurement of revenue, and social and environmental impacts in all aspects of banking operations in Nigeria.

Iheduru and Okoro (2019) examined the impact of sustainable reporting on profitability indicators of listed companies in Nigeria from 2008 to 2017. The information is derived from the firms' annual reports. Out of the total number of listed companies in Nigeria, twenty were chosen. Return on Equity, Earnings Per Share, and Return on Investments were used as stand-ins for profitability, while disclosures in the areas of economic, social, environmental, and corporate governance were used to further qualify sustainability reporting. The Hausman test was used to evaluate the panel data model. The fixed effect was supported by models 1 and 2, while the random effect was supported by model 3. The findings showed that while environmental and corporate governance disclosure had negative and insignificant effects on return on equity for the selected companies,

economic and social disclosure had favorable, but insignificant effects. Economic, social, and environmental disclosure had a favorable impact on ROI, while corporate governance disclosure had a negative impact on the ROI of the chosen Nigerian companies. All predictor factors had positive and insignificant effects on the companies' earnings per share. In order to solve environmental concerns and boost profitability, they advised carefully assessing the operational environments of the companies and developing policies to control elements like economic, social, environmental, and corporate governance disclosures. Companies should make sure that all kinds of sustainability reporting are strictly followed.

2.3 Theoretical Framework

Stakeholder theory is a very fundamental theory of sustainability reporting. Stakeholder theory suggests that the essence of business is first and foremost to build relationships and create value for all of its stakeholders. Although the composition of stakeholders can vary depending on the company's industry and business model, key stakeholders typically include employees, customers, communities, suppliers, and financiers (owners, investors). All of these stakeholders are equally important to the company and any compromise between stakeholders should be avoided. Rather, leaders must find ways to steer these interests in the same direction. Freeman's stakeholder theory states that managers must satisfy a variety of stakeholders (e.g., employees, customers, suppliers, and local community organizations) who can affect the company's outcomes (Korolo & Korolo, 2022). This study is consistent with stakeholder theory as it is a theory of organizational management and business ethics that deals with morality and values in managing and organizing stakeholders and any individual or constituency that contributes to an organization afford. “

3.0 Methodology

This research used an ex post facto research design. The population of the study comprises all three (3) companies in the telecommunications sector listed on the Nigerian Stock Exchange (NSE). The study used all three (3) companies hence there was no need for sample size and sampling techniques. Secondary data were used for this study. The data were extracted from the annual reports of the sampled companies listed on the Nigeria Stock Exchange for the financial years 2012-2021. A regression analysis was performed to test the hypotheses using the Ordinary Least Squares (OLS) method based on the desirable properties it possesses and the relative ease of its application.

3.1. Model Specification

The model specification refers to the description of the process by which the dependent variable is generated by the independent variables (Iheduru & Okoro, 2019). The study adopted the model of Okolie and Igaga (2020). Each model represented a specific hypothesis. Hypothesis one, says that there is no positive and significant impact of economic performance disclosure on the net profit margin of publicly traded telecom companies in Nigeria.

Is represented as:

$$NPM = f(ECN) \dots \dots \dots (i)$$

Model (I) can be further specified as:

$$NPM = \beta_o + \beta_1 ECN + \mu t \dots \dots \dots (ii)$$

Hypothesis two states that there is no positive and significant effect of environmental performance disclosure on the Net Profit Margin of listed telecommunication companies in Nigeria. It is represented as:

$$NPM = f(ENV) \dots \dots \dots (iii)$$

Model (iii) can be further specified as:

$$NPM = \beta_o + \beta_2 ENV + \mu t \dots \dots \dots (iv)$$

Hypothesis three states that there is no positive and significant effect of social performance disclosure on Net the Profit Margin of listed telecommunication companies in Nigeria. It is represented as:

$$NPM = f(SOC) \dots \dots \dots (v)$$

Model (v) can be further specified as:

$$NPM = \beta_o + \beta_3 SOC + \mu t \dots \dots \dots (vi)$$

The combined model specification

$$NPM = f(ECN + ENV + SOC) \dots \dots \dots (vii)$$

The regression model is;

$$NPM = \beta_o + \beta_1 ECN + \beta_2 ENV + \beta_3 SOC + \mu t \dots \dots (viii)$$

Taking the log of the model

$$LNPM = \beta_o + \beta_1 LECN + \beta_2 LENV + \beta_3 LSOC + \mu t \dots \dots \dots (ix)$$

Where:

NPM – Net profit margin

ECN – Economic Performance Disclosure

ENV– Environmental performance disclosure

SOC – Social performance disclosure

μ_t = Error term capturing other explanatory variables not explicitly included in the model.

β_0 = Intercept of the regression.

L = Log

β_1 , β_2 , and β_3 = Beta coefficients of the independent variables

4.0. Results and Discussion

Table 4.1: Economic Performance Disclosure and Profit Margin Result

Variable	Aprori sign	Random Effects Estimates	Fixed Effects Estimates	GMM Estimates
C		0.2579* (0.0746) {0.001}	0.4961* (0.0201) {0.000}	
PM (-1)				0.3087* (0.1393) {0.0272}
Log (REV)	+	0.0147* (0.0052) {0.0049}	0.0086* (0.0023) {0.0003}	0.0357 (0.0375) {0.3419}
Log (TASSET)	+	0.0022* (0.0071) {0.7607}	-0.0079* (0.0039) {0.039}	-0.02456 (0.0152) {0.1056}
LEV	+	-0.02551 (0.0196) {0.1925}	-0.0278** (0.0151) {0.0649}	-0.3257* (0.1534) {0.0342}
DPS	+	-0.0409* (0.0229) {0.0742}	-0.0296** (0.0151) {0.0508}	-0.4800* (0.1643) {0.0036}
EPS	+	-0.0253* (0.0367) {0.4917}	-0.0008 (0.0168) {0.9645}	0.7955* (0.0774) {0.000}
Model Parameters				
R ²		0.0112	0.9088	
Adjusted R ²		0.003	0.8947	
F-statistic		1.4426	64.668	
Prob(F-stat)		0.2069	0.00	
Durbin-		1.4	1.6	

Watson				
J-statistic Prob (J-stat)				18.276 (0.248)
Instrument Rank				21
Model Diagnostics				
χ^2_{Hetero} $\chi^2_{\text{Serial/Corr}}$ $\chi^2_{\text{Wald-Test}}$	(0.621) (0.240) (0.00)	χ^2_{Norm} χ^2_{Hausman}	0.144 14.051 (0.000)	
Ar(1)				0.0337
Ar(2)				0.1321

Source: Researcher's compilation (2022)

Table 4.1 examines the estimation results for the impact of economic disclosure on the margin measure of companies' financial performance. Estimating the fixed effects model based on the Hausman statistic shows that the R^2 and adjusted R^2 were 90.88% and 89.47%, respectively. This is also the model's highest explanatory power compared to those on the profit margin regressed social and environmental data and the likely reason for this has been suggested earlier. The estimation diagnostic shows that the χ^2 Hetero p-value (0.621) implies the homoscedastic behavior of the errors and the χ^2 Serial/Corr value (0.240) also shows the lack of a serial correlation. In addition, the χ^2 Norm p-value (0.144) shows that the series follows a normal distribution. The F-stat of 64.668 (p-value = 0.00), which is significant at 5%, suggests that the hypothesis of a significant linear relationship between the dependent and independent variables cannot be rejected.

Assessing the performance of the independent variable, the estimation results show that the revenue (log (REV)) measured in it has a positive and significant impact on the profit margin of 5% (0.0086, p=0.000). The influence of log (TASSET) on PM is significant (p=0.000) with a negative coefficient (-0.0079). The impact of DPS is negative (-0.0296) and significant at 10% (p=0.0508), while that of EPS is not significant (p=0.000) at 5%.

Table 4.2: Social Performance Disclosure and Profit Margin Result

Variable	Apriori sign	Random Effects Estimates	Fixed Effects Estimates	Dyn-GMM Estimates
C		0.4212* (0.0819) {0.000}	0.4751* (0.0201) {0.000}	
PM (-1)				0.3275* (0.0679) {0.000}
H/S	+	0.19033* (0.1057) {0.000}	0.1988* (0.0962) {0.0392}	1.2709* (0.6256) {0.0428}
GD	+	0.0593** (0.0322) {0.0660}	0.0353* (0.0105) {0.001}	0.0959 (0.0881) {0.2769}
EMP	+	-0.1432 (0.1175) {0.2235}	-0.2008* (0.0905) {0.0269}	-1.0534** (0.6040) {0.0818}
CSR	+	-0.0558* (0.0154) {0.0003}	-0.0283* (0.0099) {0.0046}	-0.1054 (0.0647) {0.1036}
Model Parameters				
R ²		0.0156	0.9088	
Adjusted R ²		0.0093	0.8947	
F-statistic		2.4829	64.668	
Prob(F-stat)		0.0426	0.00	
Durbin-Watson		1.4	1.6	
J-statistic Prob (J-stat)				8.9306 (0.9162)
Instrument Rank				21
Model Diagnostics				
χ^2_{Hetero}	(0.3927)		χ^2_{Norm}	0.6712
$\chi^2_{\text{Serial/Corr}}$	(0.862)		χ^2_{Hausman}	11.232
$\chi^2_{\text{Wald-Test}}$	(0.00)			(0.000)
Ar(1)				
Ar(2)				

Source: Researcher's compilation (2023)

Table 4.2 examines the estimation results for the impact of the social disclosure dimension on the margin measurement of firms' financial performance. The 2Hausman statistic and p-value (8.322 p=0.024) indicate that the fixed effects model estimate is the appropriate estimate for the model, indicating the existence of significant correlations between firm-specific disturbances and the betas. The model shows that R^2 and Adj R^2 were 60.88% and 59.47%, respectively. The χ^2 Hetero p-value (0.3927) implies the homoscedastic behavior of the errors and the χ^2 Serial/Corrp value (0.862) also shows the lack of serial correlation. In addition, the χ^2 Norm p-value (0.6712) shows that the series follows a normal distribution. The F-stat of 64.668 (p-value = 0.00), which is significant at 5%, indicates that the hypothesis of a significant linear relationship between the dependent and independent variables cannot be rejected. It is also an indication of the shared statistical significance of the model. The influence of EMP is negative at 5% (-0.2008), but also significant (p=0.0269). Finally, the impact of CSR on profit margin is found to be negative (-0.0283) and significant (p=0.0046) at 5%. The results of the diagnostic tests confirm the normality of the residuals (χ^2 Norm = 0.684), the absence of a stochastic dependence (χ^2 Serial/Corr= 0.554), and heteroscedastic errors (χ^2 Hetero = 0.554).

The results of the Arellano and Bond (1991) dynamic panel estimator show that the lag of PM (PM-1) is positive (0.3275) and significant at 5% (P = 0.000), implying that previous levels of the profit margin performance affect the current profit margin performance. Looking at the performance of social disclosure indicators, H/S maintains its positive impact (1.2709) on profit margin and is significant at 5% (p=0.0428), but while GD's impact on profit margin is positive (0.0959), but is not significant (p=0.1036) at 5%. The influence of EMP is negative (-1.0534) and significant (p=0.0818) at 10%. Finally, the impact of CSR on PM still retains its negative sign (-0.1054), albeit not significantly (p=0.1036) at 5%. The J-Stat test of limitation over-identification yields all p-values greater than 0.10, indicating that a null hypothesis could not be rejected. Therefore, over-labeling restrictions apply. The AR (1) tests show that the residuals in the first differences correlate as expected, while the AR (2) tests yield p-values greater than 0.10, meaning that a null hypothesis with no second-order serial correlation is not rejected could become. Therefore, all results of the GMM model are valid.

Table 4.3. Environmental Performance Disclosure and Profit Margin Result

Variable	Apriori sign	Random Effects Estimates	Fixed Effects Estimates	Dyn-GMM Estimates
C		0.49116* (0.0257) {0.000}	0.4708* (0.0033) {0.000}	
PM(-1)				0.3250* (0.0568) {0.000}
ECON	+	-0.0459 (0.1128) {0.6842}	-0.0492 (0.0783) {0.5296}	-0.3317 (0.3534) {0.3484}
ECP	+	0.1040 (0.1622) {0.5214}	0.0705 (0.1248) {0.5727}	1.4882 (1.5389) {0.3341}
EDON	+	-0.1677 (0.1735) {0.3342}	0.2156 (0.1777) {0.2258}	-0.62551 (1.1612) {0.5904}
EMS	+	0.17113 (0.1722) {0.3208}	-0.2094 (0.1776) {0.2390}	0.5943 (1.1684) {0.6112}
EGHGE	+	-0.0590 (0.1917) {0.7583}	-0.0170 (0.1416) {0.2390}	-1.3905 (1.5935) {0.3833}
AR(1)	+		0.3343 (0.0383) {0.000}	
Model Parameters				
R ²		0.0025	0.560	
Adjusted R ²		0.005	0.452	
F-statistic		0.3104	123.43	
Prob(F-stat)		0.9067	0.00	
Durbin-Watson		1.31	1.88	
J-statistic Prob (J-stat)				15.9111 (0.3879)
Instrument Rank				21

Model Diagnostics			
χ^2_{Hetero}	(0.658)	χ^2_{Norm}	0.097
$\chi^2_{\text{Serial/Corr}}$	(0.114)	χ^2_{Hausman}	11.232
$\chi^2_{\text{Wald-Test}}$	(0.00)		(0.000)
Ar(1)			
Ar(2)			

Source: Researcher's compilation (2023)

Table 4.3 examines the estimation results for the impact of the environmental disclosure dimension on the margin measurement of companies' financial performance. The 2Hausman p-value = 0.034 indicates that fixed effects estimation is used here. The R² for the FE model is 56% with an adjusted value of 45.2%. The F-stat of 123.43 (p-value = 0.00) is significant at 5% and suggests that the hypothesis of a significant linear relationship between the dependent and independent variables cannot be rejected. It is also an indication of the shared statistical significance of the model. Analysis of the coefficients shows that ECON has a negative (-0.0492), but not significant (p=0.5296) impact on the 5% profit margin. The influence of EDON is positive (0.2156), but also not significant (p=0.2258) at 5%, and this is also the case for EMS where the influence is negative (-0.2094), but not significant (p=0.2390) is 5%. Finally, it is noted that the impact of EGHGE on the profit margin is negative (-0.0170) at 5%, but not significant (p=0.2390). Overall, the result shows that environmental reporting has no significant impact on the margin development of the companies selected in the study. The results of the diagnostic tests confirm the normality of the residuals (χ^2_{Norm} = 0.097), the absence of a stochastic dependence ($\chi^2_{\text{Serial/Corr}}$ = 0.114), and heteroscedastic errors (χ^2_{Hetero} = 0.658)

The results of the dynamic panel estimator from Arellano and Bond (1991) show that PM (PM-1) lag is positive (0.3250) and significant at 5% (P = 0.000), implying that previous profit margin performance levels affect current profit margin performance. Looking at the performance of the environmental metrics, ECON has a negative (-0.3317) but not significant (p=0.3484) impact on the profit margin at 5%. The influence of ECP on PM is positive (1.4882) but not significant (p = 0.3341) at 5%. In addition, it is observed that EDON has a negative impact (-0.6255), albeit not significantly (p=0.5904) at 5%. The effect of EMS on PM is positive (0.5943), but not significant (p=0.6112) at 5% and in the same direction the effect of EGHGE on PM is negative (-1.39905) but not

significant ($p=0.3833$) at 5%. The J-Stat test of limitation over-identification yields all p -values greater than 0.10, indicating that a null hypothesis could not be rejected. Therefore, over-labeling restrictions apply. The dynamic GMM estimates are like the FE estimates and further, confirm that there is no proven impact of environmental reporting on the profit margins of the companies included in the study.

4.1. Discussion of Findings

4.1.1. Economic performance disclosure and net profit margin

Both the results of the Fixed Effects Estimate and the robust Arellano and Bond Dynamic GMM estimates confirm that economic information disclosure has a significant impact on the profit margin of the selected companies used for the study. In particular, the results of the FE estimation show evidence of the statistical significance of the turnover effects ($\log(\text{REV})$) ($p=0.000$), $\log(\text{TASSET})$ ($p=0.000$), while the dynamic panel estimator after controlling for potential endogeneity in the resulting model shows evidence of statistical significance for the effects of LEV ($p=0.000$), DPS ($p=0.0036$), and EPS ($p=0.000$) on PM. This finding is consistent with that reported by Okolie and Igaga (2020).

4.1.2. Social performance disclosure and net profit margin

Table 4.2 examines the estimation results for the impact of the social disclosure dimension on the profit margin measure of the company's financial performance. The results of the FE estimation show that H/S has a positive (0.1988) and significant ($p=0.039$) impact on the 5% profit margin. The influence of EMP is negative at 5% (-0.2008), but also significant ($p=0.0269$). Finally, the impact of CSR on profit margin is found to be negative (-0.0283) and significant ($p=0.0046$) at 5%. The results of the dynamic panel estimator from Arellano and Bond (1991) also have similar results for H/S, and GD on profit margin, although they are positive (0.0959), but not significant ($p=0.1036$) at 5% and EMP is positive. This result is consistent with the results of Okolie and Igaga (2020).

4.1.3. Environmental performance disclosure and net profit margin

Table 4.3 examines the estimation results for the impact of the environmental disclosure dimension on the margin measurement of the company's financial performance. Analysis of the FE coefficients shows that ECON is negative (-0.0492) at 5%, but not significant ($p=0.5296$). The influence of ECP is positive

(0.0705) but not significant ($p=0.5727$) at 5%, EDON is positive (0.2156), but also not significant ($p=0.2258$) at 5%, and this is also the case for EMS, where the impact is found to be negative (-0.2094) but not significant ($p=0.2390$) at 5%. Finally, the effect of EGHGE on PM is found to be negative (-0.0170), but not significant ($p=0.2390$) at 5%. Overall, the result shows that environmental reporting has no significant impact on the margin development of the companies selected in the study. The result is also supported by the results of the dynamic panel estimator by Arellano and Bond (1991). This result is consistent with Abdulsalam and Babangida (2020).

5.0. Conclusion and Recommendation

In today's world, business enterprises do not operate in isolation, so their activities tend to have some impact on the environment and society at large through their constant interaction with their environment. Most often, the activities of these companies have adverse environmental impacts on the people in the immediate area where they are located, as well as on the environment at large. The study examines the impact of sustainability reporting on the financial performance of telecom companies listed on the Nigerian Stock Exchange. The measure of the financial performance of companies used in the study is the profit margin (PM). The three dimensions of sustainability information examined are economic, social, and ecological information. The results of the study show that (i) economic performance disclosure has a significant positive effect on net profit margin, (ii) social performance disclosure has a significant positive effect on the net profit margin of companies listed on the Nigeria Stock Exchange (iii) the environmental performance disclosure has no material impact on the net profit margin of companies listed on the Nigerian Stock Exchange. The study concluded that sustainability reporting has an impact on the financial performance of telecom companies listed on the Nigerian Stock Exchange. The study, therefore, recommends that companies should strive not only to improve these disclosures, but also to improve the quality of these disclosures.

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Work Training: A Panacea for Personnel Productivity (A Study of Shoprite Limited, Owerri, Imo State, Nigeria)

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Abstract

The study examines the impact of workplace training on personnel productivity in Shoprite, Owerri, Imo state, Nigeria. Descriptive research method was adopted since it required observing and documenting behavior, attitudes and activities. Human capital theory and Expectancy theory underpinned the study. The sample size was derived by Krejcie & Morgan (1970) table which consist of (70) respondents who are employees of the firm. Data were collected through a questionnaire instrument found to be reliable. The data collected was grouped according to response and presented in tables using frequencies and percentages. The hypotheses were tested using Pearson's correlation analysis. Results of the study revealed that work training has a significantly strong and positive association with personnel productivity. Base on the finding, the study recommends periodic and effective trainings programs for employees to keep abreast with new skills and knowledge regarding their job and also serve as a source of motivation. The researcher suggested that further investigation should be carried out in public sector to assess the effectiveness of work trainings.

Keywords: Work training, Orientation, On-the job training, Off- the job training, personnel productivity.

1.0 Introduction

Today, the focus in work organizations around the world is on how to increase productivity through work training and human resource development programs. Work training and staff productivity are crucial management responsibilities in achieving goals and serve as a tool for gauging productivity in any context. Companies globally strives so hard to achieve these set of objectives by spending millions of their resources yearly in order to hire employees who are best fit for their roles. Even though these new recruits are meant to exceed expectation, output is frequently still subpar which are reflected in subpar product quality,

uneven customer service delivery and low worker effectiveness. Declining productivity over time has been linked to a failure of management to implement training requirements. Due to these inefficiencies, which has hampered sales turnover, product quality, good customer services and low return on investment as being investigated in shoprite Nigeria Plc.

Inadequate training in the form of induction programs for effective orientation of new hire, On –the job training and off-the job training for old employees has been identified as a major contributing factor to low productivity in workforce and this has given managers anxiety about how to increase productivity of typical employees. To accomplish these goals, several seminars, conferences, symposia and workshops are held (Nwachukwu, 2012; Alukoet *al.*, 2001).

In most Nigeria organizations, low productivity has been linked mostly to a lack of competent and adequate skills needed to execute jobs. Where the actual performance is lower than the expected performance, training of the employees is often one of the major tools used by most organizations to close up the gap (Yesufu, 2009).

Employee productivity is acknowledged as a key factor in the economic and social growth and development of any nation, because it determines the levels of living for the populace. High employee productivity boosts the company's revenue and profits, putting it in a stronger position to offer higher and enhance payment to staff. Productivity is the “ratio between goods and services produce (output) and resources (input) used to produce them (output) so as to indicate the productivity efficiency with which labour, capital, material and other inputs are combined and use to produce goods and services of a specific quality for the satisfaction of the customer's needs (Badenhorst, Ray & Jack 1999).

Work training is the methodical and systematic development of the information, skills and attitude necessary for a person to function satisfactorily in a particular work or job. Thus training in any organization is aimed at giving employees at all levels sufficient instrument and guidance to enable them perform their jobs effectively and prepares themselves for promotion and advancement (Inyang, 2002). Declined Productivity is one of the main problems companies all round the world are dealing with. These low productivity is the direct outcome of poor work training and human resource development which has directly lead to poor work output, low sales, frustration, insubordination, lack of interest, managerial

inexperience, commitment and cooperation. Maimuna *et al.*(2013) asserted that employees tends to become obsolete, and therefore making the need to adapt to the continuous learning and updating of the skill and knowledge invaluable, due to the organizational, technological and social dynamics. Also when productivity is low, most organization resort to other measures, like lay off and employment of new workers when the performance of their workers is low (Obot 1999).

Amer Hani Al-Kassem (2021) asserted that training programs conducted by organization are waste of time and money. He further said that employee's loss of interest is associated with the types of training and conclusively opined that Specific department training programs are more theoretical than practical, Employees have a hard time learning the material in these types of seminars, when a training program is conducted over a long period, academic lectures become tedious. Lerman *et al.*, (1999) and Billikopf (2003), opined in their studies that when training is provided to the employees' of an organization time is just wasted and results in adverse consequences, whereby the employees need to adapt and struggle with the new tasks handed to them after the training is completed. However, Lack of proper and adequate skills has been identified as the major cause of low productivity in most organizations in Nigeria. Finally, many organizations have struggled to recognize human resource development and work-related training as essential component of management tasks, which has a negative impact on personnel productivity.

Therefore, this study will examine the influence of work training on personnel productivity using Shoprite Nigeria limited, Owerri, Imo state. The outcome of this study will offer fresh approaches to enhancing effective work training that promote organizational productivity; and by so doing contribute something of value to the corpus of information already in existence in area of human resource development. The general objective of the study is to investigate the influence of work training as a panacea for declined personnel productivity in Shoprite, Owerri, Imo state, Nigeria. Other specific objectives include determining if work training can contributes to personnel productivity. Also whether orientation, on-the-job and off-the-job training can contribute to personnel productivity. Hence the research questions for this study are: To what extend does work training can contribute to personnel productivity? To what extent does orientation, on the job and off the job training can contribute to personnel productivity?

2.0. Literature Review

2.1.1 Conceptual review

Personnel productivity

Personnel productivity is the measure of the output per unit of input economically. It is the log of net sales over total employees (Rohan & Madhumita 2012). Productivity has been defined by Taylor (1970) as the measure of how well resources are brought together in organizations and utilized for accomplishing a set of result". The performance of productivity is at its peak. Productivity is also the amount of output created by one unit of manufacturing input in a given amount of time. Productivity, according to Mali (2008), was considered as a gauge of how effectively resources were pooled inside an organization and put to use in order to achieve a specific set of results. The best degree of performance is achieved through productivity with the fewest resources or expenditures. This is frequently understood to represent the ratio of total output to total intake. Productivity is general terms for the efficiency with which the production factors are utilized to create goods and services.

Work training

The value of training in boosting organizations productivity cannot be overstated. However, several researchers and managers agree that work experience is essential to an organization's success and the management of that organization (McDowall & Saunders, 2010). Salas (2012) and Wayne (2015) define training as a procedure and strategy for developing training materials and distributing them in a way that will improve employee's abilities to perform their job effectively. Training is therefore seen as a means of learning pre-programmed knowledge to mold employees' behavior in the desired direction of completing a particular task. According to Falola et al. (2014), training is a type of human resource intervention that enhances an employee's capacity for productive work. This suggests that training gives employees the skills they need to complete their duties and regular tasks in an efficient manner (Al-Ghazawi, 2012). Armstrong (2014) affirmed that employee development is influenced by training in such a way that the workers' mental health is enhanced with a view to evoking their commitment to tasks and organizational effectiveness. According to Adeniji (2011) training may be one of the effective methods for improving the labor force. Training increases production, according to Engetou (2017). On the other hand, training's goal is to motivate and compel people to acquire the new skills they

need to perform at the maximum level on their knowledge in order to be prepared for prospective future opportunities inside their existing jobs.



Fig 1: Relationship Cycle

Source: Rohan and Madhumita (2012)

Types of work training:

i) **Orientation or Induction Training:** In his report, Ayodele (2002) divided orientation or induction training into three types. This kind of training is used to orient new hires in an organization, such as induction programs in big businesses. The opportunity to learn about the company's history, development, issues, and policies is typically provided to new hires during this training.

ii) **On the job training:** This typology includes a variety of activities, according to Olaniyan et al. (2008), a new employee is required to shadow a more experienced worker who is already performing that job schedule as part of apprenticeship training. Another option is demonstration training, in which the employee is forced to observe the formalities or procedures necessary in a given job schedule in action. A fourth option is vestibule training (where an employee is sent for an industrial attachment in a similar job schedule). With the exception of vestibule training, each of the other typologies in this cluster naturally exists within a certain organization. Additional components of this training cluster include environment-specific task-specific exercises and practical updates on IT systems.

iii) Off the Job Training: This kind of training entails what Olaniyan et al. (2008) refers to as a structured training procedure intended to maximize the potential of an organization's human resources. The goals of off the job training include giving participants the ideal balance of operational concepts and theoretical framework (Obasi, 1996). Seminars, workshops, conferences and formal class rooms are some of the settings for this type of training. Fundamentally, this training requirement is only a long-term cerebral or intellectually taxing exercise.

Importance of employees training:

Training improves employee performance through developing a sense of teamwork among employees as well as contributing positively towards their knowledge and information about their job (Gruman & Saks, 2011). The benefits of training includes the following:

1. Promotion of employees potentials or chances that can create opportunities for organizational staff.
2. Increasing team work and work place relationship, while acquiring new skills and knowledge.
3. A decrease in the turnover rate of employees
4. Increasing the security and safety of the workplace.

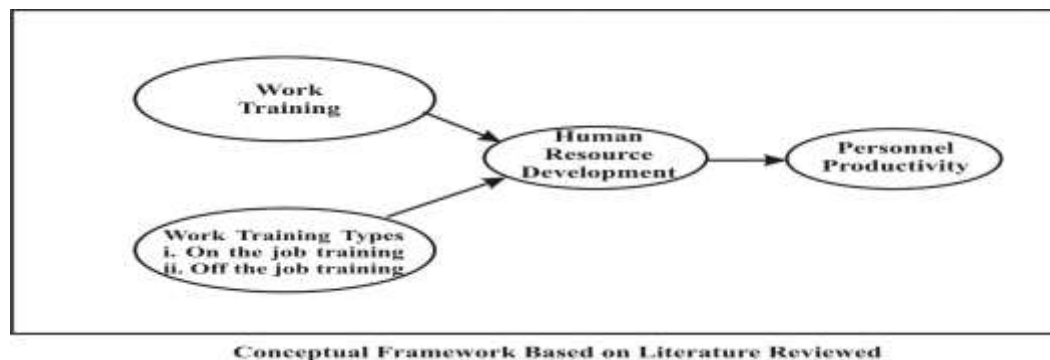


Fig 2: Conceptual framework

2.2 Theoretical Review

Human Capital Theory:

This idea has its roots in Adam Smith's legendary "Wealth of Nations" book, where he extolled the inherent values of a nation's human resource base as a necessary and vital component of its economic sustainability. The main concept

of the human capital theory is that human resources are important and essential components of any nation's productive process and as such, they must always be nurtured and fed with the appropriate ratio of excellent education and sufficient motivating work incentives. Yet the human capital theory's proponents counter that formal and informal education and training programs can both be employed to carry out an organization's staff training and development program.

Expectancy Theory:

Passer and Smith (2004), Coetsee (2003), Werner (2002), and Vroom (1968) developed this framework of analysis on the basis of the premise that an employee has the cognitive capacity to make rational decisions, including the decision to accept employment in any organization, the kinds of wage offers he will be willing to accept for his labor, and the kinds of conducive work environment he is willing to acquiesce to, because of this, they would only accept a job offer if and when its specifics closely met their expectations. Since employees are driven to work more when and where they are valued, better wages associated with their job and have the right instrumentality to perform tasks. Human capital theory allows managers to employ the right training approaches, strategies and track growth-measured through staff competencies and abilities, values and skill set. This will increase business productivity, and in time, revenue and brand recognition as well as corporate productivity. On the other hand, Expectancy theory aids managers in having a better understanding of pay packages that will inspire employees to improve their effectiveness towards reaching productivity.

2.3 Empirical Review

Akinyele (2021) study examined the influence of human resource development programs on workers job security in industrial organizations empirical evidence of Mobil Oil Nigeria. This result shows that there is a link between performance appraisal and compensation, that training and development influences workers productivity, also collective bargaining has an effect on the work-force of an organization, and there exists a significant relationship between recruitment and employee selection. The study therefore shows that human resource development programs influences workers job security. Recommendations were that Organizations striving to succeed should ensure that they are consistent in the use of factors involved in human resource development. HR Departments are also recommended to ensure that the employees are provided with maximum experience of the factors affecting human resource.

Oshati, et al (2019) examines the effect of training and development on workers' job satisfaction and productivity in a selected bottling company. The findings revealed that 87.5% of the respondents agreed that training and development could promote job satisfaction and productivity, while 12.5% disagreed, also, that 72.94% of the employee agreed that training and development guarantee high productivity, while 29.06% disagree that this does not guarantee high productivity. The paper concludes that unless Training and Development is accorded right priority attention, a firm might find it difficult to exist and if it exists at all, the vagaries of environmental factors demanding constant adaptability of entire staff may not allow it to exist for long. Blessed, et al (2022) examines human resource development practices and employees' performance in the University of Cape Coast. It was observed that formal classroom training is the most appropriate to offer staff with the adequate knowledge to perform one's job. It was also observed that training and development programmes initiated at the individual level is effective and most appropriate as compared to training and development organized for staff at the group level. The research article makes some recommendations for policy implication and this includes encouraging staff to embark on further studies to upgrade and add up to the knowledge required to perform their work. Bassam (2015) investigated training and development programs on employee performance in ministry of municipalities and public work in Iraq and finds that they are several training methods which are used to enhance employee performance. The major conclusions of this study are that improving employee performance through training can be accomplished in a number of ways. Some novel approaches for improved staff training are recommended in light of the substantial outcome.

Nwali, et al (2021) evaluates the impacts of training and development on employee performance using quantitative research methods. To achieve the objectives of the study, the quantitative research design was employed, and a questionnaire research instrument was used in collecting relevant data from either owners or managers of 260 Small and Medium Scale Enterprises in Lagos Nigeria. The study concludes that both off-the-job and on-the-job training are effective towards improving employee performance and that training and development not only improves the skill set of the employees, but also a source of motivation for the employees. Idah (2019) investigates the effect of human resources development on labor force productivity. The paper reviewed how human resources development is crucial to employee productivity and the socioeconomic well-being of citizens, and it makes the following

recommendations: the organization should coordinate human resources development with employees' skills and abilities, adequate funding should be made available to promote human resources development, and periodic reviews should be conducted to monitor progress. Timothy et al. (2021) examines the effects of training on employee performance in organizations. The expectation theory of motivation; which Victor Vroom utilized to describe the connection between training and employee performance in the workplace, demonstrate that an increase in training and development is directly connected with a 72.6% increase in employee performance. This means that declining employee performance and subpar organizational performance may be improved when managers and administrators start effective training and development programs. The study recommends that managers and administrators of organizations should increase the annual budgetary allocation for human capital training and development in both public and private organizations, because it will have a positive impact on employee performance and organizational higher productivity. Amer (2021) examines the impact of training and development on employees' job satisfaction and productivity in a chosen bottling company and finds that training and development are the most important aspects of management success in a study connected to the function of training and growth in accomplishing organizational goals. The study recommends that creation is focused on future responsibilities, while, training is devoted to the current organization. Okoye et al (2013) investigated the effect of human resources development on organizational productivity and finds that human resource development is extremely important for all enterprises. The researcher suggests that organizations foster the habit of going to conferences and seminars, that employers' efforts are periodically evaluated to determine how they contribute to the accomplishment of organizational goals, and that educational qualifications are requirement for hiring, choosing, promoting, and placing employees. Neelam et al (2014) investigated whether Training and Development has an impact on Employees Performance and Productivity. Data were analyzed and discussed. The result showed that there was significant relationship between the variables, the Pearson correlation was used in study and Cronbach Alpha for each questionnaire was obtained.

3.0 Methodology

This research adopted a descriptive research design due to the need to observe and document employee behavior, attitudes and actions as they existed at the time of the investigation. The research was limited to a survey of Shoprite Owerri, Imo

state, Nigeria. The study was conducted among employees of Shoprite-Owerri, Imo State with a population size of 85, while sample size determination was done using Krejcie and Morgan (1970) table, which gave the sample size for the study as 70. Primary source of data was adopted for the study. Data collection was done through administration of questionnaire and Personal visits to the company. The questionnaire was designed in Likert scale format. Respondents were asked questions regarding personal information about their age, sex, qualification, years of service or background etc.

The initial draft of the questionnaire was distributed to colleagues working in the field of education to assess its content validity. The questionnaire's reliability is therefore 0.864. The good reliability shows that the survey had good validity. Cronbach's alpha was used to assess the reliability of the instruments. Tables and simple percentages were used to analyze the data collected. Correlation technique was used to determine relationship between the variables under investigation. If p-value is less than 0.05 confidence level, rejected the null hypothesis in favour of the alternative hypothesis which states that there is a statistically significant relationship between work training and personnel productivity.

Regression technique was used to determine the impact of independent variable on the dependent variables. Data analyses were done using the SPSS program (statistical package for social science) version 23. If p-value is less than 0.05 confidence level, rejected the null hypothesis in favour of the alternative hypothesis which states that orientation, on the job and off the job training has significant impact on personnel productivity of Shoprite, Owerri, Imo state.

The research variables mathematically illustrate the model specifications used in the regression;

$$PP=F(WT)$$

Where; PP= personnel productivity, WT=Work training.

Whereas, the econometric form of the model being,

$$PP= \beta_0 + \beta_1 + \mu$$

Where B_0 = Autonomous/ intercept

B_1 = Coefficient of parameter WT

U= stochastic error term

4.0 Result and Discussion of Findings

Table 1: Demographic Characteristics of the Respondents

Variable	Category	Frequency	Percent (%)
Gender	Male	18	29.5
	Female	43	70.5
Total		61	100
Age	Below 20 years	3	4.9
	20 – 30years	33	54.1
	31 – 40 years	20	32.8
	Above 40 years	5	8.2
Total		61	100
Marital status	Single	38	62.3
	Married	21	34.4
	Others	2	3.3
Total		61	100
Educational Qualification	Post Graduate	8	13.1
	B.Sc/HND	27	44.3
	OND/NCE	16	26.2
	SSCE/GCE	10	16.4
Total		61	100
Years of Service	0 – 5 years	34	55.7
	6 – 11 years	17	27.9
	Others	10	16.4
Total		61	100

Source: Survey Research, 2023.

The survey revealed that female respondents dominated with 70.5%. In terms of age, the survey revealed that majority of the respondents were in the age bracket of 20-30years, accounting for 54.1%, followed by respondents above 31-40years of age, while those below 20years were the least accounted for 4.9% of the total respondents for the study. Also, survey on marital status showed that respondents who are single dominated the study with about 62.3%, followed by the married ones with 34.4%. Educational qualification of the respondents showed that those with B.Sc/HND dominated the study accounting for 44.3%, followed by respondents with OND/NCE (26.2), while those with postgraduate degree were the least represented in the study with 13.1%. Similarly, survey of the years for which respondents have worked in the company revealed that those who have

worked between 0-5years accounted for the majority of the respondents with 55.7%, followed by who have worked between 6-11years.

Hypotheses testing

HYPOTHESIS ONE:

H₀: There is no significant relationship between work training and personnel Productivity

Table 2: Relationship between work training and personnel productivity

Variable	Correlation co-efficient (r)	p-value
Work Training vs. Personnel Productivity	0.95313	0.0002

From the result of the study as presented in Table 2, it is clear that work training has a significantly strong and positive association with personnel productivity at $p < 0.05$

HYPOTHESIS TWO:

H₀: There is no significant relationship between orientation, on the job training, off the job training and personnel productivity of Shoprite, Owerri, Imo state.

Table 3: Regression results

Model summary				
Model	R	R ²	Adjusted R ²	Standard Error of the Estimate
1	0.987	0.975	0.973	0.195

a. Predictors: (Constant), On-the-Job training, Off-the-job training, Orientation

Table 4: ANOVA

	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	86.010	28.670	747.336	0.000 ^a
Residual	57	2.186	0.038		
Total	60	88.196			

- a. Dependent Variable: Personnel productivity
b. Predictors: (Constant), On-the-Job training, Off-the-job training, Orientation

Coefficients						
	Coefficients	Standard Error	t-Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.117	0.057	-2.036	0.046	-0.233	-0.001
On-job-train	0.476	0.077	6.141	0.000	0.320	0.631
Off-job-train	0.126	0.086	1.455	0.150	-0.047	0.300
Orientation	0.460	0.104	4.397	0.000	0.250	0.669

- a. Dependent Variable: Personnel productivity

Result from the table shows the value of R^2 to be 0.975. This value implies that the variations of the dependent variable (personnel productivity) of 97.5% can be explained by the variation of the independent variables (On-the-Job training, Off-the-job training, Orientation), while the remaining 2.5% is explained by variations of other variables not explained in the model.

Furthermore, results from the ANOVA table indicates that the independent variables (On-the-Job training, Off-the-job training, Orientation) has significant impact on personnel productivity at $p < 0.05$ confidence interval. Result from the coefficients shows how each of the independent variables impacted the dependent variable. It was therefore observed that apart from off-the-job training variable, other variables (on-the-job and orientation) significantly has impact on personnel productivity at $p < 0.05$. Also, the positive values of the independent variables imply that the more trainings personnel undergo, the higher their productivity.

Discussion of Findings

Study findings indicate that work training has a significantly strong and favorable relationship with employee productivity. These outcome is further supported by studies from Oshati, et al (2019); which demonstrated how training and development on workers' lead to job satisfaction and productivity. Further, Nwali *et al.* (2021) reported that both off-the-job and on-the-job training are effective towards improving employee performance and a source of motivation for the employees. In addition Okoye et al (2013) demonstrated that human resource development is very vital to any organizations ranging from small to large scale enterprises. Maimuna *et al* (2013) also highlighted the significant of training and

development on employee productivity. Timothy *et al.* (2021) dwell on how training impact employee's performance in organizations thus supporting the findings of this present study.

Conclusion and Recommendations

Work training provides information about innovation, aid more to the employees' knowledge and helps improving employees' performance aligning with the changing requirements of organization, industry and the market. The study looks at the role of job training as a solution for employee productivity in Shoprite, Owerri, Imo state, Nigeria. Findings indicate that work training has a significantly strong and favorable relationship with employee productivity. This study has supported human capital theory and expectancy theory. The result also supports the concepts posits by Adeniji (2011), training is conceivably one of the effective methods for improving the labor force. The outcome further support the work of Kumaran (2020) who stated that corporate entities should implement ongoing, well-planned training programs without undermining the value of training to enhance job happiness and performance especially in turbulence times for the environment. The study concludes that enhancing and expanding personnel industry knowledge can have greater influence on productivity more broadly, by improving organizational effectiveness and efficiency and profitability. Base on the above the study offered the following recommendations:

1. Orientation and induction programs should be designed and given to new employees at point of hire as it equipped them with requisite skills and knowledge of their jobs and the organizational corporate culture.
2. In order to fully utilize the potentials of an organization's human resource development, managers should implement concepts from human capital theory in their daily responsibilities.
3. Employees should be encouraged to attend frequent conferences and seminars to keep them informed of new developments and industry trends.
4. The researcher suggested that further investigation should be carried out in public sector to assess the effectiveness of work trainings.

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Human Capital Education and Sustainable Economic Growth in Nigeria

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Abstract

The focus of the study is to assess the extent at which investment in human capital education can affect economic performance in Nigeria with particular emphasis on sustainable level of economic growth and development over the last few decades. It has been argued in the extant literature that the nature of education provided in Nigeria is so poor that the prospect of sustainable economic development is not likely to come by. The design of the study is basically anchored on secondary data and econometric analysis, whilst all variables related to the human capital development constitutes the population of the study. Accordingly, the sample is made up of one dependent variable and four explanatory variables covering the period from 1986-2021. They include gross domestic product used as a function of secondary school enrolment, primary school enrolment, adult literacy rate as well as public spending on education. The data were obtained from various sources include the Central Bank of Nigeria's various issues of Annual Reports and Statement of Account and Statistical Bulletin as well as World Bank data bases. The data were analyzed using the Johansen co-integration technique and the parsimonious error correction model, in order to ascertain the long and short runs impact of the variables on economic growth in Nigeria. Accordingly, it was evidenced in the study that equilibrium long run relationship exists between economic growth and the selected indicators of human capital development. Specifically, it was observed in the study that enrolments into primary schools, secondary schools and adult literacy rate had positive and significant effect on economic growth in Nigeria. However, the study found that the level of government spending on education had negative but insignificant influence on human capital development in Nigeria. Among other things, the study recommended for the need to increase budgeting allocation for the educational sector that will enable the provision of adequate facilities and good learning environment.

Keyword: Sustainable economic development, economic growth, human capital education, Nigeria, ECT.

JEL Classification: O15, Q01.

1. Introduction

The noble role played in using education as effective means of governance and nation building has been acknowledged in both developed and developing countries in various stages of economic growth and development. Accordingly, there is abiding evidence that national development and capacity building in an economy are anchored on sound education thereby necessitating increased investment in the sector with the purpose of stimulating growth and development. According to Emediegwu and Clement (2016), a number of benefits are attributed to provision of basic education, capacity building and training as well as research,

all of which goes to suggest that very little or no sustainable economic growth and development will occur if investment in human capital is not raised and taken very seriously. Yusuff (2021) averred that man is the center of education because of his contribution to human and material development occasioned by improvement in thinking, skills and attitudes. He went further to say that knowledge driven economic is very competitive more so at the world stage where education is used as a channel through which human development resource is achieved. Abanyam *et al.*, (2020) argued that higher education remains as cardinal tool required to bring about durable achievement thereby leading to sustainable economic growth and development, which in turn promotes conducive environment for learning as well as creates quality workforce. Likewise, it supports industries and businesses and aids the individual in undertaking scientific research with the effect that technology is promoted and innovations are explored as well as instills in individuals the sense of achievements.

On his part, Ogunjemilua (2021) agreed to the submission that educational system in Nigeria has gone through many changes over the last few years and that many more changes are likely to occur before the end of the century. He noted that one of the many aims and objective of national education policy in Nigeria is the inclusion of the needed national unity so vital for a nation like Nigeria as well as national consciousness. Njoku and Onyegbula (2017) were of the opinion that a careful coordination in the provision of education geared towards boosting sustainable development would include access to on-the-job training, acceptable manpower planning and improved infrastructure as anything otherwise would lead to unemployment and underemployment. The authors submitted that the provision of quality education is the key to good learning opportunities most especially at the foundational level such as primary and secondary school education that provide sound training to all pupils. In their opinion, the term 'quality education' differs from access to education in that quite a number of youths in sub-Sahara Africa (SSA) countries including Nigeria lack basic literacy skills by all standards yet a good number of the population is believed to have access to education. They concluded that the realization of these issues led SDGs education for states to formulate policy where all boys and girls would attain on the average quality primary and secondary education by 2030s (Njoku & Onyegbula, 2017; Chijioke & Amadi, 2019).

It has been argued that meaningful development can only take place if there is sound financial commitment to education sector that will provide conducive

learning environment. In Nigeria, the level of investment in education is not the type that will bring about turnaround chain of event in the country quest for development. Available statistics revealed that budgetary allocation to the educational sector has been small with the result that basic facilities like class rooms, laboratories and accommodations are in a very bad shape. For instance, government spending on the sector stood ₦0.84 billion in 1986, rose to ₦15.12 billion in 1996 and further increased to ₦157.12 billion in 2006. In 2016, expenditure by government on the educational sector recorded the sum of ₦373.68 billion and by 2021, the government spending on education further increased to ₦772.42 billion. Although, there seems to be continuous increase in government spending on the sector it is relatively small when compare to other sectors such as defence and transportation sectors. Besides, the allocated budget to education sector in Nigeria has always fall short of the 26% of GDP recommended by United Nations which has partly contributed to the unsatisfactory performance of economic growth rate in Nigeria. In 1986 for instance, the growth rate of the economy was 0.1% and increased to 4.2% in 1996 and further marginal increase to 6.1% in 2006. In 2016, economic growth rate in Nigeria declined -1.6% signifying evidence of recession, a development which the economy was yet fully recover from by 2020 when the world recorded the deadly covid-19 pandemic outbreak. Thus, the growth rate of the economy in 2020 anchored on -1.9% before oscillating marginally to 3.4% in 2021.

Similar to the poor budgetary allocation is the fact that teachers, academic and non-academic staff in the educational sector in Nigeria are poorly paid. The result is that the qualities of output turned out from public schools most especially at the primary and secondary school levels are believed to be poor thereby giving rise to high patronage of private schools that charges exorbitant fees above the reach of average Nigerians. this is why Babatunde and Adetabi (2005) submitted that the standard of education usually provided in Nigeria has continue to fall over the last few decades and therefore far from being satisfactory as the mandatory six years in primary schools in most cases yield little or no result. Most primary school graduates cannot write their names let alone writing a simple sentence. The poor performance of the pupils may not be unconnected with high teachers-pupil ratio put at over 50 to 1 and at the same time the literacy rate for male youth stood at 13%, while female youth accounted for 20% by late 1990s (Babatunde & Adetabi, 2005). Although, remarkable improvement has taken place in recent time as adult literacy rate has risen to over 65% by 2021.

There are several studies in the literature that seek to unravel the extent of the effect of human capital education on economic growth in developing countries including Nigeria. For instance, there are studies that found positive relationship (see Eigbiremolen & Anaduaka, 2014; Jaiyeoba, 2015; Odo, 2016; Uduh & Benedict, 2017; Chijioke & Amadi, 2019). On the contrary, the findings from some other studies submitted that the effect of human capital investment on economic growth is negative. These authors include Emediegwu and Clement (2016), Ogunjemilua (2021) and Raymond and Ekponaanuadum (2021). However, investigation conducted by Ogunleye et al (2017) could not establish relationship at all. These development makes it inconclusive to say with certainty to what extent economic growth in Nigeria responds to changes in human capital investment. Likewise, a number of these studies has employed different variables such as primary school enrolments, secondary school enrolments, tertiary education enrolments and life expectancy rate in assessing their impact on economic growth (Jaiyeoba, 2015; Emediegwu & Clement, 2016; Ogunleye et al, 2017). However, none of these studies include adult literacy rate in these assessment most especially in the case of Nigeria. Therefore, the current study intends to close the lacuna by adding adult literacy rate to the model in addition to some of the variables utilized by prior studies in their investigation of human capital education-growth nexus in order to observe its level of contribution.

It is on this realization that the study undertaken to contribute to existing body of knowledge in the development literature. Therefore, the study has as its objective to assess the extent of the effect of investment in human capital education on economic growth in Nigeria. The sequence of the reminder of the paper follows thus. The survey of related literature is presented in section two, while section three contains the methodology. In section four, the findings of the study are presented, while section five contains conclusion and policy recommendations on the strength of findings.

2.0 Review of the Literature

Our attempt in this section is to present a brief conceptual review particularly of the variables employed in the study as well as made a brief empirical survey of related studies.

Concept of Economic Growth and Development

The gross domestic product is used as a proxy for economic growth which has been defined as a sustained increase in per capita income. It refers to a situation of

increasing growth rate arising from the production of goods and services during a particular period of time using the GDP indicator. The GDP indicator is used in measuring how healthy the economy has been with consequent of higher employment and improved standard of living (Adama, et al., 2022). Accordingly, the concept of sustainable development has evolve variously in the extant literature. Akarowhe (2018) defined national development as efforts made by any nation to ensure that the lives of her citizens are improved to at least minimum acceptable standard. Likewise, it also refers to a situation in which the government takes upon itself by ensuring that the social welfare of the citizens are provided for by way of social amenities which include functional and qualitative education, transportation, clean and drinkable water, stable power supply and good health care. In national development discourse, it is expected to lead to improvement in the economy whose measurement is normally proxied by sustained and continuous increase in the gross national product. Likewise, some sort of other social indicators are considered such as unemployment, poverty rate, literacy rate as well as provision of affordable healthcare system (Akarowhe, 2018). National development can also be seen as a way to ensure that all or majority of all sectors in the economy witnessed improvement which will act as stimulate for better life for majority of individuals in a country. From the perspective of sustainable development, it has been argued by scholars that it encompasses any development strategy that seeks not only to address the needs of the present generation, but also make sure that the ability of future generation to meet their needs are not compromised in whatever way (Odo, 2016; Ogunleye, et al., 2017).

Concept of Human Capital education

Meanwhile, there seems to be no single generally accepted definition that covers all of the very concerns of human capital in the literature. The concept therefore encompasses the abilities and skills of individuals and countries. This is why Adenuga and Otu (2002) submitted that human capital referred to the entire population of a nation that provided the back bone upon which any present and future production activities including distribution of goods and services are anchored. In human capital education, a number of variables are embedded which include the required skills and knowledge as well as abilities. All of which are available and regarded as components in the human resource stock of a nation. Likewise, education in human capital refers to all hitherto acquired stock of knowledge, competence of the labour force, personal and social characteristics which include creative skills required by labour to undertake any assigned task

thereby adding to economic value (Simkovic, 2012 cited in Nkogbu, 2014). According to OECD (2001) cited in Nkogbu (2014), the concept of human capital entails the individual's ability to acquire the basic requisite criteria and skills, knowledge, competence and all other attributes that will facilitate the understanding of how to create his economic, social and personal well-being. This is why some authors submitted that human capital development is synonymous with human resource. In this regards, human capital induced investment is akin to a process needed to acquire and increase the number of those not only with skills education, but possessed relevant experience required to enhance a nation's economic and political development (Wilson, 2017 cited in Raymond & Ekponaanuadum, 2021). Also, the concept encompasses enrolments into various levels of education as well as expenditure by government at all levels on the educational sector.

Empirical Literature

From the empirical corridor, a number of studies have conducted empirical findings aimed at ascertaining the relationship between economic growth and human capital education and mixed findings were uncovered. It is in this realization that Fadiya (2010) utilized model of error correction on data from Nigeria spanning the period 1977-2007 to appraise the nature of the effect of human capital education on growth. Accordingly, the presence of equilibrium long run relationship between growth and human capital investment was observed by the study. Specifically, the study noted that human capital spending, gross fixed capital formation and labour force had positive and significant influence on economic growth in Nigeria. Aminu (2011) carried out a similar study by using data covering 1977-2007 to assess the likely effect of government spending on health and education (proxies for human capital induced investment) on growth using Nigeria based data. The study tested for the presence of long run relationship using co-integration approach as well as utilized the ordinary least square (OLS) technique in exploring the contemporaneous dynamics among the variables. The presence of long run equilibrium relationship was established between the dependent variable and its determinants in the model. Observably, it was found by the study that government spending on health and education exerted positive and significant effect on growth in Nigeria in the period under review. This study gives supporting claim to the findings earlier reached by Fadiya (2010). Likewise, a study conducted by Eigbiremolen and Anaduaka (2014) attempted to x-ray the degree of the effect of human capital education spending on growth in Nigeria with data spanning 1999-2012. Employing the OLS

methodology, similar findings in line with prior studies were uncovered, namely that investment spending in human capital had positive and significant effect on growth in Nigeria during the period under review.

Meanwhile, in what appear as a digression from the path of prior studies who relied prominently on secondary data, Nkogbu (2014) documented a study to show if indeed investment in human capital exerted strong effect on sustainable growth in the Nigerian economy. The use of questionnaires consisting of 296 respondents were administered after which descriptive statistics and chi-square technique were utilized for the analysis. It was discovered by the study that investment spending on human capital is a necessary ingredient as it has the potentials to spur growth and development of any economy including Nigeria. However, the study was concerned on the difficulty associated with attaining a meaningful economic development without first putting in place adequate investment in human capital education. Jaiyeoba (2015) employed the Johansen co-integration approach and OLS model using data that covered the period, 1982-2011 in his effort to appraise the response of economic growth to changes in health and education spending in Nigeria. The independent variables include government spending on health and education, gross capital formation and post-primary and tertiary education enrolments. It was noted that the presence of long run relationship among the variables was evidenced in the study. Specifically, findings further indicated a significant positive impact of all independent variables on growth in Nigeria. The findings of the study supported several other studies such as Fadiya (2010), Aminu (2011) and Eigbiremolen and Anaduaka (2014).

Furthermore, a similar study conducted by Emediegwu and Clement (2016) assessed the extent at which the effect of investment in education affected growth performance in Nigeria during the period 1980 to 2015. The independent variables for the study include gross capital formation, human capital education spending as well as enrolments into primary and secondary school education. The technique of error correction mechanism for short run analysis and co-integration approach for long run dynamic model were employed for the study. Accordingly, it was observed by the study a notable evidence of statistical significant positive impact of budget allocation for education on economic growth contrary to significant negative impact of post primary enrolment during the short run period. However, it was found in the long run analysis that all the independent variables exerted significant influence on growth in Nigeria, thereby leading supporting

claim to numerous prior studies (Aminu, 2011, Egbiremolen & Anaduaka, 2014; Jaiyeoba, 2015).

In their study, using data covering 1980-2013 scrutinized the extent of the relationship existing between investment in human capital education and growth performance in Nigeria. The study employed the relatively recent econometric methodology namely the autoregressive distributed lag (ARDL) model that provided the ground for short and long run analysis. The findings from the study revealed that public spending on health, enrolment into secondary education, life expectancy and gross capital formation exerted positive but insignificant influence on growth in the long run. Contrariwise, economic growth seems to exhibit negative and significant response to changes in enrolments into primary and tertiary education in Nigeria. Odo (2016) conducted a study that tried to ascertain the extent government spending on education and health affected the level of growth performance in Nigeria. The method of error correction methodology that allows for short run estimation was employed by the study and findings revealed a significant positive impact of human education spending on economic performance in Nigeria, contrary to spending on health that is significant and inversely related to economic growth in the period under review. In this regards, the study supported the findings of Aminu (2011) and Adeyemi and Ogunsola (2016).

On their part, Uduh and Benedict (2017) documented a study to assess how expenditure on Nomadic education affected the performance of the economy in Nigeria using data that spanned 1986-2012. The OLS method was utilized by the study and findings indicated that spending on nomadic education exerted positive and significant influence on economic growth during the period under review in Nigeria. Thus, the study also leads supports to prior studies (Adeyemi & Ogunsola, 2016; Odo, 2016). In a similar study, Ogunleye et al (2017) model the relationship between economic performance and human capital education in Nigeria for the period 1981-2005 using the technique of OLS regression model in evaluating the study. A number of human capital indicators included in the model are government spending on health and education, life expectancy ratio as well as primary, secondary and tertiary school enrolments. Accordingly, it was observed by the study that economic growth responded positively and significantly to changes in health and education spending as well as enrolments into secondary and tertiary school education. However, the study could not establish a relationship between growth and life expectancy ratio as well as primary school

enrolment even though these variables had negative signs. These findings also give supporting claim to prior studies such as Adeyemi and Ogunsola (2016) and Odo (2016).

Conducting related study on Nigeria, Chijioke and Amadi (2019) opined that human capital development entails the provision of conducive environment for learning by all individuals thereby resulting in increased organizational or national goals. Their paper assessed how human capital education spending affected the performance level of the economy with data covering the period 1986-2017. The study which utilized the OLS technique found evidence to support positive significant effect of all three explanatory variables namely, gross capital formation, government spending on education and health on growth performance in Nigeria thereby validating the findings of prior studies most especially Uduh and Benedict (2017) and Ogunleye et al (2017).

In a more recent study, Raymond and Ekponaanuadum (2021) explored the extent at which human capital education expenditure has affected the performance of the Nigerian economy. The concept of misery index was developed by the study and was made a depended variable, while independent variables for the model are pupil-teacher ratio, human capital education spending as well as government spending on the health sector. The study utilized the Johansen co-integration approach to determine the level of long run association for the data, while the technique of error correction method was employed for the short run analysis, whilst the variables spanned the period 1981-2018. Accordingly, the study observed the presence of equilibrium long run relationship existing between economic performance and the selected variables of human capital education. Further, the study found that both in the long run and short run, significant negative effect of pupil teacher ratio on the misery index was observed. Yusuff (2021) submitted that the inability of Al-Majiri children to acquire any known vocational training has affected the quest for sustainable economic development in Nigeria. His paper appraise how vocational training and entrepreneurship skills can be used to improve the system of Al-Majiri in the north aimed at fast-tracking the needed sustainable economic development that have eluded Nigeria for so long. Employing systematic literature review and narrative-textual case study, the study found evidence to support that exposing Al-Majiri children to entrepreneurship skills and vocational training which include but not limited to shoe-making, poultry farming, tailoring, repair of phones, mechanics as well as

weaving is a potent source of stimulating sustainable economic development in Nigeria.

In a similar study conducted by Emeghara, et al., (2021), the authors appraised the nature of relationship that existed between investment in human capital and the growth performance of the Nigerian economy. The dependent variable for the study is gross domestic product, while human development index, household health expenditure, household education expenditure, government education expenditure and government health expenditure as well as gross fixed capital formation are the regressors. To test for long run relationship among the variables, the Johansen co-integration approach was employed, while the technique of error correction model was utilized for the short run contemporaneous analysis on data covering 1981-2018. Accordingly, it was found out by the study that household education expenditure is negative and significant in affecting economic growth and development as against the significant positive impact exerted by household spending on health, gross capital formation and human development index during the long run analysis. Meanwhile, investment by households spending on health and human development index had significant and positive impact on economic growth, contrarily to the significant negative effect from household spending on education during the short run. The positive effect of health expenditure and the negative impact exerted by education spending are similar to numerous prior empirical findings such as Odo (2016), Ogunleye, et al., (2017), Chijioke and Amadi (2019) and Raymond and Ekponaanuadum (2021).

Theoretical Framework

A number of theories exist in the literature trying to explain the need for human capital education in which few of such theories are presented here.

Theory of Human Capital

This theory was formulated by Romer (1986) cited in Chijioke and Amadi (2019) who anchored his argument on the power of education to transform a man thereby making him more productive with higher efficiency predicated on his cognitive skills. The literature further submitted that people can only increase their stock of human capital only by increasing investment in education in areas such as on the job training, public spending on education as well as the health sectors (Schultz, 1961 cited in Chijioke, & Amadi, 2019). It was further argued that investment in human capital can only increase if and only if depreciation is less than gross investment. In some countries such as the United States, investment in education

is regarded as investment in human being aimed at increasing productivity in future and considers such investment more critical than physical investment. For this reason, the US sees to it that spending in education is three times greater than physical investment. Leading support to the theory they averred that as provisions for schooling are expanded, there is tendency for greater stock of capital in the society, leading to increase in technical and specialized knowledge, high skilled professions, national productivity as well as enhanced the rate of growth (Chijioke, & Amadi, 2019).

Human-Capital Augmented Solow Model

Developed and expanded by Mankiw et al., (1992), they see human capital as additional input in the production process. Further, they liken the modelling of human capital to that of physical capital whose accumulation is possible by investing a part of income into its production. Likewise, they further submitted that human capital depreciates with the same rate as physical capital. In developing their model, they included human capital using the Solow model in conjunction with the Cobb-Douglas production function as follows:

$$Y_t = K_t^\alpha H_t^\beta (A_t L_t)^{1-\alpha-\beta}$$

This equation is referred to as the human capital augmented Solow model where Y is defined as output, H as stock of human capital, K is defined as capital, A is referred to as level of technology, while L is defined as labour force. The exponentials, α , β as well as $1-\alpha-\beta$ are defined as input-output elasticity coefficients. Like the Solow original model, the augmented growth model also regarded long-run growth as exogenous with rate equals the pace of technological progress (Mankiw, et al., 1992).

3.0 Methodology

3.1 Research Design

The study is quantitative in nature and as such uses secondary data. Further, the tool of econometrics was employed for the data analysis after the stochastic properties and the cointegration level of the series have been checked.

3.2 Population and Sampling

The population of the study comprises all variables relating to human capital development such as primary, secondary and tertiary education enrolments as

well as all indicators of development. Accordingly, a simple random sampling that affords every participant equal opportunity of being selected was chosen. Therefore, one dependent variable and four explanatory variables spanning the period, 1986-2021 were employed for the study.

3.3 Sources of Data

The data on gross domestic product, government spending and adult literacy rate were culled from the various issues of the annual report and statement of account of the Central Bank of Nigeria. Similarly, data on schools enrolments were sourced from the World Bank data bases.

3.4 Technique of Analysis

The technique of error correction method is employed for the study for the purpose of analyzing the short run and the long run relationship between variables. This is preceded by cointegration test using the approach of Johansen (1988) technique.

3.5 Model Specification

The study adopts a variant of the human capital augmented Solow model where output is made as function of labour, capital and human capital variables. Accordingly, the model developed by Emediegwu and Clement (2016) in which economic growth is made a function of investment in human capital is adopted for the study. In what follows, the study employed error correction technique (ECT) in the context of OLS regression model. Essentially the model is presented as follows:

$$GDP = f(PSE, SSE, ALR, GEE) \dots \dots \dots (1)$$

In log stochastic form, equation (1) is estimated as follows:

$$\ln GDP_t = \beta_0 + \beta_1 \ln PSE_t + \beta_2 \ln SSE_t + \beta_3 \ln ALR_t + \beta_4 \ln GEE_t + \varepsilon_t \dots \dots \dots (2)$$

Where:

GDP = gross domestic product at 2010 constant price in billions of Naira, PSE = primary school enrolments in millions, SSE = secondary school enrolments in millions, ALR = adult literacy rate, GEE = government spending on education in billions of Naira. Also, β_0 = constant, $\beta_1 - \beta_4$ = coefficients to be estimated. ε = error terms, t = time trend. It is expected that the influence of the regressors on

economic growth should be positive. According to the ECT of equation 2 is estimated as follows:

$$\Delta \ln GDP_t = \sigma_0 + \sum_{i=1}^K \sigma_{1i} \Delta \ln GDP_{t-1} + \sum_{i=1}^K \sigma_{2i} \Delta \ln PPE_{t-1} + \sum_{i=1}^K \sigma_{3i} \Delta \ln SSE_{t-1} + \sum_{i=1}^K \sigma_{4i} \Delta \ln ALR_{t-1} + \sum_{i=1}^K \sigma_{5i} \Delta GGE_{t-1} + \lambda ECM_{t-1} \dots \dots \dots (3)$$

Where the term ECM which implies error correction mechanism refers to the short run estimation, a residual which has earlier been generated from the long-run dynamic model. Thus, while the variable carrying Δ could be termed short run, the model is also regarded as a long run estimate occasioned by the presence of the ECM. The symbol λ refers to the coefficient and describes the speed of adjustment between the long and short runs whenever disequilibrium occurs. To ensure that the model of ECM is stable the Cumulative Sum of Recursive Residuals (CUSUM) as well as the Cumulative Sum of Square of Recursive Residuals (CUSUMSQ) are employed for the test whose equation has been developed by Brown, et al., (1975).

3.5.1 Unit Root Test

In order to avoid a situation of spurious regression, the stochastic properties of the variables were checked using the Augmented Dickey Fuller (ADF) test and the Phillips-Perron test. These tests become more important as the Johansen co-integration test requires only integration of order 1 variables. Accordingly, the ADF test is estimated as follows:

$$\Delta I_t = \varphi_i + \varpi I_{t-1} + \varphi_{2t} + \sum_{i=1}^p \delta_i \Delta I_{t-1} + \mu t \dots \dots \dots (4)$$

Here, I_t refers to the relevant time series; Δ defines the differencing operator; t = time trend and μt refers to error term. For a stationarity to exist of a variable, the null hypothesis must be rejected, when the values of ADF and PP tests exceed the Mackinnon critical value chosen for this study which is 5% level of significant.

3.5.2 Co-integration Test

In conducting this test, the Johansen and Juselius (1990) approach is employed to ascertain if long run equilibrium relationship exists among variables. Accordingly, two likelihood ratio tests have been developed by Johansen and

Juselius. These include the trace statistic which tests the null hypothesis of co-integrating relations as follows:

$$\Gamma_{trace}(r) = -\tau \sum_{i=1}^m \log[1 - \lambda_i] \dots \dots \dots (5a)$$

The other is Maximum Eigen static which also tests the null hypothesis of r co-integrating relation as follows:

$$\Gamma_{max}(r, r+1) = \tau \log(1 - \lambda_{r+1}) \dots \dots \dots (5b)$$

4.0. Result and Discussion

Table 1 contains the results of unit root using the ADF and PP tests at 5% level of significant. The results indicate that all five variables as contained in equation (1) show evidence of unit root at level, but stationarity was achieved for the series following further differencing.

Table 1: Unit Root Test Results

ADF Test				PP Test		
Variable	Level	First Diff	Order	Level	First Diff	Order
LGDP	-3.12	-4.31	1	-3.34	-4.67	1
LPSE	-2.87	-3.87	1	-2.98	-3.79	1
LSSE	-3.43	-5.42	1	-3.52	-6.86	1
LALR	-2.76	-4.59	1	-3.41	-5.90	1
LGEE	-3.38	-4.66	1	-3.52	-6.88	1
C.V. = 5%	-3.56	-3.58		-3.56	-3.58	

Source: Extracted from Eview 12.0

The presence of co-integrating variables implies that at least one co-integrating equation is evidenced which is achieved if the value of the trace or max-eigen or both exceed either of the 5% or 1% respectively. Therefore, Table 2 reveals that there is at least one co-integrating relationship for the variables, since the trace and the Eigen values indicate presence of co-integration at all confidence levels. This suggests that the variables have long run tendency during the review period.

Table 2: Johansen Co-integration test

Eigen Value	Trace Stat	5%	1%
0.87	141.3	97.5	112.5
0.76	91.2	74.3	88.6
Max-Eigen stat			
0.87	67.9	42.7	54.3
0.76	45.5	36.8	39.3

Source: Extracted from Eview 12.0

With cointegration relationship established as suggested by the variables in equation (1) and the fact that the series were stationary at first differencing, a crucial condition for restricted error correction mechanism has been meant. Accordingly, Table 3 contains the short run model where the ECM which is statistically significant indicated the speed of adjustment by which equilibrium is restored in the event that deviation from equilibrium occurs between the long and short run models. The ECM coefficient of 0.47 suggests that the disequilibrium which occurred in the course of last year was corrected with a speed of 47%. Essentially, the ECM does not only observed the expected negative sign, it is also statistically significant, a behavioural trend normally followed if the dependent variable and its determinants are co-integrated. The significant level of the ECM also suggests that changes in the regressors significantly influenced growth and development in Nigeria during the course of the long run. A cursory look at the results revealed that all the regressors explained changes of about 65% in growth performance in Nigeria. Also, the test of DW statistics indicated that autocorrelation is not present in the model and the F-stat of 9.2 shows the extent the entire model is significant. What this implies is that the model is statistically significant so that policy suggestions can be based on it. Likewise, the constant indicated that growth during the period maintained positive trajectory in the absence of all the independent variables. The result from the model in equation is presented in Table 3.

Table 3: Parsimonious ECM Results**Dependent variable: DLGDP****Method: Least Square**

Variable	Coeff	Std error	t-stat	Prob
C	0.44	0.18	2.44	0.05
Δ LGDP(-1)	0.15	0.04	3.75	0.00
Δ LPSE	0.22	0.08	2.75	0.01
Δ LSSE	0.45	0.13	3.46	0.00
Δ LGEE	-0.35	0.23	-1.52	0.13
Δ LALR	0.28	0.09	3.11	0.00
ECM(-1)	-0.47	0.12	-3.92	0.00
Diagnostic Test				
R^2	0.65			
DW	2.03			
F-stat	9.21			

Source: Author's computation using Eview 12.0

It should be noted that the coefficient of ECM encompasses the speed of adjustment between the long run and the short run disequilibrium estimates. Therefore, primary school enrolment, secondary school enrolment, adult literacy rate as well as the first lag of GDP exerted positive and significant effect on growth and development during the short run. What this implies is that changes in any of the independent variables tend to significantly affect economic growth in the period of consideration. For instance, an increase in enrolments into primary school education by say 100% increases economic growth by 22% in the period under consideration. Likewise, a 10% increase in previous GDP led to increase of 1.5% in current GDP. The results therefore give credence to the findings of Jaiyeoba (2015), Uduh and Benedict (2017) and Chijioke and Amadi (2019), but contrary to Yusuff (2021) and Raymond and Ekponaanuadum (2021). Furthermore, the results also revealed that spending on education by government is insignificantly negative in affecting growth and development which further suggests that no relationship is evidenced between these variables during the review period. This is contrary to the findings earlier reached by Ogunleye, et al., (2017).

5. Conclusion and Recommendations

The study assessed the extent at which spending on human capital education tends to affect sustainable growth performance in Nigeria. It was noted by the study that any effort made at boosting education in human capital through expenditure channel is necessary to ensure that economic growth is not only achieved, but that the needed development remains sustainable. This, notwithstanding, the kind of education offered in Nigeria is not the type that will bring about the desired development. It was observed by the study that with exception of education spending by government, all the explanatory variables were statistically significant and positively correlated with economic performance in Nigeria. The implications on the economy call for the need by government to massively invest on every level of educational sector including vocational education. The result is that a good number of the youth with acquired skills will be useful to the economy and to themselves thereby discouraging the current migration exodus abroad called 'Japa'. On the bases of the findings, some recommendations were put forward by the study. Firstly, that the current budgetary allocation into the educational sector is considered too paltry so that upward review should be considered so as to ensure conducive learning environment. Secondly, the United Nations recommendation of allocating 26% of national GDP into education sector should be considered very seriously by policy makers. Finally, there is need for expansion of schools most so as to accommodate more enrolments particularly at the elementary level of education in Nigeria.

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Oil Revenue and Real Sector Performance in the Nigerian Economy

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Abstract

The real sector of the economy especially agriculture and manufacturing, have suffered serious neglect due to growing influence of oil sector performance. This paper analyzed the relationship between oil revenue and real sector performance in Nigeria between 1980 and 2021. Agricultural and manufacturing sectors' outputs were used as proxy of real sector performance, while oil revenue is the independent variable with, exchange rate and inflation as control variables. Data were collected from CBN publications. The ADF unit roots results showed that the data in agriculture and manufacturing sectors model were integrated at different order (i.e., $I(0)$ and $I(1)$), but none was $I(2)$ and the variables were co-integrated using the Bound Testing Co-integration techniques. Autoregressive Distributed Lag (ARDL) was used to estimate the agricultural and manufacturing sector models. The outcome revealed that the relationship between oil revenue and agriculture sector output is positive and statistically not significant in the long-run. There is also a positive connection between oil revenue and manufacturing sector performance in terms of output. The coefficients of the current and lag periods of the dependent variables were seen in the dynamic model to be insignificant, suggesting that oil revenue have not affected manufacturing sector in the immediate period. The study recommends among others, that, the government should pay serious notice to the agricultural and manufacturing sectors as they constitute the real sectors of the Nigerian economy, by increasing the level of investments and opening them up to both domestic and foreign investors in addressing the macroeconomic objectives of the nation.

Keywords: agricultural sector, manufacturing sector, real sector performance, oil revenue.

1.0 Introduction

Oil revenue is the income that is gotten from the sale of crude oil. Crude oil revenue has served as a major source of income to the Nigerian government from the time when crude oil was discovered and explored in large quantity. Before the discovery of crude oil in Nigeria, the economy depended on the agricultural sector for its major income. Nigeria exported crops like cocoa, palm products, cotton, groundnut, timber and rubber and these exports were the major source of foreign exchange. When the agricultural sector was booming, the oil sector was weak in generating funds (Odularu, 2008).

When crude oil was discovered in large quantity in 1959 at Oloibiri in the present Bayelsa State, the petroleum industry started booming and it becomes the engine that moves the Nigerian economy till date (Nweze & Edame, 2016). There was oil boom in the 1970's and as a result of the boom Nigeria abandoned the agricultural sector and manufacturing sector and focused its attention on the oil sector (Odularu, 2008). Nigeria is one of the OPEC member countries and ranked second in Africa as the largest oil producing economy. The country's oil reserve is estimated to be 35 billion barrels, it's crude oil production averages 2.2 million barrels per day, Nigeria provides about 10% of U.S. overall oil import as and is ranked 5th as U.S. largest source of imported oil (Odularu, 2008). Nigeria has experienced a decrease in oil production from the year 2006. This decrease has affected the country's income and other sectors of the economy (Nweze & Edame, 2016). It has also been observed that oil prices has been volatile in recent years and this volatility has affected the amount of revenue gotten from crude oil and this in turn affects the economy, because of its over dependence on crude oil (Akinlo, 2012).

On the other hand, the real sector of the Nigerian economy has been undergoing transformation in order for it to emerge as an industrial workhorse. The real sector is made up of the agricultural sector, the manufacturing sector, building and construction, wholesale and retail and the service sectors. It is argued that for a developing economy to be developed, it has to invest in its real sector and make it the engine of the economy (CBN, 2013).

The negative consequences of over dependence on oil revenue in Nigeria have crumbled the economy instead of revitalizing the economy (Emmanuel, Joseph & Noko, 2016). However, heavy dependence on the export of natural resources has been shown to negatively affect a country's economic, social and political development. The major consequences of over dependence on oil revenue for the country's survival includes among others; neglecting of the agricultural and industrial sectors of the economy, leading to an impoverishment of the rural population (Emmanuel, Joseph & Noko, 2016).

Overlooking by the government to the agricultural sector which was the mainstay of the economy before the discovery of oil was the major problem hindering the country's economic progress. Although, government has made some effort at combating the syndrome of over dependence on oil revenue in Nigeria, but the effort was not significant enough, giving their inconsistency in policy and lack of

implementation of agricultural and industrial policy in the country (Emmanuel, Joseph & Noko, 2016).

It is surprising that a nation that has all of the above proceeds and stock of oil is facing hardship, poverty and poor development in other sectors (Maduki & Beya, 2009). It is in the light of this that this research investigated the effect of oil revenue on real sector performance in Nigeria. The rest of the paper is structured as literature review, methodology, results and discussions, conclusion and recommendations.

2 Literature Review

This section considers some literatures, stemming from empirical literatures to theoretical and evaluation of literature review.

2.1 Empirical Literature Review

Appah (2022) investigated the relationship between oil revenue and economic growth in Nigeria. It spanned through the period 1990 to 2019. The specific objectives are to investigate the relationship between crude oil/gas export, petroleum profit tax/royalty, domestic crude oil sales, oil licensing fees on real gross domestic product and real gross national product in Nigeria. And also, ascertain whether the exchange rate moderates the relationship between oil revenue and economic growth in Nigeria. The study employed an ex post facto research design and the secondary data used for the investigation were sourced from the Central Bank of Nigeria (CBN) statistical bulletin, Federal Inland Revenue Service Fact Book and the World Bank Development Website. Descriptive Statistics, Pearson Moment Correlation Coefficient and Ordinary Least Square Multiple Regression Statistical tools were used in the study. The results revealed that Crude oil/gas export has a significant and negative relationship with the real gross domestic product in Nigeria; Petroleum profit tax/royalty has a significant and positive relationship with real gross domestic in Nigeria; Domestic crude oil sales have an insignificant and negative relationship with real gross domestic product in Nigeria; Oil licensing fees have an insignificant and negative relationship with real gross domestic product in Nigeria.

Isiaka and Aminu (2021) examine the effect of oil revenue on unemployment in Nigeria over the period of 1970 to 2018. The study examines the direct, indirect, and distributional effects of oil revenue on unemployment using Autoregressive

Distributed Lag (ARDL) and Quantile Regression (QR). The direct effect results from ARDL estimation show that oil revenue reduces unemployment only in the long run. The indirect effect results reveal that oil revenue appears to worsen unemployment. Therefore, whether oil revenue would reduce unemployment or not depends on oil price. The results are robust when using oil rents as a proxy for oil revenue. The QR results depict that the effect of oil revenue on unemployment varies over different quantiles, exhibiting a worsening effect at the lower quantiles and reducing the effect at the upper quantiles. Given our results, it is critical for the Nigerian government to design a proper plan to manage oil revenue for growth and employment creation.

Akpokerere and Anuya (2019) studied oil revenue and behavior of selected macroeconomic indicators in Nigeria. The study adopted ex-post factor research method, while Ordinary Least Square was used to process the data gathered using E-views. The finding on this study indicates that apart from interest rate, no significant relationship exists between the two other variables in the study with oil revenue. The study recommended diversification and encouragement of more participations of non-governmental sector in economy development.

Charles, *et al* (2019) examined oil price fluctuation, oil revenue and well-being of Nigerians. The study adopted time series techniques. The findings suggested that oil price fluctuation has no significant impact on well-being, while oil revenue is observed to have a significant and positive impact on well-being. The study recommended for youth empowerment policies that could help reduce the rate of pipeline vandalization to boost crude oil production in the country.

Nwanne and Eze (2019) analyzed the effect of government oil revenue on Agricultural sector growth. The study adopted ex-post factor research design and regression analysis. The result from the study found that there is a significant relationship between government oil revenue and growth of agricultural sector in Nigeria, while budget deficit is seen to have an insignificant effect on the performance of real sector in Nigeria with a bias to agricultural sector in Nigeria. The implication of the study is that government financing budget deficit through domestic means crowd out private investment, especially the agricultural sector and thereby reducing its contributions to the growth of the economy. Temitope and Moses (2018) examined oil revenue and output growth in Nigeria. The study employed Fully Modified Ordinary Least Square (FMOLS). The study discovered that oil revenue does not have short run impact on the economic activities of

Nigeria. Therefore, recommended that the government should effectively and efficiently utilize the oil fund into strategic developmental projects, so as to reduce the rate of poverty and facilitate output growth.

Nweze *et al* (2016) carried out an empirical investigation of oil revenue and economic growth in Nigeria using Error Correction Mechanism. The result showed that oil Revenue has a positive relationship with economic growth in the long run, but has a negative relationship with economic growth in the short-run. The study recommends that government should use the revenue generated from petroleum to invest in other domestic sector such as agriculture and manufacturing sector in order to expand the revenue source of the economy and also to increase revenue.

Ijirshar (2015) empirically analyzed oil revenue and industrial growth in Nigeria, using Johansen co-integration techniques. The study revealed a long-run positive influence of oil revenue growth on the industrial growth in Nigeria; also the Vector Error Correction shows that the coefficient of error correction term is insignificant though with the expected sign and low magnitude of 3.5%. The study further revealed that oil Revenue has a positive significant influence on industrial growth in the Nigerian economy in the long run.

Olumu (2015) investigated the effect of oil and agriculture on economic growth in Nigeria. This study used Vector Auto regression (VAR) method. From the study, it was observed that output responses to agriculture output exhibited positive effect on economic development through investing in the agricultural sector, even from the gains from the oil sector in as oil shock showed positive response in the agricultural sector in Nigeria.

Harold *et. al* (2014) examined oil revenue and manufacturing sector growth in Africa's oil exporting countries. They made use of both static and dynamic panel data techniques to explore the effects of oil on manufacturing sector of the countries between 1970 and 2018. The study reveals that there is a dearth of capital formation in the six countries' manufacturing sectors. It was recommended that these countries should restructure their oil sector in such a way that proceeds from oil are Longley utilized for more investment in the manufacturing sector.

Odeniyi *et. al* (2013) investigated the effect of crude oil price on Agricultural productivity in Nigeria between 1981 and 2010. They adopted Error Correction

Mechanism (ECM). The result showed that the petroleum industry in Nigeria has brought unprecedented changes to the Nigeria economy. The study recommended that Agricultural production in Nigeria can be increased by diversifying the economy and shifting focus away from the export of crude oil and concentrating more on local production of agricultural produce and export of its surplus.

Ogbonna (2012) investigated the effect of petroleum income on the Nigeria economy for the period of 2000 to 2009, using the Gross Domestic Product (GDP), per capita income (PCI) and inflation (INF) as the explained variables, and oil revenue, petroleum profit and licensing fees as the explanatory variables. They relied on secondary data from CBN statistical bulletin. The result showed that oil revenue has a positive and significant relationship with GDP and PCI, but a negative and insignificant relationship with inflation. The study recommends that the effect of petroleum income on the Nigeria economy was positive for the period reviewed.

2.2 Theoretical Literature

2.2.1 Ragnar Nurkse's Balance growth Theory

The theory was propounded by Ragnar Nurkse (1961). He postulates that the governments of any under developed country need to make a huge investment to enlarge the market size of that nation, increase productivity and create an incentive to enable the private venture to invest.

Nurkse was in favor of attaining balanced growth both in Agricultural sector and industrial sector. Ragner supports inter-sectorial balance between manufacturing and Agricultural sector. It is crucial that each sector provides a market for the products of the other and in turn, supply the necessary raw materials for the growth and development of others. Ragnar was of the opinion that if the productivity level in less developed countries rises, its market size will expand and this will lead to development in the country as well. The brain box behind this theory was Adam smith, who stated that division of labour is limited by the extent of the market.

2.2.2 Rostow's Stages of Growth

This theory was propounded by Rostow in the year 1960. Rostow believed that for a country to transit from underdeveloped to developed, there must be some stages that the said country must pass through. Rostow posits that "for any

country to take off, it must mobilize domestic and foreign savings in order to generate sufficient investment for economic growth''. Harrod and Domar supported this theory. In their growth model, they held that every economy saves a certain proportion of its national income, if only to replace worn out or impaired capital goods. But this theory had been criticized on the bases that not all the mechanism embodied in the theory always work out. The reason is that more saving and investment could be a necessary condition but not a sufficient condition.

In Rostow's model, he stated that an economy may need to depend on exportation of raw materials to finance the development of industrial sectors which have not yet achieved superior level of competitiveness in the early stages of take-off. The theory believed that what worked in American can as well work in the less developed countries (LDCs).

2.3 Evaluation of Literatures Reviewed

The review conducted so far considered some development theories and also exposes us to the historical survey of oil mineral and impact of oil revenue on the performance of the real sector in Nigeria. Theoretically, this study is anchored on Ragnar Nurkse balance theory, who stated that government should enhance productivity. He opined that there should be a balanced growth between Agricultural sector and Manufacturing sector. The view of other scholars on the topic under consideration was also observed. This study will fill this gap by examining Oil Revenue as a variable on the performance of the real sector (agricultural and manufacturing sector). The literatures reviewed have a scope which is less than 2020 but this study fills this gap by extending the scope to 2021. This study also employed the ARDL technique for analysis which is an advanced OLS method.

3.0 Methodology

3.1 Research Design

This research adopted quasi-experimental research design. The choice of this design is because the researcher is making use of variables that cannot be controlled in the lab.

3.2 Data justification

The data used in this study covers agricultural output and manufacturing output as dependent variables while oil revenue, inflation and exchange rate are used as

explanatory variables. They were sourced from the CBN statistical bulletin various issues. The period covers from 1980-2022.

Manufacturing Sub-sector Output (MANOTP); this is the total monetary values of all goods and services produced within the manufacturing sector of the economy within a year.

Agricultural Output; this is the total monetary values of all goods and services produced in the agricultural sector of the economy within a year.

Oil Revenue (OILR): This is the total revenue derived from the exploration of oil (petroleum products). It includes the revenue derived from the export and internal usage of crude oil and crude oil by products in the country annually. It is expected to have a positive relationship with the dependent variables.

Exchange rate: This is the price of one country's currency in terms of another. For instance exchange rate of Nigerian Naira to US dollar is the rate or price at which the naira is given up for a dollar. In this research, we restricted ourselves to the exchange rate of the Naira to the US dollar. It was Krugman (1983) and Golub (1983) that developed the theoretical relationship between exchange rate and oil price (oil revenue, since revenue is price multiply by quantities) and argued that appreciation of the exchange rate of oil-exporting countries may be achieved with a rise in the price of oil and may experience exchange rate depreciation with a fall in the price of oil. Since Nigeria is an oil exporting country, exchange rate appreciation is expected to improve oil revenue and thus manufacturing and agricultural sub-sector output (real sector performance).

Inflation: Parkin and Bade defines inflation as an upward movement in the average level of prices. In this study inflation rate is expected to be negatively related to real sector performance. Domestic price rises may encourage importation of foreign consumable goods thereby bring pressure on the domestic currency.

3.3 Technique of Data Analyses

This study adopted the Error Correction Mechanism model using Autoregressive Distributive Lag (ARDL) approach. The autoregressive distributive lag technique was developed by Pesaran, Shin and Smith (2001) and it allows the inclusion of lag values of the dependent and independent variables of a model, while carrying

out regression analysis. This method was used because the theorem states that when the series in a model are of different order of integration (1(0) and 1(1), but not 1(2), then the ARDL technique is the best technique for analysis. Bound test method of co integration was used to test for long run relationship among the series in the model. When long run relationship was found, it would lead to the estimation of an error correction mechanism model to examine the speed of adjustment of short-run dynamics to long-run equilibrium.

3.3.1 Model Specification.

To examine the relationship between oil revenue and real sector performance in Nigeria, this study developed two models which are the modification of Harold et. al (2014). Their study was a cross country analysis examining the effect of oil revenue on the manufacturing sector. Their model is stated below;

$$MGR = GCF + PCI + OIR + EGR + EXR + U_t$$

Where MGR is manufacturing sector growth rate, GCF is gross capital formation. PCI is per capita income, OIR is oil revenue, EGR is electricity growth rate, EXR is exchange rate and U_t is the error term. This study modifies their model by examining the effect of oil revenue on the real sector using agricultural sector output and manufacturing sector output as dependent variables and also including inflation in the models. GCF, PCI and EGR were removed. The linear and log linear specifications of the model were tried and the specification that best explained the data in terms of R^2 , t-values and minimal level of multicollinearity was analyzed.

The functional form of the models is expressed as;

$$AGOTP_t = f(OILR_t, INF_t, EXR_t) \quad (1)$$

$$MNOTP_t = f(OILR_t, INF_t, EXR_t) \quad (2)$$

The ARDL specifications of the model are stated below;

$$AGOTP_t = a_0 + \sum_{t=1}^k \gamma AGOTP_{t-1} + \sum_{t=1}^k a_1 OILR_{t-1} + \sum_{t=1}^k a_2 INF_{t-1} + \sum_{t=1}^k a_3 EXR_{t-1} + ut$$

$$MNOTP_t = b_0 + \sum_{t=1}^k \gamma MNOTP_{t-1} + \sum_{t=1}^k b_1 OILR_{t-1} + \sum_{t=1}^k b_2 INF_{t-1} + \sum_{t=1}^k b_3 EXR_{t-1} + ut$$

Where;

a_0 and b_0 = Constant

$a_1 - a_3$ = coefficients of the independent variables.

$b_1 - b_3$ = coefficient of the independent variables

AGOTP =Agricultural Output

OILR = Oil revenue

INF = Inflation Rate

EXR = Exchange Rate

MANOTP = Manufacturing Output

u_t = Error Term

On *a priori* ground, the researcher expects $a_1 > 0$, $a_2 < 0$, $a_3 > 0$ and $b_1 > 0$, $b_2 < 0$, $b_3 > 0$, implying that an increase in oil revenue and exchange rate will bring a positive effect on Agricultural and manufacturing output, while increase in inflationary pressure will bring a negative effect or cause a decrease in manufacturing and Agriculture output.

3.3.2 Pre-Estimation Tests

Unit Root Test

The unit root tests that were considered include the conventional unit root tests namely: Augmented Dickey-Fuller (ADF) (1979) and Phillips-Perron (PP) (1988) to test for stationarity of the variables in the model. The null hypothesis for ADF and PP is that time series variables are not stationary (i.e. has a unit root). Both of these tests are well established in literature.

ARDL Bound Test

We employed the Bound Testing co-integration techniques developed by Paseran et. al (2001) to test for the presence of long-run relationship between the variables, because the variables in our model are of different order of integration (i.e., $I(0)$ and $I(1)$), but none were found to be $I(2)$.

4. Results and Discussion

The analysis of the data in this study was done in six (6) stages. Stage 1 gives a breakdown of the ADF Unit Root Test. Thereafter, stages 2, 3 and 4 dwell on Bound (Co-integration) Test, Regression Result Analysis and diagnostic tests and stage 5 discussed the findings from the results.

4.1 Unit root Test

Table 4.1 ADF Unit Root Test Results

Variable	Calculated Values		Critical Values	Order of
	Levels	1 st -Diff.	5%	Integration
LOG(AGOTP)	-0.8650	-4.8045	-2.9484	I(1)
LOG(MANOTP)	-0.7602	-4.0275	-2.9484	I(1)
LOG(OILR)	-1.2599	-6.4603	-2.9458	I(1)
INF	-2.9585	-	-2.9458	I(0)
(EXR)	-1.9985	-5.0622	-2.9458	I(1)

Source: Author's computation from E-views

Included observation n = 39

All tests were carried out at 5% level of significance.

Results from table 4.1 shows that inflation rate is stationary at level at the 5% level of significance, while output of agricultural sector, output of manufacturing sector and exchange rates were only stationary after 1st difference. In other words, the series employed in our model are mixture of I(0) and I(1) series. This necessitated the used of bound testing co-integration techniques to test for the possibility of long-run relationship among the series in both model 1 and model 2. The result of the co-integration test for model one is presented on table 4.2a, while the results for co-integration test for model two is presented on table 4.2b.

4.2 ARDL Bound Test Results

Table 4.2a ARDL Bound Test Result for Agricultural Model

Null Hypothesis: No long-run relationship exists			
Critical Value Bounds			
Significance	I(0) Bound	I(1) Bound	
5%	3.23	4.35	K = 3
			F-statistic= 12.03532

Source: Author's computation using E-views

Table 4.2b: ARDL Bound Test Result for Manufacturing Model

Null Hypothesis: No long-run relationships exist			
Critical Value Bounds			
Significance	I(0) Bound	I(1) Bound	
5%	2.45	3.63	K = 3
			F-statistic = 8.836780

Source: Author's computation using E-views

The argument of the bound testing co-integration techniques is that the null hypothesis is rejected if the F-statistics is greater than the upper bound limit I(1), otherwise we fail to reject. Results from table 4.2a and table 4.2b shows that the values for the F-statistics are greater than the upper bound limit at 5% level of significance. Thus, we fail to accept the null hypothesis and conclude that there is a co-integrating relationship among the variables in model one and model two.

4.3 Regression Result Analysis

Table 4.3a Model One: Oil Revenue and Agricultural Sector Output

Panel I: Short-Run Model for AGOTP and OILR

Variable	Coefficient	t-Statistic	Prob.
DLOG(AGOTP(-1))	0.760200	8.948394	0.0000
DLOG(OILR)	-0.073339	-0.935186	0.3586
DLOG(OILR(-1))	-0.085055	-1.243002	0.2254
DLOG(OILR(-2))	0.145872	2.169668	0.0397
D(INF)	0.003127	1.908038	0.0679
D(EXR)	0.139416	2.049459	0.0510
ECM(-1)	-0.239800	-2.822704	0.0092

Panel II: Long-Run-Model for AGOTP and OILR

Variable	Coefficient	t-Statistic	Prob.
C	2.658192	3.169614	0.0040
LOG(OILR)	0.472250	1.495170	0.1474
INF	0.022372	2.069499	0.0490
(EXR)	0.581387	1.439193	0.1625

$R^2 = 0.9982$; Adjusted $R^2 = 0.9976$ F-Stats = 1717.1***; DW-Stats = 2.1694

Source: Author's computation using E-views

Table 4.3b Model Two: Oil Revenue and Manufacturing Sector Output

Panel I: Short-Run Model for AGOTP and OILR			
Variable	Coefficient	Std. Error	Prob.
DLOG(MANOTP(-1))	0.864730	0.059303	0.0000
DLOG(OILR)	0.044854	0.063170	0.4845
DLOG(OILR(-1))	-0.141739	0.073315	0.0651
D(INF)	0.001490	0.001545	0.3444
D(EXR)	0.055991	0.082405	0.5033
D(EXR(-1))	0.014635	0.101881	0.8870
D(EXR(-2))	0.126239	0.067702	0.0745
ECM(-1)	-0.135270	0.059303	0.0317
Panel II: Long-Run-Model for AGOTP and OILR			
Variable	Coefficient	Std. Error	Prob.
C	0.731935	0.186297	0.0005
LOG(OILR)	1.448662	0.175121	0.0000
INF	0.028359	0.013666	0.0489
(EXR)	-0.736071	0.285791	0.0166

$R^2 = 0.9975$; Adjusted $R^2 = 0.9965$ F-Stats = 33.41***; DW-Stats = 2.0963

Source: Author's computation using E-views

Tables 4.3a and 4.3b show the relationship between output of agricultural sector and the output of the manufacturing sector in Nigeria from 1980 to 2021. The models were analyzed using the ARDL, since the variables in both models exhibit different levels of integration, I(0) and I(1) as shown in table 4.1. We provided the maximum lag length, while the optimum lags were automatically selected with the aid of Akaike Information Criteria (AIC).

4.4 Diagnostic Tests Results

Table 4.4 Diagnostic Tests for both Models

Hypothesis	Output of Agricultural Sector Model				Remark
	Test statistic	F-stats	Prob.		
Residual normally distributed	Jacque Bera (JB)	2.7089	0.2581		Accepted
No Serial correlation	Breusch Godfrey (BG)	0.9551	0.3994		Accepted
Homoscedasticity	Breusch-Pagan-Godfrey	1.3459	0.2675		Accepted
No specification error	Ramsey RESET	0.1415	0.0949		Accepted
Manufacturing Sector Model					
Residual normally distributed	Jacque Bera (JB)	0.2270	0.8927		Accepted
No Serial correlation	Breusch Godfrey (BG)	0.2195	0.8046		Accepted
Homoscedasticity	Breusch-Pagan-Godfrey	1.4519	0.2203		Accepted
No specification error	Ramsey RESET	0.0198	0.8893		Accepted

Source: Researcher's Computation using E-views 9

Results for model two are in parenthesis. All tests were carried out at 5% level of significance.

We reported the values and the probability of the f-statistics in the four tests carried out to check for diagnostic results for the estimated models. We failed to reject the null hypothesis in the four tests carried out, which implies that the results can be relied upon.

4.5 Discussion of Findings

4.5.1 Oil Revenue and Agriculture Sector Performance

Results in table 4.3a, shows that the one period lags of AGOTP are positive and statistically significant at 5%; this implies that investment in agricultural sector depends not only on external variables but on its own previous year output. That is the sector has the capacity of stimulating itself internally. However, the relationship between oil revenue and the agricultural sector output is not statistically significant in the long-term model, but the coefficient was correctly signed, part one of the table shows that the relationship of OILR and AGOTP was

negative and insignificant in its current period and 1st lag period of investment, the study discovered that it takes at least two years for OILR to impact on the AGOPT since the 2nd lag was seen to be positive and significant at the 5% level. This implies that the revenue generated from oil, only have a positive and significant impact on agricultural sector output after a period of two years. An increase in oil revenue leads to increase in the performance of agricultural sector in Nigeria.

The coefficient of ECM in the model is value of -0.2398 and is statistically significant. This implies that the speed of adjustment to any disequilibrium is corrected with about 23.98%, which is a very slow speed.

Result of the model diagnostic tests is presented in table 4.4. The Jacque-Bera statistic revealed that the residuals are normally distributed. The Breusch-Godfrey (BG) statistic also prove that the error terms are not serially correlated, that is they are independently distributed.

The test of homoscedasticity proves that the distribution of the error terms have constant variance. The Ramsey RESET test statistic signifies that the model employed in the analysis was correctly specified and therefore adequately captured the true relationship between oil revenue and agricultural sector performance in Nigeria. The diagnostic analysis has revealed that the model residual terms are normally distributed, independent; and identically distributed with mean zero and constant variance. Hence, the Gauss-Markov (GM) theorem applies here and the estimates could be considered as the Best Linear unbiased and efficient (BLUE) estimators.

4.5.2 Oil Revenue and Manufacturing Sector Performance

The dynamic model in Table 4.3b shows that the results of the lag of manufacturing sector output are positive indicating that previous year's activities of the manufacturing sector have the capacity to improve the performance of the sector. It also implies that the manufacturing sector has the ability to stimulate itself to future growth path from previous years output. The results show that it will take at least one period lag before the manufacturing sector in Nigeria can stimulate its future output from previous year, since 1st lag was statistically significant at the 5% in the Short-run dynamics model.

The results shows that the coefficient of the current and lag periods of the independent variables in the dynamic model are insignificant implying that oil

revenue have not affected manufacturing sector in the immediate period. The ECM is very low (-0.1353), this implies that it's only about 13.52% of the disequilibrium or external shocks from oil price fluctuation in the short term that can be corrected in the long term. The long term coefficients tend to behave differently since the sign of parameters were correctly signed and highly statistically significant. This means that OILR is a long term determinant of MANTOP in Nigeria. The findings are in line with the apriori expectations for this variable and in conformity with the finding of Adamu Saidu (2004) who studied the impact of oil revenue on manufacturing sector performance in Nigeria from 1980 to 2001. And also, the finding of Parkhish (2007) who found positive and significant relationship between oil revenue and manufacturing sector performance in the Gulf countries.

5.0 Conclusion and Recommendations

From the findings of the study, the relationship between oil revenue and agricultural sector output is not statistically significant. This justifies the fact that the huge revenue accruing from the oil sector has not been felt by other sectors especially the agricultural sector in terms of investments. There is no backward linkage existing between the oil sector and the agricultural sector, which necessitated the insignificant relationship between the two sectors. The positive and insignificant relationship between oil revenue and the manufacturing sector performance can equally be attributed to the poor linkage between the two industries such that expansion in the Nigeria oil and gas sector is not accentuated with commensurate expansion in the manufacturing sector in Nigeria.

It is therefore evident that, in achieving a sustainable growth and development of the Nigerian economy, emphasis on diversification away from oil must be sustained. This is because for the past three years, oil price in the international market has been fluctuating and this has affected foreign exchange in the domestic economy. This shows a great need for investment and attention to other sectors of the Nigerian economy in ensuring overall inclusive growth and development.

Based on the findings of the study, the following recommendations were made:

- i) Government should diversify the domestic economy as a strategy to increase the supply of foreign currency through stimulating export earnings and reduce the demand for imported goods.
- ii) The government should pay serious attention to the agricultural and manufacturing sector as they constitute the real sectors of the Nigerian

economy, by increasing the level of investments into the two sectors of the economy.

The study suggests that further studies in this regard should compare the effects of agricultural sector output, manufacturing sector output, oil revenue, electricity output, telecommunication and transport (as a single equation) on the economic growth of Nigeria. This is to really ascertain the areas of interest and priority for investment by the government in driving inclusive, sustainable growth and development.

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Shortages and Inequalities in Geographic Distribution of Healthcare Workers in Katsina State, Nigeria

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Abstract

This paper examined shortages and geographical inequality in the distribution of healthcare workers in Katsina State. The Gini index and Lorenz curve were used to analyze data on healthcare workers in the study area. This is with a view to revealing the shortages of health workers or otherwise according to the criteria set by the World Health Organization (WHO). Finally coefficient correlation and determinant were used to establish whether or not there is significant association between population and distribution of healthcare facilities among the 34 Local Government Areas across the state. The findings of the study revealed that inequality really exist in the distribution of healthcare staff within the three zones of the state, the study confirmed that none of the three zones of the state has achieved the minimum requirement as stipulated by the WHO for critical shortage of 2.5/1000 population. In addition to inadequacy of health personnel in Nigeria and in Katsina State, there is a common understanding that this problem is more in Katsina state and is further exacerbated by geographic distributional inequalities that are even more severe in rural areas. On the other hand, the Lorenz curve has also depicted similar results as the curves are further away from the diagonal, which means there is high variation in the distribution of health care workers in the State. Based on the study findings, it is recommended that a more vigorous analysis should be carried out by the state ministry of health to ascertain the number of healthcare facilities as well as the required number of healthcare workers with a view to establishing the number of equipment available and facilities which may require upgrade for effectiveness. The actual access levels individuals and communities have to the health care facilities in Katsina State needs to be ascertained. Besides, the government should adopt population threshold as a yardstick for health care facility distribution as this is the only approach to ensure equality and social justice in distribution of health care workers and other basic facilities.

Keywords: Geographic distribution, Health workers; Inequalities; Katsina State.

Introduction

According to the World Health Organization (WHO) (2006), the public health sector is considered one of the driving forces of most developing countries' health systems, due to some of its core objectives of preventing, improving and providing health services to their populations. Although, the world health body defines human resources for health (HRH) as "all people engaged in actions, whose primary intent is to enhance health", however, this study is restricted to health workers in the public health sector. The Joint Learning Initiative (2004), estimated that there is a global deficit of HRH and it has to be above 4 million, if all countries have to achieve an average worker-to-population density of 2.5 per 1,000. According to the 2006 World Health Report, over 4.3 million more health

workers are needed to bridge the gap of health personnel globally, of which about 1.5 million (35%) are required in Africa alone (WHO, 2006).

The Global health work force (2013) identified 57 countries across the world facing a “critical deficiency” of health workers, out of which 36 are in Africa including Nigeria. This is more critical in the Sub-Saharan Africa (SSA), where the existing low densities in health workforce to population per 1,000, have further strained their ability to cope with increasing health crisis and disease burden as compared to other regions in the world (Dovlo, 2005).

In addition to inadequacy of health personnel in the Sub-Saharan African (SSA) where Nigeria belongs, there is a common understanding that the region is further exacerbated by geographic distributional inequalities that are consequently even more severe in rural areas (Dovlo, 2005). However, one of the major limitations to this claim has been incomplete country data on their HRH profiles, as most studies have focused on the distribution of specific health cadres - physicians or nurses (Amani, 2010; Fongwa, 2002). Therefore the present study examines shortages and inequalities in geographic distribution of healthcare workers in Katsina State, Nigeria.

Study Area

Location Size and Population

Katsina State is located between latitude 11°08'N and 13°22'N and longitudes 6°52'E and 9°20'E, covering an area of 23,938 sq. km. The State is bordered to the north by Niger Republic, Jigawa and Kano States to the east, Kaduna State to the South and Zamfara State to the west. Based on the 2017 population projection, the total population size of Katsina State was put at Seven Million, Nine Hundred and Nineteen thousand, Four Hundred and Twenty Five (7,919,425). This figure comprised the males' population of Four Million Thirty Eight Thousand Nine Hundred and Six (4,038,906) and the females' population of Three Million Eight Hundred and Eighty Thousand Five Hundred and Eighteen (3,880,518). The Males' population constitutes 51% of the total population of the state, while that of the females constitute 49%. (Umar, 2019)



The Gini index and Lorenz curve were used to analyze data on healthcare workers in the study area. This in order to reveal shortages of health workers or otherwise, according to the criteria set by the World Health Organization (WHO). The Gini index compares the percentage frequency of some attributes with the distribution of the ‘distributional criterion’ and it is one of the best known measures of inequality as it measures the extent to which a condition or activity is geographically localized or concentrated (Smith, 1975; Okafor, 1987 & 2007; Munga and Maestad, 2009; Adhami et al., 2014; and Tandi et al., 2015).

Gini coefficient is expressed thus;

$$G = \frac{n+1}{n} - \frac{2 \sum_{i=1}^n (n+1-i)x_i}{n \sum_{i=1}^n x_i},$$

Hence, G is the Gini index, n is the number of observations and X_i the number of health personnel at i th location.

The Lorenz Curve is a graphical device for representing inequality and in plotting the graph, territories are ranked according to the ratios of their advantages, and the cumulative percentages of the health facilities (distributed phenomena) are plotted against the cumulative percentage of the population size (distribution criterion). A diagonal curve 45° is the line of perfect equality and, if the Lorenz curve overlaps with the diagonal, then there is perfect equality in the distribution of facilities. The further away of the Lorenz curve from the diagonal, the greater the difference.

Finally, the coefficients correlation and determinant were used in order to reveal whether there is significant association between population and distribution of healthcare facilities among the LGAs in the study area.

Result and Discussion

The Density of Health Workers to Population '1000/ LGA, Gini index and Lorenz Curve

Table 1 provides a picture of general health workers' distribution in Katsina State. The table reveals that the aggregate density of health worker to population is 0.91 per 1000 which is less than the world Health Organization (WHO) recommended critical shortage threshold of 2.5 (i.e. 400 persons per health worker). However there is four-fold variation in the density of available health worker to population per 1000, which range from 4 to 0.5 across the state. As shown on Table 1, only Katsina LGA attained the WHO critical shortage threshold limit, 5 out of the 34 LGAs, therest have density of health workers less than 1.0. Among the different category of Health worker to population per 1000, the densities vary from 2.0 Nurses per 1000 to a low of 0.00, for Radiographer per 1000 as illustrated on Table 1. The result describes the degree of association between densities of doctors, nurses, paramedics and hospital beds vary across different LGAs of the State when population size is used as an index of need.

Table 1. The density of health workers to population per 1000 per LGA and Gini index per cadre

LGA	Doctors	Nurses	Dental Tech	Medical Lab Tech	Nutritionist	Radiographer	Pharmacy technician	JCH EW	SCH EW	Hospital Beds	General Health Workers
Daura	0.03	0.21	0.05	0.03	0.00	0.00	0.03	0.08	0.61	0.54	1.05
Baure	0.01	0.06	0.01	0.01	0.00	0.00	0.01	0.19	0.29	0.20	0.59
Mai'adua	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.35	0.07	0.53
Zango	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.33	0.14	0.53
Sandamu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.42	0.17	0.74
Dutsi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.59	0.25	1.21
Mashi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.48	0.15	0.86
Mani	0.02	0.16	0.03	0.03	0.00	0.00	0.02	0.18	0.27	0.39	0.71
Bindawa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.34	0.14	0.66
Ingawa	0.01	0.07	0.01	0.02	0.00	0.00	0.03	0.21	0.32	0.29	0.67
Kankia	0.02	0.14	0.03	0.00	0.00	0.00	0.03	0.15	0.54	0.54	0.92
Kusada	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.41	0.26	0.59
Kaita	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.32	0.10	0.43
Katsina	0.73	1.97	0.04	0.13	0.06	0.01	0.08	0.14	0.32	2.86	3.47
Jibia	0.01	0.06	0.01	0.05	0.00	0.00	0.02	0.25	0.45	0.29	0.85
Batagara											0.74
wa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.51	0.17	
Batsari	0.01	0.06	0.01	0.01	0.00	0.00	0.01	0.16	0.33	0.30	0.60
Rimi	0.02	0.08	0.00	0.01	0.00	0.00	0.02	0.35	0.43	0.27	0.92
Charanch											0.56
i	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.31	0.24	
Kurfi	0.03	0.11	0.00	0.02	0.00	0.00	0.03	0.36	0.31	0.33	0.86

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Dutsinma	0.03	0.15	0.03	0.04	0.00	0.00	0.03	0.26	0.3	0.48	0.85
Danmusa	0.02	0.12	0.01	0.01	0.00	0.00	0.03	0.36	0.36	0.51	0.92
Safana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.26	0.08	0.40
Matazu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.46	0.14	0.61
Musawa	0.01	0.09	0.02	0.03	0.00	0.00	0.02	0.13	0.30	0.30	0.60
Kankara	0.01	0.06	0.01	0.02	0.00	0.00	0.01	0.17	0.24	0.26	0.52
Malumfa											1.28
shi	0.06	0.31	0.03	0.04	0.00	0.00	0.04	0.26	0.53	0.88	
Faskari	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.43	0.13	0.64
Funtua	0.05	0.33	0.03	0.03	0.00	0.00	0.03	0.27	0.52	0.61	1.26
Bakori	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.3	0.69	0.20	0.99
Dandume	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.47	0.13	0.73
Danja	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.63	0.20	1.04
Kafur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.41	0.15	0.75
Sabuwa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.47	0.13	0.76
Total	0.05	0.17	0.01	0.02	0.00	0.00	0.01	0.24	0.40	0.42	0.91
Gini	0.90	0.86	0.75	0.77	0.93	0.97	0.69	0.20	0.18	0.57	
Index											

Sources: Ministry of Health, 2018

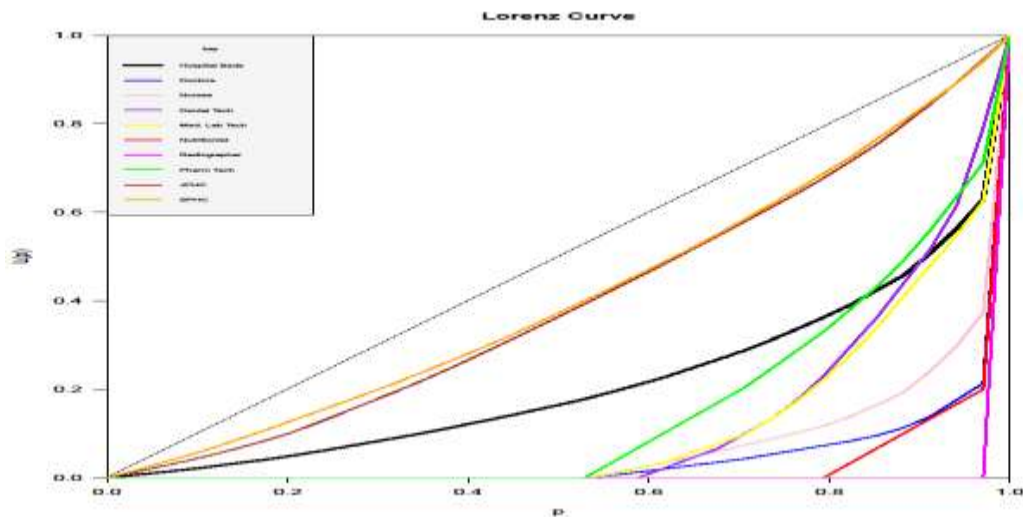


Figure 1: Distribution of health workers

Based on the population figures of LGAs as projected by the National Population Commission and the available health workers, the overall inter-state inequality has a Gini-coefficient of 0.903 (table 1) for the entire State, 0.86 for Nurse, 0.7476 for Dental technologist, 0.7647 for Medical lab technologist, and 0.9294 for Radiographer, 0.6889 Pharmacy technicians, 0.2 for JCHEW, 0.18 for SCHEW, and 0.5658 for Hospital Beds. Table 1 and Figure 2 illustrate the Gini Index and Lorenz curve for the distribution of health worker in Katsina State respectively. The result depicted by the Gini index and Lorenz curve (Table 1 and Figure 2) reaffirmed the first findings on healthcare facilities in the state, that Katsina State health care system is not only suffering from inequality in distribution of healthcare staff and facilities, but also shortages exist at various health workers cadre in the State's health system.

Moreover, on the distribution of healthcare workers in Katsina State, Gini coefficient, Lorenz curve and World Health Organization (WHO) recommended criteria of critical shortage threshold was used to analyze the data of health facilities staff. The findings of the study revealed that, not only do inequality exists in the distribution of healthcare staff in the three zones of the State (i.e. Katsina, Daura and Funtua zones), but also inadequacy of staff was detected, because in all the three zones of the state the minimum requirement as stipulated

by the WHO for critical shortage of 2.5/1000 population (i.e. 400 persons per health worker) has not been achieved.

On the other hand, the Lorenz curve which is the graphical representation of Gini index also depicted similar results as the curve runs further away from the diagonal which means there is high inequality in the distribution of health care staff in the three senatorial districts of the State. This finding corroborates studies conducted by Okafor (1987, 2007) Adamu and Mongunu (2009); Adamu and Uwais (2003); Darda'u (2011); As further proof of the disparity between population and healthcare facilities in Katsina State, a correlation analysis was carried out. A close-fit between population distribution and the distribution of health care facilities produced a high positive correlation coefficient. This means that local government areas with higher population have large numbers of health facilities and vice-versa. In addition, the correlation coefficient would help establish the importance or otherwise of population figures in the distribution of health care facilities in Katsina State. The correlation coefficient between population and the health care facilities are all positive and high (see Table 2).

Table 2: Coefficients of correlation and determination

Facilities	r	r²
Hospital Bed	0.634	0.4
Doctors	0.597	0.36
Nurses	0.623	0.39
Dental Technicians	0.629	0.4
Medical Lab Technologist	0.652	0.43
Nutritionist	0.578	0.33
Pharmacist Technicians	0.621	0.39
JPHC	0.133	0.02
SPHC	0.521	0.27

Field work 2019

This table shows that Correlation is significant at the 0.05 level (2-tailed) and that LGAs with higher population have more health care facilities than the ones with relatively lower population. Based on the fact that the coefficient is high and also significant, this makes conclusion reached in this case to be valid and is in tandem with the findings of Dar'dau (2011). Therefore, a close relationship exists

between the distribution of population and the distribution of health care facilities in Katsina State. The coefficient of determination on Table 2 also provides substantiation that the size population is a determining factor in the distribution of health facilities in Katsina State. Therefore, it can be concluded that population size determined the allocation of health workers in Katsina State with p -value at <0.005 .

Moreover, correlation analysis was conducted to ascertain the relationship between population size and the provision of healthcare facilities worker. However the findings revealed a highly significant relationship, which indicates that in Katsina State, health workers are allocated to LGAs based on population size which is the index of need as stipulated by the National Health Policy (2016). This finding is however contrary to what Tandi *et al* (2015) and Adhami *et al.* (2014) revealed, in these studies they reported that population size and the allocation of health workers are not significantly correlated in their areas of study.

Conclusion and Recommendations

A critical look at the existing inequality of access and distribution of healthcare facilities and workers within the 34 LGAs in Katsina State has revealed a gap between the population and the number of health personnel per person, as well as how it has generated disparities in levels of productivity among individuals and communities, as a result of the existing correlation between health status of population and productivity. To this end, it is recommended that a more robust investigation be conducted tied to the existing healthcare facilities, particularly the primary healthcare facilities, so as to determine the availability of equipment or otherwise, in the healthcare facility, this will ultimately determine the quality of the hospitals. There is also the need to also establish the actual access that an individuals and communities have regards healthcare facilities in Katsina State. This with a view of reducing distance and stress a person will face before accessing a healthcare facility. In addition, the government should adopt the recommendation of WHO as cited in Adamu et al.(2009), where it suggested the use of population threshold as a yardstick for health care facility distribution to ensure equality and social justice in distribution of health care workers and other basic facilities.

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Rural Urban Variation in Quality of Life as Push Factor of Migration in Dutsinma Local Government Area, Katsina State

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Abstract

The study investigates the Rural-Urban variation in quality of life as a factor of migration in Dutsin-ma local Government area of Katsina state. The paper examined the nature of quality of life in Dutsinma local government area of Katsina state. The method used in this research involved both qualitative and quantitative data design; a total of 120 questionnaires was administered to the sample respondents of the study area. The major finding revealed that, 66.7% of the respondents believed that their migration to the study area increases pressure on the available resources. This means that they are being over-stretched thereby leading some of them into extinction. On the other hand, only 32% of the respondents did not observed any change. This implies that since the number of people is continuously increasing while the resources are static, so the more people the more pressure on the already limited resources in the study area. It also implies that too much migration into the study area increases pressure on the available infrastructures, reduces their efficiency, and also leads to their decay. Therefore, since this phenomenon cannot completely be stopped, it should be mitigated and reduced. In conclusion, Security constraints were also observed to contribute to the overall rural-urban migration and as such, needs to be provided in rural areas. The study recommends infrastructural development such as hospital and clinics, schools, pipe-borne water sources, electricity and other infrastructural facilities in rural areas to tame the tide of migration in the study area, and to keep rural dwellers away from migration in search for better life.

Keywords: Migration, Rural-Urban Variation, infrastructure, Dutsin-ma LGA

Introduction

Migration can be considered as a significant feature of livelihood in developing countries to pursuit better living standards. Central to the understanding of rural-urban migration flow is the traditional push-pull factors (Asmame, 2011). Push factor refers to those circumstances at home that repel. For instance, these include famine, drought, low agriculture productivity, unemployment, and poor standard of living among others. A study of migration is of key importance in development studies because of its influence on lives of individuals, rural and urban growth. Migration is considered as the movement of people from one geographical region to another, which may be on temporary or permanent basis (Adewale, 2005).

People migrate based on the prevailing conditions, and the reasons for it vary from one person to another depending on the situation(s) that brought about the decision. According to Adewale (2005), migration is a selective process affecting individuals or families with certain economic, social, educational and demographic characteristics. In the past, rural-urban migration was formerly regarded as favorable in economic development. However, today it has become one of the most embarrassing problems in the Nigerian development experience. Rural-urban migration is in fact described as the phenomenon of a historically unprecedented movement of people from the rural countryside to the burgeoning cities of Africa, Asia and Latin America (Todaro, 1976).

In Nigeria however, one important dimension of internal population movement is its link to rural- urban variation in terms of quality of life. The level of government presence in rural areas is generally abysmally low, creating the erroneous impression that rural dwellers are second class citizens who do not deserve modern amenities that make life more comfortable (Asmame, 2011). Many rural areas in Nigeria lack such social amenities like electricity, motorable road, portable water supply, schools, hospitals, and industries – small, medium or large scale. Thus, the absence of industries and lack of social amenities among others, are the main reasons why young men and women abandon the villages in search of livelihood in the urban centers.

This perhaps is due to the differences in quality of life experienced in rural and urban areas. Today however, after about hundred years of colonial rule and fifty-four years of political independence, the quality of life in most rural Nigeria is worse, characterized by inadequate access and use of basic amenities of life. There is inadequate/absence of such infrastructures as physical (such as roads, water, rural electrification, storage and processing facilities), social (such as health and educational facilities, community centers, fire and security services), and institutional (such as credit and financial institutions) infrastructures to improve their quality of life (Akinleye, 2005).

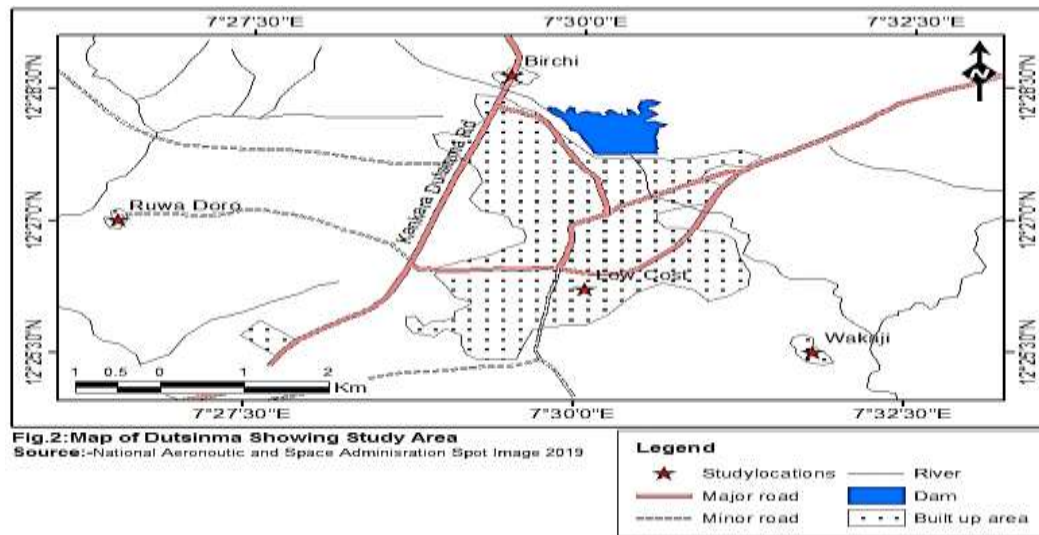
In essence, it is disappointing to see that despite the national objectives of building a just and an egalitarian society in Nigeria and the enormous contribution of rural communities to the economic and political systems of the country, rural Nigerians are deprived of basic needs of life in favors of the urban centers. This quality of life differential in the provision of social amenities has not only widened the gap between rural and urban incomes, it has also increased rural

unemployment and the desire of youths to move out of the rural areas into the cities in search of a better standard of living. The basis to this study emanates from the growth of Dutsin-Ma local government headquarters/town, due to increased rural-urban migration, leading to much pressure on existing facilities. The aim of this study is to examine the rural urban variation in quality of life as push factor of migration in Dutsin-Ma local government area, Katsina state. In order to achieve the aim of the study the following objectives are to be pursued: To Determine Socio demographic characteristic of respondents in the study area, to assess Knowledge and Awareness of the respondents about Quality of Life in Dutsinma Town before Migration, to examine accessibility of migrants to the social amenities/infrastructure in the study area and to know the impact of Migration on the available social amenities /Infrastructures of the Study Area.

Study Area

Location

The study area is Dutsin-Ma Local Government; Katsina state. Dutsin-ma is located on latitude 12.5°N and Longitude 7.5°E . Dutsin-ma is one of the oldest towns in Central part of katsina. It is bounded by Kankia, Charanchi and Matazu to the East, Safana and Dan-musa to the South and Kurfi to the North.



Dutsin-ma region falls under northern parts of Nigeria; the Hausa-Fulani are the dominant group that occupied the region, although there are various ethnic groups in the area who arrived at one time or another for different reason usually from different part of the country and beyond. It is possible to distinguish some of the people in the region by their local history, costumes, tradition and language. Such distinction must be made with great care since in almost all parts of tradition have been complicated and interwoven (Wikipedia, 2015). According to 2006 National Population Census reported that the population of the area is 169,671 as at 2006 (NPC, 2006).

The research utilizes both qualitative and quantitative data that was gathered during the field survey. The qualitative data gathered during the research field survey includes data on quality of life of the respondents, quality of roads, standard of living, infrastructural facilities etc. Quantitative data was also collected from the respondents such as; number of children, age number of wives, income, number of clinics, number of primary schools etc.

Source of Data

The data sources for the research work is primary data collected during the field survey of the research, this type of data was collected because the research requires current information on the rural-urban variation in quality of life and hence can only be generated through primary sources. To complement the data a questionnaire which includes open-ended and closed ended questions and four sections were prepared. The first section was demographic information/characteristics of migrants that help to secure information about the personal profile of the respondents; including their sex, age, marital status, and educational attainment. The second section deals with the economic status of the migrants. The third section deals with the quality of life indicators in the rural areas; including education, health, water and electricity supply, roads, and other social indicators. The fourth section of the questionnaire talks about the motives for migration into the study area.

Sampling Techniques and Sample Size

The sampling technique adopted by the researcher is stratified random sampling, where the characteristics of the sample is first defined and then selected randomly amongst. This sampling technique was adopted by the researcher, because it allows selection of the suitable sample defined by the researcher and then selected amongst randomly with every individual having equal chance of being selected from the main population as a sample. In the context of this research work, the characteristics of the population defined which is being an inhabitant of the study area by birth or by migration, age however is also a concern as being more familiar with rural-urban migration also depends on the age of the respondent. Communities that are evident of clearly rural-urban migration related factors/causes in Dutsin-ma local government headquarters are in a nut shell the population from which the sample was drawn from.

A total of 120 copy of questionnaire was administered to respondents using sampling technique. The population of the study area according to 1999 and 2006 National population census reported that the population of area is one hundred and thirty nine thousand five hundred and fifty two(139,552) respectively and the questionnaire is distributed best on the population of the ward selected.

Table 1. Population of each ward and the sample size selected from each Ward

Ward	Population of the ward	Sample size	Percentage
Low cost	14,700	35	29
Birchi	12,280	29	24
Ruwa Doro	10,866	26	22
Wakaji	12,960	30	25
Total	50,806	120	100

(Source: National Population Commission, 2006)

The reason behind selecting only four ward among the eleven ward have in Dutsinma is because the research is mainly focused in rural urban migration in quality of life as factor of migration in Dutsinma local government area.

These wards (Low coast and Birchi) was selected for the study due to the fact that, they are the most populous and popular places in the local government area in terms of economic activities and other business opportunities and therefore raises more chances of receiving in-migrants in the whole of the local government area.

Ruwa Doro and Wakaji however were selected due to their less population density and lack of infrastructural development and therefore suitable for determining rural life quality and most of the in-migrant tares from difference areas of the local government area are within those ward.

Result and Discussion

Demographic Information of Respondents

Number of Migrants by Place of Origin to Dutsin-Ma Town

The spatial distribution of migrants at their place of origin manifests not only a rural-urban variation within a given administrative unit, but also from different administrative regions of the same state or country. However, it is quite natural that the largest proportion of migrants comes from within the same administrative region mainly because of proximity and close link (Asmmame, 2009).Table 4.1 shows the volume (number) of migrants by their place of origin to the study area.

Table 2. Number of Migrants by Place of Origin to Dutsin-Ma Town

Place of Origin		Frequency	Percentage
Within	Dutsen-ma	83	62
LGA			
Outside	Dutsin-Ma	37	38
LGA			
Total		120	100

Source: Field Survey, (2019)

Table 2 shows the number of migrants into Dutsin-Ma town. The Table reveals that 69.2% of the respondents migrated from within Dutsin-Ma local government area to Dutsin-Ma town, while 30.8% of the respondents migrated from outside Dutsin-Ma LGA. This higher percentage may be due to their closeness to the local government headquarters in terms of distance, and the fact that the local government headquarters was found to be better than their original place of residence in terms of social infrastructures and amenities. On the other hand, 62% of those that are not from within the villages of the local government are seen to have come from Kurfi to the north, Matazu and Danmusa to the south, Kankia and Charanchi to the east and Sandamu to the west which are the neighboring local government areas to the study area. The remaining 38% of the respondents are seen to have come from other distant places.

Sex Composition of the Respondents

Among the demographic characteristics, sex compositions are one of which that has influence on migration process, in the sense that it is selective depending on the place or region in which the research is carried out. For instance, migrants in Africa, Middle East and Asia are predominantly male, whereas those in Latin America are female (Adepoju, 2004). Figure 1 shows the sex composition of the respondents in the study area.

Figure 1 shows the sex distribution of the respondents. It reveals that 87.5% of the migrants are male, these is because the migrant are male and married women since it is the male that are responsible in controlling the house, while 12.5% are female. This implies that majority of the migrants in the study area are male, who could on their own take decision to migrate based on certain conditions. This is in line with the findings of Adesiji et. al. (2009) in Kwara state, which showed that there has been more male migrants than female migrants because the males are able and strong portion of the population who

migrate for better quality of life and remember home by sending remittance.

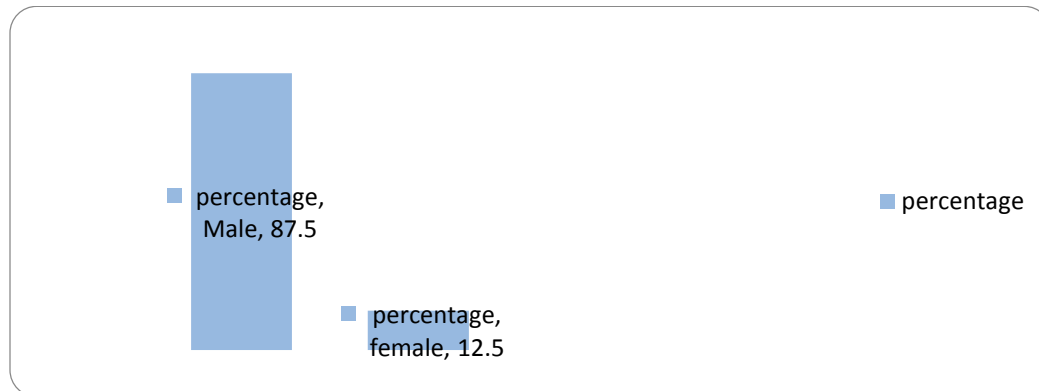


Figure 1 Sex Compositions of the Respondents

Age Distribution of the Respondents

Age distribution of migrants is also among the compositions that have influence on migration process, in the sense that it is also selective depending on the study area. For instance, a study conducted in Africa shows that most migrants both within and across national borders are young adults aged 15-39years (Adepoju, 2004). Figure 4.2 shows the age distribution of the respondents in the study area.

Figure (2) shows the age distribution of the respondents. It reveals that majority (39%) of the migrants falls within the age range of 31-40years, 35% falls within the age bracket of 20-30years, 13% falls within the age range of 20-30years, while only 9% and 4% fall within the age brackets of 41-50 and above 50years respectively. This means that majority of the migrants are within their adult age (above 20 years), these is because it is for searching and struggling in life many went for school, many are employed age and it is this age bracket that work in agricultural sector .This however contradicts the findings of Adesiji et. al. (2009), where majority (71.7%) of the migrants falls within the age bracket of 15-20years, a stage of their youthful development, and were influenced to migrate to the cities.

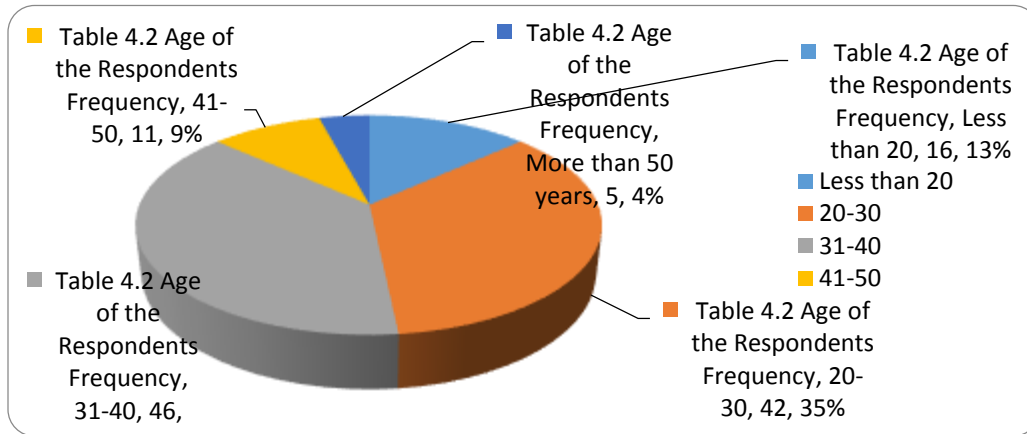


Figure 2 Age Distribution of the Respondents

Table 3: Marital status of the Respondents

Marital Status	Frequency	Percentage
Single	59	49.2
Married	48	40.0
Divorced	5	4.2
Separated	8	6.7
Total	120	100

Source: Field survey, (2019)

Marital status is another important characteristic influencing the propensity to migrate. Migration propensities change with marital status. That is, the matter of being married, unmarried (single), divorced and separated has an effect on the decision to migrate. Single people have less responsibility than married ones. As such, the propensity to migrate is highest among the single than married ones. Table 4.2 shows the marital status of the respondents.

Marital Status of the Respondents

The table 3 shows the marital status of the respondents. It divulges that majority of the respondents/migrants (49.2%) are single, 40% are married, while only 6.7% and 4.2% are separated and divorced respectively. The finding that majority of the migrants are single suggests that it is easier for them to travel than married men and women. This however contradicts the findings of Agbonhalo and Enilolobo

(2013) in the South-western Nigeria, where majority of the migrants were married, which indicates that they are likely to pay a frequent visit to their families at regular intervals to minimize social impact of separation from place of origin or residency.

Educational Levels of the Respondents

Education is one of the significant characteristics inducing rural-urban migration. The decision to migrate is also more likely influenced by educational attainment. This would mean that those who are better educated are relatively more involved in different migration streams than those who are not. Those who have completed secondary and tertiary education are more migratory than those who have completed primary education. This is mainly because of the fact that educational attainment increases the chance to get employment and other opportunities. Strong association between the propensity to migrate and level of education is observed in many developing countries (Adepoju, 2004).

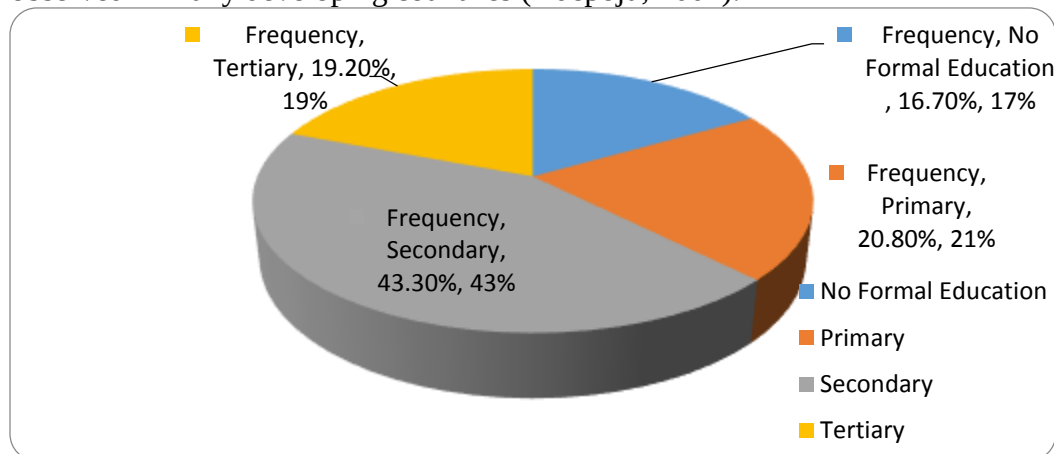


Figure 3 Educational Levels of the Respondents

The Figure 3 shows the level of educational attainment/qualification of the respondents. It portrays that most (43.3%) of the respondents/migrants have secondary school education/qualification, 20.8% have primary school education/qualification, 19.2% have attained tertiary level of education, while 16.7% have not attained any level of formal education. This higher percentage of the respondents with secondary school education/qualification means that the migrants have attained some level of education that they can be able to understand

and respond to the questions given to them pertaining to the subject under discussion, and that their judgment is considered accepted.

Year of Migration to Dutsin-Ma Town

The time of arrival to the place of destination is also very important in the study of migration in the sense that, it can be used to know the time when the greatest and lowest volume of migration is experienced. Table 4 shows the time of migration (in years) of the respondents to the study area.

Table 4 Year of Migration to Dutsin-MaTown

Time of Arrival to Dutsin-Ma	Frequency	Percentage (%)
2019	19	15.8
2015	59	49.2
Around 2010	22	18.3
Around 2008	13	10.8
Before 2008	7	5.8
Total	120	100

Source: field survey, (2019)

The table 4 shows data on the time of arrival of the respondents/migrants to the study area. It reveals that 49.2% of the migrants arrived to urban Dutsin-Ma about eight years ago (2010), 18.3% about twelve years ago (around 2007), 15.8% last year (2013), 10.8% about eighteen years ago (around 2004), and 5.8% arrived for over years (before 2004). This shows that the rate of migration to Dutsin-Ma town has significantly increased in recent years. This is because about 65% of the migrants arrived just in the last eight years. This therefore means that the rate of migration is increasing every day and this could be due to increasing standard of living and improved infrastructural facilities in Dutsin-Ma town, or the decay of the infrastructures in the nearby villages.

Occupational Status of the Respondents

One of the determinant factors for the decision to migrate is occupational status of migrants after migration. That means post migration occupation plays an important role for the decision to migrate. For example, farmers as a result of crop failure as well as the need for other better opportunities, and for students as a result of less opportunity in rural areas and lack of employment opportunities need to move to urban areas. Similarly, migrants of urban origin also move to

other urban areas where better opportunities are available. Tables 5 and 6, and figures 4 and 5 show the occupational status of the respondents after their migration. These include their employment status, nature of the employment, average monthly income (in Naira), as well as whether it is the employment opportunity that made them to migrate to the study area.

Table 5 Employment Status

Employment	Frequency	Percentage
Yes	88	73.3
No	32	26.7
Total	120	100

Source: Field survey, (2019)

The table 5 shows the employment status of the respondents. It reveals that most (73.3%) of the respondents are employed, while 25% of the respondents are not employed. This means that about three quarter (3/4) of the migrants have gotten job in Dutsin-ma town, while only about quarter (1/4) of the migrants have not gotten job to do after their migration.

The nature of employment is revealed in figure 4 where civil service has the highest number of employed, while farming has the least.

Table 6 Average Monthly Income (in Naira) of the Respondents

Average monthly income (#)	Frequency	Percentage (%)
Unanswered	7	5.8
About 10,000	26	21.7
About 10, 000-20,000	30	25.0
About 20,000-30,000	16	13.3
About 30,000-40,000	27	22.5
Above 40,000	14	11.7
Total	120	100

Source: field survey, (2019)

The Table 6 shows data on the monthly income of the migrants in Dutsin-Ma town. From the table, the result reveals that 5.8% of the questions are unanswered, 21.7% of the respondents generate income of about 10,000 Naira monthly, 25% have income between 10,000-20,000 Naira, 13.3% generate 20,000-30,000 Naira, 22.5% 30,000-40,000 Naira, while only 11.7% of the respondents generate above 40,000 Naira monthly. This implies that though most of the migrants are into civil service sector, the nature of their work is mostly casual, teaching in most of the primary/nursery schools. It also implies that even though the respondents migrated to better themselves financially/economically, their monthly income is still low, which shows that the living conditions in most of the neighboring villages need to be improved.

Employment Opportunities as the Factor of Migration

The figure 4 shows data on whether employment opportunity is the major factor of migration into Dutsin-Ma town. It discloses that majority (60%) of the respondents strongly agreed that it is the employment opportunity that made them migrate to Dutsin-ma town, 24.2% partially agreed, 12.5% disagreed, while only 3.3% strongly disagreed that it is the employment opportunity that made them migrate to Dutsin-Ma town. This implies that employment opportunity is the first influencing factor of rural-urban migration in the study area. This is clearly correct as the quality of life of a given area can only be improved when there are improved economic activities. This finding however corroborates the works of many writers such as Adepoju (2004) in West Africa, Adamu (2009) in Wudil local government area of Kano state, Arewomi et al., (2011) in some selected local government areas of Lagos state, and Ango et al., (2013) in Sokoto state among others; who noted that majority of the migrants migrated to the cities for better employment.

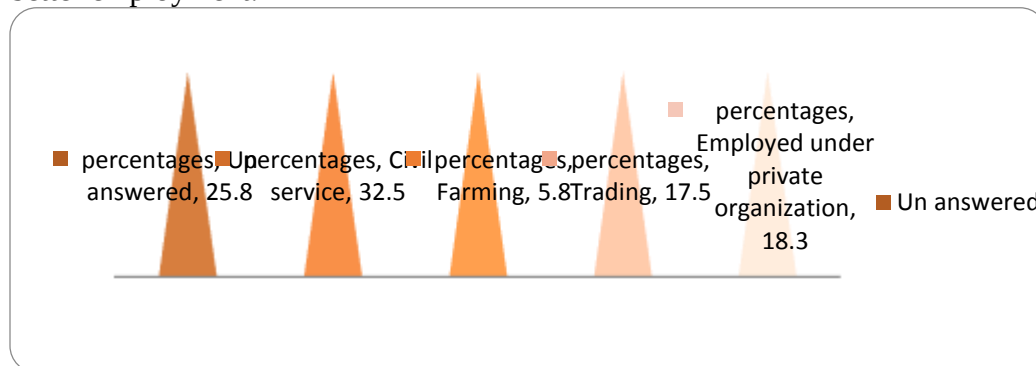


Figure 4 Employment Opportunities as the Factor of Migration

Quality of Life Indicators

Apart from the employment opportunity, there are several reasons for population mobility from place to place. Among these reasons however, reasons for migration to urban centers are more complex (Adepoju 2004). Although the causes of migration are usually identified as two broad categories, namely “pushing” and “pulling” factors, non-economic pulling factors such as the need for improved or better facilities or services in the urban areas may also pull people to different urban areas. In other words, the decision to migrate may also be influenced by non-economic factors. Below are the tables showing such quality of life indicators as education, health, water and electricity supply, road, and some other social amenities that are seen to cause rural-urban migration in the study area.

Table 7 Education

Obtainable school in the migrants place of Origin	Frequency	Percentage (%)
Primary school	44	36.7
Primary school and secondary school	19	15.8
Primary school, secondary school and tertiary	4	3.3.
No school	53	44.2
Total	120	100
Response about whether there are children of age 5-11 not in primary school		
Yes	119	99.2
No	1	0.8
Total	120	100
Response for not being in primary school		
Not answered	1	8
Because there is no school	53	44.2
Because the teachers are negligent	4	3.3.
Because the training materials and the classes are not available	18	15.0
Because of the location is far from pupils reach	44	36.7
Total	120	100
Response about children of age 15-20 not in secondary school		
Yes	118	98.3
No	2	1.7
Total	120	100

Response for not being in secondary school		
Unanswered	1	8
Because there is no school	82	68.3
Because the teachers are negligent and not well educated	6	5.0
Because the teaching materials and classes are not available	3	2.5
Because the location is far from pupils reach	28	23.3
Total	120	100
Educational facilities as the major factor of migration to Urban Dutsin-Ma		
Strongly agree	58	48.3
Partially	34	28.3
Disagree	21	17.5
Strongly disagree	7	5.8
Total	120	100
Source Field Survey, 2019		

The table 7 shows data on the educational status of the respondents' place of origin and its role in migration to urban Dutsin-Ma. From the table, the result reveals that majority of the migrants disclose that there is no school in their place of origin/birth; because 44.2% do not have school in their place of origin/birth, 36.7% have only primary school, 15.8% have up to secondary school, and only 3.3% have primary, secondary and tertiary schools. So from this, it can be deduce that there is poor educational systems in most of the migrants place of origin (mostly villages around urban Dutsin-Ma), as many of them do not even have schools; and this may lead to migration into the study area for educational pursued.

It is also seen from the table that even though in some of the migrants' place of origin (the neighboring villages) there are schools, but majority of the people in such areas are not engaged in schooling. It is revealed from the result that about 99.2% of the respondents agreed that there is high number of children with age range 5-11years that do not go to or did not attain primary school, while only 0.8% of the respondents do not agree that they have children of age 5-11years that do not go to or did not attain primary school. This minor group or percentage of respondents is likely to be from only those that are not from within the local government area. However, the reasons for the majority of the respondents of having children of age 5-11years in their place of birth not in primary school from

the table are, 44.2% disclosed that it is because there is no school in their villages (place of birth), 36.7% view it that it is because the location is far from the peoples' reach, 15.0% of the respondents have the view that it is because the training materials and classes are not available, while only 3.3% are of the view that it is because the teachers are negligent.

The result also reveals that 98.3% of the respondents disclosed that they have children of age 15-20 years in their place of birth that are not in or did not attain secondary schools, and the reasons are the same as in the case of primary school; where 68.3% of the respondents disclosed that the children do not go to school because there is no school. Other reasons are; the location is far from the peoples' reach (23.3%), the teachers are negligent and not well educated (5.0%), and lastly because the teaching materials and classes are not available (2.5%).

Whatever the reason, the result from table 7 implies that there are generally poor educational facilities and inadequacy of teaching materials, and lack of teachers in the nearby villages of the study area. On the other hand, the improved educational status in the study area in comparison with the surrounding villages is said to be one of the major factors of migration into the study area. This is evident from the table, as about 48.3% of the respondents strongly agreed that it is the educational facilities that made them migrate to urban Dutsin-ma 28.3% partially agreed, 17.5% disagreed, while only 5.8% strongly disagreed that it is the educational facilities that made them migrate to urban. In essence Dutsin-Ma, the study area is said to be relatively equipped with improved educational facilities as the quality of education is higher than that of its neighboring villages because of the increasing investment in that sector and the closeness of the study area to the capital city of the state (Katsina), which can influence its educational status and quality of life. This is evident in the everyday increasing number and type of schools in the study area, as there are now thirteen primary schools (out of which five are private) and four secondary schools (out of which one is private). Apart from this however, of all the government primary school teachers (972), sixty eight per cent of them are teaching within the urban (Local Government Education Authority, 2017). In Dutsin-Ma there also exist College of Health Science, and Vocational Training School within the study area. In general, from the above findings, it is clear that improved educational facilities in Dutsin-Ma among the major determining factors of migration to urban.

Table 8 Health

Availability of hospital or clinician the migrant place of origin	Frequency	Percentage (%)
Yes	44	36.7
No	76	63.3
Total	120	100
Response on the effective use of the hospital or clinic		
Yes	12	10.0
No	108	90.0
Total	120	100.0
Reason for not effectively using the hospital/Clinic		
Unanswered	11	9.2
Because there are no doctors	44	36.7
Because medical service or drugs are very expensive	4	3.3
Because the location is far from people reach	29	24.2
Because the staff are negligent and not well educated	32	26.7
Total	120	100
Health care facilities as the major determinant of migrant		
Strong agree	52	43.3
Partially	42	35.0
Disagree	20	16.7
Strongly disagree	6	5.0
Total	120	100

Source: Field Survey, (2019)

The table 8 presents information on the availability of health care facilities and their utilization in the respondents' place of origin, and its relation to migration. From the table, it is seen that 63.3% of the respondents indicated that they do not have hospital or clinic in their place of origin, whereas 36.7% responded that they have hospital/clinic in their village.

From the table also, it is revealed that 90% of the people do not effectively use their hospitals/clinics, while only 10% effectively use their health care facilities. The reasons for not effectively using these health care services from the findings

are due to lack or absence of doctors (36.7%), unavailability and expensive nature of Dutsin-Ma medical services and drugs (3.3%), the health care services are far from the peoples' reach (24.2%), and because the staffs are negligent and not well educated (26.7%).

Thus, access to qualitative health care facilities/services could be said to be the major factor (pull factor) that made majority of the respondents migrated to town. This is because from the table, it is revealed that 43.3% of the respondents strongly agreed that it is the access to health care facilities that made them migrate to urban, 35% partially agreed, while 16.7% and 5% of the respondents disagreed and strongly disagreed respectively, that access to health care facilities is not the determinant factor of their migration to the Dutsin-ma study area. This result implies that majority of the respondents agreed that health care facilities, which are higher and better than those obtainable in their places of birth (the surrounding villages) are the major factors (regarded as the pull factors) of their migration to town. This is possible considering the fact that majority of the respondents have attained a certain level of formal education, that they can be able to know the importance of good hygiene/health condition. On the other hand however, even those that disagreed and strongly disagreed that it is not the major factor that determined their migration could be those that are not from within the neighboring local government villages. They probably come from places where these services are somehow efficiently provided.

Table 9 Water and Electricity

Availability of electricity in the migrant place of origin	Frequency	Percentage (%)
Yes	44	36.7
No	76	63.3
Total	120	100.0
Duration of the electricity supply		
Unanswered	64	53.3
About complete one week in a month	13	10.8
About 2-3 days in a week	20	16.7
About 24 hours in a day	117	14.2
About 1-3 hours in a day	6	5.0
Total	120	100.0
Main source of water in the migrant place of origin		
Un answered	1	0.8
Tap water	18	15.0
Borehole water	32	26.1
Well water	65	54.2
Stream and pond water	4	3.3
Total	120	100.0
Water and electricity as the factor of migrant		
Strong agreed	52	43.3
Partially	46	38.3
Disagreed	18	15.0
Strong disagree	4	3.3
Total	120	100.0

Source: Field Survey (2019)

Dutsin-Ma town has improved its health care services as there is a General Hospital owned by the state government, one primary health care services owned by the local government, two private hospitals and a veterinary clinic. However of all the health personnel/officers (476) in the local government area, sixty four per cent of them are working within town (Office of Head of Health services, 2019). This privilege among others, can generally be said is the determining factor of migration to the study area.

The table 9 presents information on the availability of electricity and water supply in the respondents' place of origin, and their relation to migration. The table reveals that most (63.3%) of the respondents places of origin do not have electricity, while 36.7% reveals that they have electricity in their villages but erratic in supply. That means, the duration of supply is not much/long in a month, week, and even a day. It is seen in the table that 10.8% of the respondents have electricity supply in their rural areas only for about complete one week in a month, 16.7% only for about 2-3days in a week, 14.2% witness about 24hours in a week, while only 5% of the respondents disclosed that their people have electricity supply for only about 1-3hours in a day. This shows that the electricity supply in the nearby villages of the study area is poor that it cannot support any development. So this could act as the pushing factor of the respondents out of their villages to Dutsin-Ma town, where there is a branch of power station. In the case of water supply, there is insufficiency of water supply in almost all of the neighboring villages of the study area. This is evident from table 9 that 54.2% of the respondents disclosed that they source their water from well, which is low in quality. About 26.7% of the people source their water from borehole which is also of doubtful of quality, while 3.3% of the people source their water from streams/ponds. However, it is only 15% of the people that source their water from tap, which is regarded as high quality water. This percentage of people however could only be from those that are not from within the local government area, as evident from the fact that it is only the Dutsin-Ma town that enjoy portable drinking water from the water board station situated in Dutsin-Ma (Office of Head of Health services,).

In terms of whether electricity and water supply are the determinants that made the migrants to migrate to the study area, the data obtained reveal that 43.3% of the respondents strongly agreed that electricity and water supply are the factors of their migration to the study area, 38.3% partially agreed, 15% disagreed, while only 3.3% strongly disagreed. This means that in the villages, there is poor electricity and water supply that act as the factors of their migration to the study area, where such amenities are relatively inadequate and of improved quality.

Table 10: Roads infrastructure

Types of road in the migrant place of origin	Frequency	Percentages (%)
Motor able road	74	61.7
Non motor able road	46	38.3
Total	120	100.0
Nature of the motor able		
Un answered	48	40.0
Tarred and paved road	7	5.8
Tarred and un paved road	12	10.0
Un tarred road	35	29.2
Un tarred and eroded road	18	15.0
Total	120	100.0
Accessibility to the road		
Closer to the road	65	54.2
Not closer to the road	55	45.8
total	120	100.0
Access to good road		
Strongly agree	45	37.5
Partially	50	41.7
Disagree	25	20.0
Total	120	100.0

Source Field survey (2019)

Table 10 presents information on another infrastructural facility that initiates rural-urban migration in the study area (which is road). From the table, it is seen that 61.7% of the respondents have motorable road in their place of origin, while 38.3% do not have motorable road in their villages. This means that majority (54.2%) of the migrants' villages are accessible by road.

However, it is not only the presence of roads that determines the quality of life of the migrants in their villages, it is the nature or conditions of the roads that is the most important determining factor in this regards. It is evident from the table that 29.2% of the villages have untarred road, 15% have untarred and eroded road, 10% have tarred and unpaved road, while only 5% have tarred and paved road. This shows that the conditions or quality of the rural roads in the study area are poor even though most of them are motorable, which if well improved, will in turn improve the economy of such villages. Therefore, it can be said that the poor

quality or nature of the roads in the respondents' place of origin acts as the factor of their migration to the study area, as it is evident from the table that 37.5% of the respondents strongly agreed that it is the access to good road a major infrastructure that made them migrate to the Dutsin-Ma town, 41.7% partially agreed, while 20.8% disagreed that it is the access of good road as the major factor of their migration. This result may probably be due the fact that most of the respondents' villages (place of birth) have roads, and only that majority are of bad nature; and that they see provision of good roads as of less important compared to the other indicators of quality of life mentioned above, which may probably be due to their level of understanding the term "quality of life".

Generally, Dutsin-Ma town has road infrastructures as there is, apart from a number of single-lane roads constructed by the various local government administrations within the local government headquarters which most of them are equipped with security light, an equipped 5km dual road constructed by the state government, and also a trunk.

Other Social Amenities

Apart from the above infrastructural facilities, other social amenities which can also be seen to trigger migration into the study area are taken into consideration. These are shown in the table below:

Table 11: Other Social Amenities

Availability of security services in the migrant place of origin	Frequency	Percentage
Yes	28	23.3
No	92	76.7
Total	120	100.0
Presence of petrol in the migrant place of origin		
Yes	12	10.0
No	108	90.0
Total	120	100.0
Presence of recreational facilities in the migrant place of origin		
Yes	47	39.2
No	73	60.8
Total	120	100.0

Presence of communication provide in the migrant place of origin		
Yes	56	46.7
No	64	53.3
Total	120	100.0

Table 11, presents information on the availability of other social amenities which is also seen to determine the nature of quality of life in the respondents' place of origin. These other social amenities as seen from the table are security services such as police station; vigilante groups, petrol station, recreational facilities such as cinema, public centre, and mobile communication service providers such as MTN, GLO, etc., - of which the presence will show the degree of quality of life in a given locality. From the table, 76.7% of the respondents' reported that their villages have no security services, while only 23.3% have security services. Also, 90% of the respondents' place of origin do not have petrol station, while only 10% have it. It can also be seen in the table that 60.8% do not have recreational facilities, while only 39.2% have them. Also, 53.3% do not have communication services, while 46% have them. This means that even in terms of other social amenities, most of the migrants' villages do not have majority of them. This implies that the above social amenities among others can trigger migration from rural to the urban areas, where they are present.

Knowledge and Awareness of Quality of Life in Dutsin-Ma Town before Migration

Individuals may take rational decision to leave their places with the hope of better life chances of their destinations. This is always a decision under risk and uncertainty taken under certain perception based on the information and knowledge. Table 12 shows the respondents experience or information about the living condition of the study area.

Table 12: knowledge and Awareness of the Living Condition in Dutsin-Ma Town before Migration

Knowledge of the living condition in Dutsin-ma town	frequency	Percentage (%)
Yes	114	95.0
No	6	5.0
Total	120	100.0
Nature of the information experience		
Un answered	6	5.0
Positive (migrant life is improving in Dutsin-ma)	106	88.3
Negative (migrant is not improving in Dutsin-ma)	8	6.7
Total	120	100.0

Table 12, reveals the respondents' experience or information on the living condition or quality of life of the study area before their migration. About 95% of the migrants have prior knowledge about the living conditions of Dutsin-Ma town, while only 5% migrated to the study area without experience or information about its living conditions. From the result obtained, most of the migrants (88.3%) have positive information about the living conditions or quality of life of the study area, that migrants' life is improved in Dutsin-Ma town; while only little of them (6.7%) have negative information about the living condition of the study area. This shows that majority of the respondents migrate to Dutsin-Ma town in thirst to improve their life.

Impact of Migration on the Available Infrastructures of the Study Area

There are several other consequences of population mobility associated with the area of destination. Such consequences are said to be the result of the pulling factor as seen from a number of literature reviews concerning rural-urban migration related topics. Below is a table showing some of the consequences of rural-urban migration in the study area.

Table 13: Impact of Migration on the Available Infrastructures in Dutsin-Ma Town

Effect migration to the available resources	Frequency	Percentage (%)
Increase to the resources	80	66.7
Normal as before	24	20.0
Reduces pressure to the available resource	16	13.3
Total	120	100.0
Efficient of the available infrastructure as many people migrant to Dutsin-Ma		
Normal efficient as before	34	28.3
Increase efficient	19	15.8
Decrease efficient	67	55.8
Total	120	100.0
The relationship between on to Dutsin-Ma and its available infrastructure		
Over utility	57	47.5
Decrease	46	38.3
In efficient	17	14.2
Total	120	100.0

Sources; Field survey (2019)

Table 13, presents information on effects of migration in the study area. From the table, 66.7% of the respondents believe that their migration to the study area increases pressure on the available resources. This means that the available resources are being exhausted, leading some of them into extinction. On the other hand, only 20% and 12% of the respondents do not see any change and believed that pressure is rather reduced respectively.

About 55.8% of the respondents believe that the efficiency of the available resources is drastically reduced, and there is over-utilization of the available infrastructures. This implies that since the number of people is continuously increasing, while the resources are static, so more people will demand the already limited resources. It also implies that too much migration into the study area increases pressure on the available infrastructures, reduces their efficiency, and also leads to their decay. Therefore, since this phenomenon cannot completely be stopped, it should be regulated and reduced.

Conclusion and Recommendations

Rural-urban variation in quality of life has a remarkable influence in migration process in the study area. This is because majority of the respondents/migrants attributed their action to the absence of social amenities in the village environment; as a result, they are attracted to the urban area. Thus, by and large, urban pull factors are stronger than rural push factors, causing depopulation to rural areas. At the same time, urban areas due to investment and economic growth are suffering from insufficiency and over utilization of resources which are amongst the consequences of rural-urban migration. In general, the high flow of migrants to urban Dutsin-Ma has accentuated the problem of infrastructural decay and inefficiency. Thus, the overall consequences of rural-urban variation in quality of life in Dutsin-Ma local government area of Katsina state are discouraging, and hence the following recommendations are suggested to solve some of the problems of both the places of origin and destination of the migrants.

Concentration of various elements of modernization in the urban areas and their conspicuous absence in rural localities pull many rural people to towns. Therefore, provision of different social services such as better medical facilities and services, education, infrastructure, water and electricity to the rural areas may reduce the amount of flow of population to urban centers. Taking into account the population growth of the town, constructing additional infrastructures and social services, such as schools, health institutions, recreational centers and so forth are important in providing needed services and better quality of life.

The vast actual or perceived difference between rural-urban incomes causes population migration. Since poverty is a pronounced rural phenomenon, migration from rural areas is tied to the income gap between rural and urban areas. When growth is balanced between them through viable regional planning strategies for the mutual development of the rural areas and their urban centers at different hierarchical scales, it is recommended that it will check or slow down the rural outflow.

The study recommends future research to focus on the causes of rural-urban variation in quality of life, other areas of future research is the comparative analysis of migrant from within and outside Dutsin-Ma local government area.

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Board Political Affiliation and Financial Performance of Non-Financial Companies in Nigeria

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Abstract

The study looks at how board political allegiance affects the financial success of non-financial companies listed on the Nigerian Stock Exchange. The study's specific goal is to ascertain whether board political affiliation, a component of corporate governance, influences the financial performance of the company. Return on equity (ROE) and net profit margin (NPM) were used to measure the company's financial performance. The study employed an ex post facto research design and a sample of 75 listed non-financial corporations with detailed annual reports that were released during the measure reporting period (2012-2021). Regression using generalized least squares (GLS) was utilized to analyze the correlation between the variables. The outcome demonstrates that board political membership has a favorable and significant impact on ROE and NPM at a level of 5%. The study concludes that there should be no restriction on the number of politically affiliated individuals serving on boards of directors within the parameters of corporate governance regulations and that political affiliation has a positive and significant impact on companies' NPM, as evidenced by the higher attendance of politically connected individuals, which suggests that board members improve the company's financial performance and revenue. According to the study, it should always be encouraged for people with political clout to serve on the boards of Nigerian publicly traded non-financial enterprises.

Keywords: Corporate Governance, Board Political Affiliation, Financial Performance, Non-Financial Companies, Return on Equity

JEL Classification: M40, M41, G34

1. Introduction

Corporate governance is concerned with how all parties involved in a company try to guarantee that managers and other insiders adopt a structure that protects their interests (Waleed, Mohammed, Mosab, & Najib, 2020). A system or arrangement known as corporate governance is made up of a variety of practices (such as accounting standards and rules governing financial disclosure, executive compensation, and the size and composition of corporate boards) and institutions (such as legal, economic, and social systems) that safeguard the interests of the owners of a corporation. Corporate governance is also the framework that a board of directors of a corporation uses to set and work toward attaining goals by

ensuring an effective and efficient separation of ownership and control. It entails implementing and maintaining independent validation procedures within the company to guarantee the dependability of an effective internal control system that the board of directors uses to check compliance with the strategies it has taken in relation to risk tolerance (Herman & Joy, 2020).

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Corporate governance also refers to a group of procedures used by businesses to run when management and ownership are distinct. It deals with the procedures that give shareholders in companies some level of protection about their investments. “The division between a company's ownership and control based on the framework for how businesses are managed gives rise to corporate governance. The corporate governance structure outlines the rules and methods for making decisions on corporate affairs as well as the distribution of rights and responsibilities among various stakeholders (the board, management, shareholders, and other participants) in the business. In doing so, it also offers the framework through which the company's goals are established as well as the tools for achieving those goals and keeping track of performance. By strengthening corporate performance and accountability and considering the interests of other stakeholders, corporate governance is therefore designed to increase long-term shareholder value (Waleed *et al*, 2020).

The idea of firm financial performance encourages the effective and efficient use of financial resources to accomplish larger-scale business objectives, such as maximizing shareholder wealth and profit maximization (Urhoghide & Korolo, 2018). Companies having a history of strong financial performance typically draw in more investors. One of the factors that investors take into consideration when choosing an investment is the company's financial performance. Researchers have paid a lot of attention to financial performance, notably in the accounting and strategic management sectors. This makes sense because financial performance affects an organization's long-term viability and overall health. In order to meet the expectations of its numerous stakeholders and to raise its stock price, sales, market share, profitability, and cash flow, an organization is said to have achieved financial performance by using its resources efficiently and effectively. This study aims to determine the association between corporate governance (political affiliation of the board) and the financial performance of listed non-financial enterprises in Nigeria.

Studies have demonstrated that effective corporate governance lowers the risk of business collapse brought on by subpar financial performance. The study investigates the effect of Board political affiliation on the financial performance of listed non-financial companies which has not been extensively examined in most studies carried out in Nigeria. There is a rising argument that business conditions are improving by removing obstacles with the backing of politically connected senior officials (Baum, 2008). Compared to other corporate governance variables like board size and board diversity, this variable has not gotten as much academic attention. Therefore, it is necessary to investigate how these factors affect the financial performance of Nigerian enterprises that use non-financial sectors.

2. Review of Related Literature

Good corporate governance is now a must for every business to be successful in the global economy. Although corporate governance may be relatively new to the general public and the academic community, the issues it addresses are not new. This section summarizes the conclusions advanced by several academics.

2.1 Conceptual Review

2.1.1 Corporate Governance

Researchers, writers, and some academics approach corporate governance from several angles. The definition and development of corporate governance have also benefited from the contributions of some well-known organizations. According to Strandbery (2001), the distribution of stock among internal and external investors determines corporate governance. Corporate governance is a tool used to punish corporations, according to Cadbury (1992). In 2010, the Organization for Economic Cooperation and Development (OECD) defined corporate governance as the framework to direct and control business corporations. Corporate governance also considers how societal perceptions of the extent of corporate responsibility relate to the internal governance structures of businesses (Deakin & Hughes, 1997).

Corporate governance, as defined by Gompers, Ishii, and Metrick (2003) is the process by which the board of directors raises shareholder value by monitoring the behavior of the managers in charge of running the business daily. Corporate governance gives top management essential controls and oversight from an agency/control standpoint. It is said that managers have less of an opportunistic tendency to participate in unethical behavior. They prevent asset skimming, moral

hazard, the waste of corporate-controlled resources, and various other variations of the agency problem. They also ensure corporate alignment with the interests of investors and society.

The Central Bank of Nigeria (CBN, 2010) provided what is arguably the most comprehensive and illuminating definition of corporate governance when it described it as a process of conventions, policies, systems, laws, and procedures that regulate institutions and the way these rules and regulations are administered and controlled. It also entails adhering to statutory and legal standards. Because it considers the acknowledgment and protection of the rights of all stakeholders, this definition appears to be more precise and suitable. This study is in line with the definition of corporate governance, which is defined as the structures and processes put in place to provide efficient and effective control of a company's affairs for the best possible maximization of shareholders' wealth and fair remuneration for other stakeholders. Therefore, checks and balances for both internal and external operations by company leaders were conceptualized in this study as corporate governance, which ensures that corporations are accountable to all their stakeholders and their environment in all aspects of their business activities.

2.1.2 Board political affiliation and Firm Financial Performance

Faccio (2006) discovered that when senior corporate executives enter politics, stock prices increase. These findings demonstrate how political identification with the board of directors might enhance business performance. According to the literature, board political affiliation affected corporate performance in Brazil (Claessen, Feljen, & Laeven, 2008), China (Du, 2012); India (Cole, 2009); Pakistan (Khwaja & Mian, 2005), and the United States (Houston, 2012). Previous studies (Faccio, 2006; Charunulind *et al.*, 2006) demonstrated that membership on a political board influences a company's financial performance and that because these companies have easier access to bank financing in the developed and developing nations, there will be a higher failure rate in the future. According to Houston (2012), US banks consider prospective political favors when making loan decisions. His research demonstrates that bankers lend at lower interest rates to companies whose board members hold political office. There is a growing consensus that roadblocks should be taken down with the backing of high political leaders in order to enhance economic conditions for enterprises. (Baum, 2008).

In response to the subprime mortgage crisis, Duchin and Sosyura (2012) found that the allocation of government funding under the U.S. Troubled Asset Relief Program (TARP) was biased in favor of politicians. For instance, most of the contributions made to the presidential campaigns of the People's Democratic Party (PDP) and All Progressive Congress (APC) in Nigeria have been donated to a cause that is best known to business. Many professional associations offer insurance to their donors. PDP has received donations from companies including SIFAX Group (\$100 million), Tunde Ayeni (\$2 billion), Oil & Gas Sector (\$5 billion), and Real Estate & Buildings (\$4 billion). Additionally, some academics asserted that a board member's political allegiance might not influence the company's financial success (Urhoghide, & Korolo, 2018). By demonstrating that companies' performance was unaffected by the presence of board members with strong political ties, such as former US Vice President Cheney, Fisman (2000) backed this point of view. According to Bertrand (2008), high-level political officials at a company have little to no effect on the firm's worth.

2.1.3. Firm Financial Performance

The utility or benefit shareholders receive from a company's shares can be thought of as a company's performance or value. Companies that have a high share sale value can prosper financially. Such highly rated businesses draw a lot of investors, enhancing their chances of continuing to grow. Power is a hard notion to describe and quantify, though. It has been defined as the outcome of the activity, and it is thought that the best way to assess corporate performance will rely on the type of organization being assessed as well as the objectives that will be attained through this assessment (Jat, 2006). On the other hand, performance measurement systems should be seen as information systems that are used to evaluate both individual and organizational performance, according to Zuriekat *et al.*, (2011). Companies have traditionally utilized financial performance criteria as the foundation for performance evaluation.

In Corporate Management, Lin and Liu (2005) observed that financial indicators are typically one of the metrics used to assess a company's performance. Financial measures are essentially items that are shared by other items in the financial statements, which are often where a company's financial information for operations is provided. The initial point of reference for analyzing business progress is financial indicators. This is like Osisioma's (1996) assertion that ratios relate one set of values to another, with the resulting quotient acting as a benchmark or reference point for performance. Financial ratios are traditionally

used to measure a firm's success because they offer a straightforward assessment of the financial performance of the company in comparison to prior periods and assist management in enhancing performance. Investors are interested in two facets of a company's financial success, according to Gautier and Underdown (2001). First, the ability to make profits can be used to evaluate its financial performance. This supports Pandey's (2005) assertion that, in competitive market environments, profit is regarded as the most relevant indicator of a firm's performance and that profit maximization promotes the efficient allocation of resources. The profitability of a company is measured by its financial performance. For the purposes of this study, return on equity (ROE) and net profit margin were used to gauge the company's financial performance.

2.2 Empirical Review

Researches done by other researchers are discussed below:

Urhoghide and Korolo (2018) investigated the effect of corporate governance on the performance of quoted oil and gas companies in Nigeria. Board size, board diversity, board diligence, board political affiliation, and corporate governance disclosures were used as corporate governance mechanisms while profit after tax was used as a measure of firm financial performance. The study used the published annual reports spanning the period from 2008 to 2015. A sample of twelve (12) out of the fourteen (14) quoted companies in the oil and gas sector was used for the study. The Generalised Least Square (GLS) regression was employed to examine the relationship existing between the variables. The study found that Board size, board gender diversity and corporate governance practices had a significant positive impact on financial performance. Board diligence and corporate governance reforms were positive, but not significant while board political affiliation had a significant negative relationship with the financial performance of quoted oil and gas companies in Nigeria.

Umar and Sanni (2020) investigated the effect of corporate governance on the performance of fifteen (15) quoted Deposit Money Banks in Nigeria (2015-2019). Using Panel regression techniques, findings showed that there was a significant relationship between board composition, board size, and firm size, and the ROA of Deposit Money Banks in Nigeria. Board size, Board composition, and Firm size were used as proxies for corporate governance and return on asset as a measure of performance.

Waleed et al., (2020) examine the impact of corporate governance on the financial performance of fifty-three (53) non-financial listed companies from India and 53

non-financial listed companies from GCC countries for the period 2009–2016. Using ordinary least squares (OLS), the results revealed that board accountability (BA) and audit committee (AC) had an insignificant impact on firms' performance measured by ROE and Tobin's Q. Similarly, transparency and disclosure (TD) had an insignificant negative impact on firms' performance measured by Tobin's Q. The study used corporate governance scores/ratings as independent variables while return on equity and Tobin's Q were used as dependent variables.

Gbadebo (2019) examined the effect of corporate governance mechanisms on the corporate performance of some selected non-financial firms in Nigeria (1990 – 2017), using panel regression analysis, findings suggested that leverage had a positive significant correlation with return on assets and return on equity while directors' shareholding and block holding had inverse relations with dependent variables. However, board size had mixed results with a negative significant influence on return on equity while it showed an inverse but insignificant impact on return on assets. Board size, directors' shareholding, block holding, and leverage were used as measures of corporate governance mechanisms while return on asset and return on equity were used as measures of corporate performance.

2.3 Theoretical Framework

Several hypotheses have been developed during the last two decades to explain the corporate governance model and business performance. Agency theory is the foundation of this work. Any discussion on corporate governance is typically thought to begin with the principal-agent theory. According to Berle and Means (1932), the primary agency issue facing contemporary businesses is principally caused by the division between finance and management. The fundamental issue with modern businesses is the separation of ownership and control because these corporations are operated by professional managers who act as agents and are not answerable to the shareholders.

The challenge for the owners is to choose the best managers and to provide the managers (agents) with the correct incentives to act in the best interests of the shareholders. Jensen and Meckling (1976) created the concept of agency. They put forth a hypothesis that claimed that conflicts of interest between a company's principal lenders, managers, and owners (shareholders) are what make a business run well. These groups differ in their interests and objectives. According to Jensen and Meckling (1976), agency theory can be seen as a nexus of implicit and explicit agreements between many stakeholders, including shareholders,

bondholders, employees, and the general public, involving the delegation of some decision-making authority to the agent. Here, the primary refers to all the shareholders, while the agents are the managers of the companies.

A principal-agent relationship develops when a company's owner does not also exercise control or direction over it. Managers may need investors' resources because they may not have enough of their own capital to invest, and investors need managers with specialized human capital to earn returns on their investments. In this instance, there is a divide between ownership and control, or between those who issue the fund and those who administer the business (Berle & Means 1932).

The implicit premise that conflicts arise between powerful, entrenched managers and weak, dispersed shareholders is a criticism of agency theory. As a result, the primary issues with corporate governance in the principal-agent environment with distributed ownership have almost all been resolved by both the analytical work and the reform initiatives: monitoring and anchoring in management (Maher & Terry, 1999). Another critique of agency theory is that its analytical focus on solving the corporate governance problem is too limited (Mathias, 2002). It should be highlighted that investors in a company are not only stockholders; effective performance or success of a firm results from cooperation with input from numerous resource suppliers.

3. Methodology

This study adopted an ex post facto research design. The ex-post facto research design as stated by Onwumere (2009) is the type of research involving events that have already taken place. Since the events have already occurred and the research is being done after the fact, it is not possible to directly modify or control the independent variables in this design. All non-financial companies listed on the Nigerian Stock Exchange's floor are included in the research population. The population for the study is made up of the 134 non-financial companies that are listed on the Nigerian Stock Exchange as of December 2021 (NSEFactbook, 2021). The study eventually settled on a sample of 75 organizations after filtering the data and eliminating those with insufficient data, businesses whose entire annual report was unavailable, and businesses listed after 2012. Secondary data from the annual reports of the sampled companies for the years 2012 through 2021 was used in the study. For data analysis in the study, generalized least squares (GLS) regression estimation was used.

3.1 Model Specification

The study adopted the model of Urhoghide and Korolo (2018) with modifications. The following are the models for this study:

MODEL 1

$$ROE_{jt} = \lambda_0 + \lambda_1 Bpol_{jt} + \mu_{jt} \dots \dots \dots (1)$$

MODEL 2

$$NPM_{jt} = \lambda_0 + \lambda_1 Bpol_{jt} + \mu_{jt} \dots \dots \dots (2)$$

Where:

FP=Financial performance proxied by ROE and NPM

BPOL= Board political affiliation

J =jth firm

t = time period

3.2 Measurement of Variables

The measurement of variables and apriori expectations are depicted in table 3.1 below.

Table 3.1: Measurement of Variables and a priori Expectations

Variable	Description	Measurement (operational definition)	A priori sign	Sources
Dependent Variable				
FP	Financial performance	Accounting measure: (Return on Equity (ROE) and Net Profit Margin(NPM)		De Vuyst & Ooghe 2001, Olayiwola, (2018)
Independent Variables				
BDPA	Board political affiliation	Dummy variable measure of “1” if company board has members with political affiliation and “0” if not	–	Faccio,(2006) Urhoghide & Korolo (2018)

Source: Researcher’s compilation, (2023)

4. Findings

Generalized least squares (GLS) regression analysis is used in the study. Generalized least squares (GLS) is used because it has the extra advantage of enabling the analysis of differences within and between cross-sectional units at the same time. Therefore, removing crucial unobservable parameters will mis-specify the model from an econometric point of view and unavoidably lead to biases (or inconsistencies). The outcomes are displayed below.

Table 1. ROE Regression Result

Variable	Aprori sign	Random Effects Estimates	Fixed Effects Estimates	Pooled OLS
C		0.7701* (0.1100) {0.0000}	0.5477* (0.1079) {0.000}	0.8265 (0.0561) {0.000}
BDPOL	+	0.0302* (0.0189) {0.1102}	0.0274* (0.0110) {0.0130}	0.0040 (0.0122) {0.7438}
“Model Parameters				
R ²	0.1202		0.913	0.123
Adjusted R ²	0.1015		0.900	0.104
F-statistic	6.4402		75.897	6.596
Prob(F-stat)	0.000		0.000	0.000
Durbin-Watson	1.029		1.904	0.59
Model Diagnostics				
χ^2_{Hetero}	(0.3927)		χ^2_{Norm}	0.6712
$\chi^2_{\text{Serial/Corr}}$	(0.862)		χ^2_{Hausman}	11.232
$\chi^2_{\text{Wald-Test}}$	(0.00)			(0.000)

Source: Researcher's compilation (2022)

Table 1 displays the findings of a regression analysis looking at how corporate governance-board political affiliation affects a company's financial performance as shown by ROE. The hypothesis of a significant linear relationship between the dependent and independent variables cannot be ruled out, according to the F-stat of 75.89 (p-value = 0.00), which is significant at 5%. Additionally, it shows the model's overall statistical significance. Political affiliation on the board of directors has a positive, 5% (0.0302) and significant (p=0.000) influence on the business's financial performance, suggesting that having more politically affiliated board members really helps to increase company earnings and financial success. Therefore, we disprove the claim that board political affiliation has little bearing on ROE. The literature outlines a few justifications for the potential for a favorable association between political allegiance and gain. Politically connected businesses have easier access to government contracts for buying goods and services (Goldman *et al.*, 2009), may be given preferential regulatory treatment (Stratmann, 2005), and may also be given other preferential treatment such as

private rent. The findings of our study agree with those of Goldman *et al.*, 2009; Ferguson and Voth (2008); Jayachandran (2006) and Faccio (2006)

Table 2. NPM Regression Result

Variable	Aprori sign	Random Effects Estimates	Fixed Effects Estimates	Pooled OLS
C		0.4880* (0.0764) {0.000}	0.0002 (0.000) {0.2927}	0.4904* (0.1038) {0.000}
BDPOL	+	-0.0045* (0.0017) {0.0084}	0.0141* (0.000) {0.000}	-0.0021** (0.0011) {0.0545}
Model Parameters				
R ²	0.2187		0.6811	0.1907
Adjusted R ²	0.1809		0.6056	0.1531
F-statistic	7.998		63.950	7.809
Prob(F-stat)	0.000		0.000	0.000
Durbin-Watson	1.029		1.97	1.430
Model Diagnostics				
χ^2_{Hetero}	(0.966)		χ^2_{Norm}	0.509
$\chi^2_{\text{Serial/Corr}}$	(0.144)		χ^2_{Hausman}	15.866
$\chi^2_{\text{Wald-Test}}$	(0.000)			(0.000)

Source: Researcher's compilation (2022) "

The results of the regression analysis looking at how board political affiliation affects companies' net profit margins are displayed in table 2. The fixed effects model estimate is the proper estimate for the model, as shown by the Hausman statistic and p-value (15.866, p=0.00), which also show that there are substantial correlations between firm-specific disturbances and the betas. According to the model's R² and Adj R² values of 68.11% and 60.56%, respectively, firm Board political affiliation may be responsible for around 68% of the systematic variance in the corporate performance of the sampled organizations. Additionally, the series follow a normal distribution, as indicated by the Norm p-value of (0.509). The hypothesis of a significant linear relationship between the dependent and independent variables cannot be ruled out, according to the F-stat of 75.89 (p-value = 0.00), which is significant at 5%. Additionally, it shows the model's overall statistical significance.

The analysis of the fixed effects estimation results demonstrates that the influence of board political affiliation on the company's financial performance is 5% positive (0.0141) and significant ($p=0.000$), suggesting that a higher presence of politically affiliated board members helps to increase the company's revenue and NPM. This suggests that improving corporate governance procedures has a favorable effect on the NPM, which is consistent with *apriori*'s assumptions. As a result, we disprove the claim that board politics have little bearing on the company's financial performance.

The literature cites several justifications for the potential for benefits to have a favorable association with political identification. Politically connected businesses have easier access to government contracts for buying goods and services (Goldman *et al.*, 2009), may be given preferential regulatory treatment (Stratmann, 2005), and may also be given other preferential treatment such as private rent. The findings of our study agree with those of Jayachandran (2006) and Faccio. (2006). On the other hand, Urhoghide and Korolo (2018) discovered that the financial performance of listed oil and gas businesses in Nigeria has a strongly unfavorable association with board political affiliation.

5. Conclusion and Recommendations

In “the study, the effect of corporate governance (affiliation to the political board) is investigated in relation to the financial performance of non-financial enterprises listed on the Nigerian Stock Exchange. The outcome demonstrates that (i) board political affiliation has a favorable and significant impact on ROE and NPM at a level of 5%. Based on the study's findings, the following suggestions are put forth; Political affiliation on the board of directors has a positive and significant impact on the company's ROE, indicating that having more politically affiliated board members really benefits the company's earnings and financial performance. The study concludes that there should be no restriction on the number of politically affiliated individuals serving on boards of directors within the parameters of corporate governance regulations and that political affiliation has a positive and significant impact on companies' NPM, as evidenced by the higher attendance of politically connected individuals, which suggests that board members improve the company's financial performance and revenue. According to the study, it should always be encouraged for people with political clout to serve on the boards of Nigerian publicly traded non-financial enterprises.

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Impact of Women Empowerment on Poverty Reduction: Empirical Evidence from Nigeria and Ivory Coast

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Abstract

Poverty is one of the major causes of many social vices in less developed countries, which increasingly affecting vulnerable class in the society, particularly women. This study examines the impact of women empowerment on poverty reduction in Africa using time series panel data across Nigeria and Ivory Coast covering 2011 to 2021. The study used Livin, Lin and Chu (LLC) panel unit root test and found that all the variables are stationary at level and Pedroni test of cointegration confirmed the long run relationship among the variables. The causality result showed evidence of bi-directional causality running from poverty rate to multidimensional women empowerment and poverty rate and unemployment. Lastly, the study recommends that more importance should be attached to women empowerment in order to reduce the poverty rate across the countries of the study.

Keywords: Empirical Evidence, Panel Data, Poverty Reduction, Vulnerability, Women Empowerment,

Introduction

The World Development Report 2000/2001 emphasizes a number of poverty faces from inadequacy of opportunity, empowerment and security (World Bank, 2001). The prospects are unopened to the deprived groups, and resulting to practically incapability in the humanity. While less or absence of empowerment restricts their chances in almost every aspects of life and their insecurity confirms their vulnerability to diseases, violence and discrimination (Rowland, 1995).

World Bank data (2007), stresses about the percentage of people whose members of households with total spending per person lower than the poverty line continue falling down globally since 1990. With this reduction, the incidence and perseverance of poverty cannot be ruled out completely in the world, it could be

proclaimed that its incidence in Africa is by far much higher than it is among European, Central Asian and other continents altogether. Among the African nations themselves, the level of poverty varies between the Northern and Southern parts, leading to the inadequacy of the basic means to facilitate growth and progress. It is as well observable that, poverty is certainly a global endemic. Nonetheless, the degree of poverty plays great role in determining the taxonomy defining the individuals or nations.

Situated in the Western Africa around the inter-tropical zone, Côte d'Ivoire has a size of 322,462 Km². It is bordered by the Atlantic Ocean in the South, by Ghana in the East, by Burkina Faso and Mali in the North, as well as by Guinea and Liberia in the West. The political and economic capitals of Côte d'Ivoire are located in Yamoussoukro and Abidjan, respectively. The population of the country was estimated at 20.8 million in 2008; out of which 26% are immigrants from neighboring nations within the sub-region. Côte d'Ivoire has about sixty ethnic groups across the four major groups. Reduction of poverty always remains the main priority of the Government's economic, social and cultural development plans. Indeed, the need to spend on human, particularly on education, health and basic socio-economic infrastructure, resulted to the adoption of a national poverty reduction program by the government in 1997 (Parizi, 2002).

In Nigeria, prevalence of poverty is an authenticity that is reflected by deprivation. As such, female are continuously regarded as a center of the global progress agenda and strengthening them as well as upholding gender parity are recognized as world progressive targets in the Sustainable Development Goals (SDGs) (USAID, 2020). Regardless the fact that women's strengthening is generally seen as a "good thing", the inquiry of how development processes may add to achieving the development together with lengthy and unsmooth path of women's strengthening, and to allow them to carry out most suitable and effective decisions about their own lives, is a controversial and argued area. Poverty and absence of women empowerment go parri-passu. As earning poverty decreases, women are more empowered (Zulfiqar, 2017). Progress processes that centered on "practical gender needs", counting females' earnings and material resources that can facilitate to the poverty reduction and to more women empowerment (Baulch & Hoddinott, 2000).

Also, micro financing and female money savings strategies are kings of governments' supports via a spotlight on realistic gender requirements, aims to

decrease poverty and add towards females' strengthening. Due to the persistent spread of poverty at individual levels, various sectors and activities directly related women equally are affected and cost of living among them is high, due to the fact that they are at the fore front of house management, but their entrepreneurship development and empowerment is low. Nigeria and Ivory Coast are West Africa nations share similarities on higher rate of governments' commitments on women empowerment over years (Doss, 2013; Akanle & Nwaobiala, 2020), and studies carried out on women empowerment are country specific mostly considered on aspect of empowerment at a time leaving others (Hanmer & Klugman, 2016; Enfield, 2019). Inability of previous studies to address this issue necessitated for the use of multidimensional women index to capture all aspect of the women empowerment at a time. Against this backdrop, the study is carried out to examine the impact of women empowerment on poverty reduction in Africa with evidence from Nigeria and Ivory Coast (Code de Voire). The remaining parts of the paper are divided into four: the literature review is presented in Section two. The data sources and estimation techniques are highlighted in Section three, the empirical results are presented in Section four. The last section concludes and draws policy framework.

2. Literature Review

2.1 Conceptual Review

In a more generic sense, empowerment is considered as deliberate attempt aimed at maximizing the possibility of the person. It is similar with the argument that the strengthening is a procedure of change from a condition of zero power to a condition of virtual power over one's self. The main idea in this definition is that individuals acquire power in their milieu (Sadan, 1997). The basic idea as indicated in the conception cannot rest unaccompanied and solely does focus on the individuals, but the degree to which they are able to influence issues for their society.

In another conception, Rowland (1995) highlighted that strengthening extends beyond acquiring right in doing decisions; it equally includes all processes that motivate individuals to feel able and righteous to dwell in position of assessment making process. This view supports the argument that strengthening may not be considered as the process, but rather the effect which rises essentially in the use of all the abilities and competence in the countenance of troubles which happen in common existence. Therefore, strengthening has to do with enriching the person's inner quality to make unusual milestone which may be a commitment to raise

output and improve individual's effort to one's society. In order to tackle the issues experienced in environment now, the victory is determined on power acquired and enjoyed by to all concerned in problem solving (Parizi, 2002). Even though, the meaning of empowerment is always claiming about upholding individuals towards equal opportunity in decision making processes. This indirectly promotes them to possess equal access to right politically as well as partaking in making economic decisions (Enfield, 2019).

The conceptualization of women empowerment helps to appreciate all that is required in order to transform the actual situation of the deprived women. The condition of women particularly in the Less Developed World and some developing nations today is not worth bearing. Women in less developed countries possess very limited opportunities to empowerment and a little chance in decisions making for themselves due to so many reasons of which poverty is the leading one. Also, Zulfiqar (2017) stressed that female's empowerment can take any of the following dimension: Right to educational chances, partaking in the politics and allowance in economic chances and micro financing efforts. Additionally, there can be many classes of empowerment needed by women based on their needs, location and circumstances. Essentially, Mayoux (2000), reveals that empowerment can be classified into three classes: economic, educational, as well as political empowerments. The division of the classes is aggravated to fact that research findings highlighted that empowerment is a major force that assists in poverty reduction.

Rowland (1995) also opines that females are empowered by granting them with major control over the activities related to their routine lives is mandatory, but most importantly is their role over politics. Rowland did not look at empowerment of the women and political stages to be associated so that transformation at one stage has effect and result about causation on another stage. Rather, dwells to females' participation in politics and acquiring power of all these at general levels in order to create a control at the individual capacity.

On the other hand, the term poverty has its genesis in the Latin word *pauper* means poor, with its origin in the words *pau-and pario*, "giving birth to nothing"; it refers to non-working farm animals and farm area (Westover, 2008). History shows that some individuals got rapt with deprivation, while others have spells in poverty which over the years remain the main concern of the majority examination (Hulme & McKay, 2005). For instance, during 18th century, France

clarified differences between the pauvre and the indigent. In the pauvre, individual suffering from seasonal condition when crops production was poor or agricultural labor demand was low. But rather, in the indigent individual was permanently in the condition of poor health both physical and mental, accident, age or alcoholism. And the major concern was to upgrade the poor in such a way that they will escape away of being indigent (Hulme & McKay, 2005).

In modern connotation, this issue related to deprivation is not much discussed and more particularly its measurement is on its state of severe. Therefore, this issue is more severe especially in economics domain in which concerned study on period began in the late 1980s (Gahia, 1993). Much of the researches was on the perseverance of poverty on personal and family levels and strongly associated with the harshness of deprivation. In the early 1990s for instance, similar researches began on accessible panel data sets and by 2000, the first known anthology of papers on this was published (Baulch & Hoddinnott, 2000).

2.2. Theoretical Framework

Arrow Model popularly known as AK production function Model is adopted as the theoretical anchor of this study. The model viewed capital broadly to encapsulate both physical and human components. According to this model capital as factors of production are assumed to be broken into two i.e. physical capital and human capital, K and H. Therefore, women empowerment is considered as an investment in human capital, which must be combined with physical capital like infrastructure to yield a resulting output that help in reducing the deprivation level among the females. By incorporating the empowerment into the traditional Ramsey's approach, this study measures the contribution of empowerment skills as a determinant of output or income. Thus; $Q=f(L, K, H)$.

2.3 Empirical Review

Empirically, Mbuli (2008), conducted a research on poverty reduction strategies in South Africa using descriptive statistics and non-parametric tool and found out that as a result of inadequate pro-poor growth, poor effective execution at the public stage, low wealth relocation, greater income inequity, little employment creation level by SME'S, more spread of infectious, corruption at public level and poor controlling of poverty. Consequently, if significant improvement is made toward lessening, poverty may reduce.

McFerson (2010) examines the interface of conventional limits on female possession rights, poor leadership and aggressive social clash in perpetuating

gender bias and female deprivation in those nations. Empirical results reveals that improvement in female progressive indices in Sub-Saharan Africa over a decade, relatively related with progress in leadership and the closing of civil war in some nations. Strengthening and promoting this improvements needs planned strategies that consider conditions of many association of female at the same time motivating the establishment of recovery networks among the associations as well as the establishment of better windows for females' voice.

Conversely, Addae-Korankye (2014) reviewed the causes of poverty in Africa, using content analysis and reported that poverty in African continent occurs owing to a number of forces like bribery and bad leadership, restricted job chances, inadequate social amenities, bad wealth utilization, wars and persisting conflicts, and weak World financial institutions' policies. The study further concluded that deprivation issues could be resolved by provision of qualitative framework, and even sharing of wealth. This process needs non-compromised leadership efforts. Though, in Less Developed Countries (LCDs) particularly Africa, strategies developed to tackle poverty is not completely implemented due to the fact that targeted funds fall in the hands of unclean people who pocket the majority.

Also Okeke (2014) carried out a study on women empowerment and development in Nigeria using content analysis. The study indicated that women in Nigeria are unable to reach a stable expected level for their well-being from rewarding economic activities. Also, lack of access to good health, education, and legal right in the decision making process partaking have limited their complete capability. Lastly, the study offered suggestions that compact farming system as well as microfinance inclusion will strength and improve the level of women, their food security and integrated national development.

On the other hand, Adamu (2021) conducted a study on the impact of empowerment on women welfare in Ngaski, Kebbi State. The study applied primary data collected among 400 women farmers and analysed using Logit Model and descriptive statistics. The major finding of the study was that empowerment promotes women welfare in the area of the study and it offered suggestion for keeping the empowerment program in order to ensure sustainable women welfare.

In another development, Mahbub (2021) carried out a review analysis on women empowerment with regard to theory, practice, process and importance. The major

issues reviewed are the concept of women empowerment, theory of empowerment, process of women empowerment, dimension of empowering women, major variables of empowering women, forms of empowerment, approaches to women empowerment, practice of empowerment and major importance of the women empowerment. The study concluded that women empowerment helps the women to realize their identity, potentiality and power in all sphere of lives. Lastly, the study recommended that empowering the women will make the country free from a large burden of illiteracy, unemployment as well as curse.

Nevertheless, Wei, Sarker, Ukiewicz-Sobczak, Roy, Alam, Rabbany, Hussain and Aziz (2021) conducted a research on the influence of Women's Empowerment on Poverty Reduction in the Rural Areas of Bangladesh: Focus on Health, Education and Living Standard. The study applied a structured questionnaire and a random technique of sampling. The major analytical tools are descriptive statistics, logit, and OLS models. The study reveals that higher females' right to schooling, wealth possession, making decision on younger people's health and knowledge, and right to good medical care, spores an important reduction in deprivation and poverty index utilized. Nevertheless, extra-gender conflicts, use of wealth contrary to the women's interests, and limiting women from outside interactions, spore a serious fall in income per head and a raise poverty and poverty index. Generally, the study reveals that females' strengthening has a strong effect in the reduction of poverty and poverty index of area.

Kabeer (n.d.), examined gender equality and women's empowerment: a critical analysis of the third Millenium Development Goals. The study applied content review of the Article III of Millenium Development Goals (MDGs). The study observes the definition of women empowerment and reveals process through which the indices related to these goals on schooling, job and politics may add to it. So many empirical studies were conducted to examine the impact of empowerment on different socio-economic variables in different places and time. From the knowledge of this study, none of the previous studies examined causality between poverty and women empowerment. This study contributes by conducting a research on the impact of women empowerment on poverty reduction in Africa covering 20 years from 2001 to 2021.

3. Methodology

3.1 Source and Type of Data

The study used panel data covering a period of 20 years from 2001 to 2021 across two countries i.e. Nigeria and Ivory Coast (Cote de Voire). The selection of the countries is informed based on their similarities with regard to the socio-economic characteristics of poor rural women and governments' commitments in women empowerment during the last decade and data availability. Starting period of 2001 marked the year of ending World Bank interview for the voices of poor report in Africa. Also, the annual data series were obtained from the World Development Indicators (WDI) (2021).

3.2 Model Specification

Following the established practice in the literature, endogenous model based on the work of Ukashatu, Gwadebe, Imam and Koki (2019). This study adopted Dynamic Panel data models in measuring the relationship between women empowerment and poverty reduction across the sections and periods of the study. The study used Poverty Rate, Unemployment Rate and the Multidimensional Women Empowerment Index, which is obtained by aggregating the four dimensions of production/income, resource, education and time, based on the Dual Cutoff Approach consistent with Alkire and Foster (2007). The model is specified in economic function given as:

POVRATE

$$= (MultiD\ Index, Unemployment\ Rate,) \dots \dots \dots (3.1)$$

The econometric form of this equation is written, thus:

$$POVRATE = \beta_0 + \beta_1 Multidem\ Empower\ Index + \beta_2 UnemployRate + \mu it \dots \dots \dots (3.2)$$

The above model is then transformed into log-log form as below:

$$LogPOVRTE = \beta_0 + \beta_1 LogMultidEmpowerIndex + \beta_2 LogUnemRate + \mu it \dots \dots \dots (3.3)$$

3.3 Method of Data Analysis

Following the work of Garba and Ibrahim (2010), this study intends to apply Livin, Lin and Chu unit root test for panel data, if the series were identified to be I(1), panel cointegration based on Pedroni will then be applied to determine the existence of long run associationship or otherwise. Lastly, panel causality based on Dumitrescu-Hurlin (2012) will be applied.

Panel Unit Root Test: Unit root test in this study is carried out using Livin, Lin and Chu Test due to its relative advantage in accommodating homogenous panel in which the AR coefficient for the unit roots are assumed to be the same across the cross sections (Baltagi, Bresson & Pirotte, 2006).

$$\Delta Y_{it} = \alpha_{it} + \rho Y_{i,t-1} + \sum_{k=1}^{\infty} \phi \Delta Y_{i,t-k} + \delta t + \theta_t + \mu_{it} \dots \dots \dots (iv)$$

Panel Cointegration Test: The test for co-integration in this study is in line to Pedroni (2020), based on its multiple regression for the co-integration vector to vary across the sections of the panel series. Thus, it is specified as follow:

$$Y_{it} = \beta_{it} + \delta_i + \sum_{m=1}^m \beta_{mi} + X_{mi,t} + \varepsilon_{it} \dots \dots \dots (v)$$

Panel Causality Test: To investigate the direction of causality between women empowerment and poverty reduction across the areas of the study. This study followed the panel causality test developed by Dumitrescu-Hurlin (2012) as adopted by Ukashatu, Gwadabe, Imam and Koki (2019).

$$Y_{it} = \theta_i + \sum_{k=1}^{\infty} y_1^{(k)} y_{i,t-k} + \sum_{k=1}^k \delta_1^{(k)} + X_{i,t-k} + \varepsilon_{it} \dots \dots \dots (vi)$$

Where x and y are two stationary variables observed on T periods for N countries. The individual effects are assumed to be fixed and lag order K is supposed to be common. $y_1^{(k)}$ Denote the autoregressive parameters and $y_1^{(k)}$ are the regression coefficients' slopes; both parameters differ across countries.

4. Results and Discussions

Table 1. Panel Unit Root Result

Variable	LLC	Level	1 ST Difference
		Prob.	Prob
LogPRate	-1.7817	0.0874	0.0250**
LogMultdWEm	-0.6587	0.0569	0.0000*
LogURate	2.2705	0.0891	0.0001*

Source: Researcher's Computation Using Eviews 9.

*, ** indicate level of significance at 1% and 5% respectively.

In the table 1 panel unit root result is reported. The result portrays that the variables are all non-stationary at level using LLC but, after differencing all the variables are found stationary, meaning that the variables are I(1) processes.

Table 2: Panel Co-integration Result

	Within-Dimension (Panel)	Between (Panel)	Dimension
V-Statistics	-0.167486 (0.5665)		
Rho-Statistics	-1.879784 (0.0301)**	-0.986070 (0.1620)	
PP-Statistics	-8.425400 (0.0000)*	13.47167 (0.0000)*	
ADF-Statistics	-7.591063 (0.0000)*	-5.521671 (0.0000)*	

Source: Researcher's computation using Eviews 9.

*, ** indicate level of significance at 1% and 5% respectively.

Table 2 indicates that in “within dimension”, the p-value of V-statistic is insignificant, while the p-values of rho-statistics is significant at 5% within dimension, but insignificant for between dimension even at 10%. The p-values of pp-statistics and ADF-statistics are significant at 1% each within dimension and between dimensions. This result portrays that only two out of its seven statistics (panel v-statistics and group rho-statistics) do not reject the null hypothesis of no cointegration. Therefore, the overall result reveals that there is long-run relationship amongst the variables in the model. The result obtained in this study is consistent with the empirical findings of Garba and Ibrahim (2010), in their study on poverty and women empowerment in West Africa.

Table 3. Panel Causality Result

Null Hypothesis	Zbar- Statistics	Prob.
LogPRate does not homogeneously cause LogMultidWEIndex	0.58071	0.5487
LogMultidWEIndex does not homogeneously cause LogPRrate	0.78545	0.4322
LogPRate does not homogeneously cause LogUnRate	0.61148	0.5409
LogUnRate does not homogeneously cause LogPRate	2.22693	0.0260**

Source: Researcher's Computation Using Eviews 9.

*, ** indicate level of significance at 1% and 5% respectively.

The results as highlighted in Table 3 show that the choice of this panel granger causality test is also to observe the existence and nature of the direction of the causal link among the variables and equally to portray if the direction is uni-directional (one-way granger causal link) or bi-directional (two-way granger causal link). This is achieved by using Dumitrescu-Hurlin (2012) granger

causality. The decision rule is to reject the null hypothesis if the Zbar-statistical value is higher than the p-value, otherwise null hypothesis cannot reject (Wooldridge, 2009). Based on the empirical estimation, causality test result shows evidence of uni-directional causality running from unemployment rate to the poverty rate. This implies that poverty reduction efforts among women should focus on reduction of unemployment via extensive women empowerment across Cote de Voire and Nigeria. It further reveals absence of causality running from poverty rate to multi-dimensional women index and its other way round. This finding of one way causality concurs the empirical result of Luciano and Sylvain (2017).

5. Conclusion and Recommendation

The study examines the impact of women empowerment on poverty reduction using panel data across Nigeria and Ivory Coast covering a period of 20 years spanning from 2001 until 2021. Cointegration and causality techniques were empirically applied to test the long run links among the variables. The causality test result shows evidence of uni-directional causality running from unemployment rate to the poverty rate. The study argued that more importance should be attached to reduction of unemployment through intensive women empowerment so as curb the problem of poverty among the women.

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Perception of Intimate Partner Violence by Residents of Enerhen Community, Warri, Delta State

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Abstract

Intimate partner violence is a serious social problem that violates women's rights and is acknowledged as a serious health issue that harms women's well-being and has a significant negative impact on their physical, reproductive, and mental health. Han and Choi (2021), cited World Health Organization (2005), stated that more than 75% of violence against women is allegedly caused by an intimate male partner. This inhumane act is widespread throughout all groups, societies, and nations and, if it is not properly addressed, can result in an unbalanced state and marital dissolution among family members, which will contribute to further societal decadence. To this end, this study examined the perception of intimate partner violence by residents of Enerhen Community, Warri, Delta State. In this study, the social learning theory put forward by Bandura (1986) was used. The study especially looked into the types, causes, and manifestations of intimate partner violence in the study area, as well as the function that social workers play in putting a stop to this scourge. The population of the study was 340,600, and the study also used a survey research design. Using the sample size method developed by Krejcie & Morgan (1970), a sample size of 400 research participants was selected for the study. An interview guide and a structured and semi-structured questionnaire were utilized to collect information from the participants. The analysis' findings demonstrated that the area under study has a high rate of intimate partner violence as a result of poverty, unemployment, persistent marital conflicts, availability of drugs, and slums. Pre-marital counselling is advocated, according to the research, so that future spouses may get to know one another better before getting married and learn how to handle some of the issues that can cause conflicts. Additionally, society has to be made aware of the possibility of IPV in males to stop stigmatizing such victims and encourage open dialogue between male and female victims.

Keywords: Intimate Partner; Perception; Social Workers; Slums; Violence

Introduction

Intimate partner violence is a universal phenomenon, a scourge in modern societies, and a violation of human rights. It transcends social, political, religious, regional, and economic barriers. Intimate partner violence is a social evil that affects industrialized, developing, and underdeveloped cultures worldwide. This inhumane act increases the mortality rates in women globally compared to men

(Idris et al., 2018). According to the World Health Organization [WHO] (2013), domestic violence, which includes intimate relationship violence, is a worldwide issue that affects the health and the inalienable and fundamental human rights of the victim(s). The prevalence and effects of the global scourge of this act also known as sexual violence against the female gender, is becoming increasingly well-known.

WHO report also showed that the global and regional estimates of violence against women, the prevalence of intimate partner violence [IPV] among women in relationships was 30%, while in Africa the estimate was 37%. Studies carried out by Mapayi et al. (2013) as cited in Benebo et al. (2018) on the impact of intimate partner violence on anxiety and depression amongst women in Ile-Ife Nigeria have shown that the prevalence of IPV ranges from 31-61% for psychological/emotional abuse, 20-31% for sexual abuse, and 7-31% for physical abuse. The estimated prevalence of IPV is said to be 42% in the North (Tanimu et al., 2016), 29% in the South West (Okenwa et al., 2016), 78.8% in the South East (Okemgbo et al., 2002) and 41% in the South-South (Dienye et al., 2014). In order to avert abuse against women and girls, it is critical to address structural and underlying causes and risk factors which drive this act. Intimate partner violence or abuse is described as an act of physical, sexual, emotional or psychological abuse which is directed towards a person (particularly a woman) who is in an intimate relationship with her partner.

It must be stated that this type of violence also affects men (Camey et al., 2007). In affluent countries in Europe and North America, results have shown that there is a high prevalence of IPV. However, the situation is worse in third-world countries due to their lower degree of legal system development, poverty, and underdevelopment (Dutton, 2007; Pande et al., 2017). Meanwhile in Sub-Saharan Africa, the issue of this type of abuse is pervasive and chronic. This makes reference to the vicious cycle of poverty, difficult economic conditions, insurgency, and ethnic/religious conflict in some third world countries. Intimate partner violence is bizarre and widespread in Nigeria, but it is more severe and frequent in the northern region of the country due to the concept of the Islamic religion, which seems to justify the oppression of women by their husbands (Ugiagbe, 2013).

Though intimate partner violence is not an uncommon phenomenon of discourse due to its daily occurrence among members of the society, the way this scourge is

perceived and attitude towards it differs from society to society, group and individual. While in societies like Pakistan and Afghanistan, which operate the Sharia system or even India and some states in Northern Nigeria, intimate partner violence is regarded as normal and worst still the women always take the blame in other civilized society including southern parts of Nigeria, the perception and attitude towards intimate partner violence are mixed and divergent and circumstance determined. This study therefore seeks to examine the perception of intimate partner violence by residents of Enerhen Community of Warri, Delta State.

The manipulation of violence between two individuals who are ostensibly in a romantic or intimate relationship is a form of intimate partner violence. It is prevalent in all groups, societies, and countries around the world, whether they are developed, developing, or underdeveloped (Ellsberg et al., 2014). Put differently, intimate partner violence includes all types of violence, be it in the form of physical, sexual or psychological violence, coercive controlling of intimate partner, situational couple abuse, reciprocal violence, and violence induced by separation of intimate partners. Other instances include aggression committed by men, violence brought on by separation, interactions between men who control others, and psychotic and paranoid behaviours. Violence against intimate partners has negative effects on one's health, and those of future generations, and society as a whole. The persistence of this phenomenon has attracted substantial health concerns as victims are constantly visiting hospitals, welfare agencies, and shelters seeking help. Stories regarding the suffering and death of intimate partners as a result of this kind of violence are common place in both mainstream and online media.

Social work professionals are frequently faced with cases involving individuals with this kind of violence and they are actively involved in the rehabilitation and other intervention methods on behalf of these victims. Children's health and emotional development are also negatively impacted, and women who are abused are more likely to endure emotional and psychological anguish, which in extreme cases could lead to death or lifelong impairment. One of the biggest obstacles to women's protection from domestic violence is how human rights protection is sometimes perceived by individuals and the society.

Nonetheless, in spite of having some objective signs of abuse and admitting to having experienced violent behaviour, some women are still unable to perceive it

or recognize themselves as victims of gender-based and intimate partner violence; as a result, majority of them do not perceive themselves to be at risk of death due to self-recrimination and blame as well as loving the oppression syndrome as a result of deeply ingrained learned helplessness and powerlessness (Ugiagbe & Edegbe, 2016). Given the aforementioned assumption that women experience loving the oppressor syndrome as a result of the pervasive cultural constraints and coercion in Nigerian society, it is important to investigate and analyze how residents of the Enerhen community in the Uvwie local government area, Warri, Delta State, view intimate partner violence. This is due to the fact that Warri city is a well-known patriarchal society notorious for violence against women; as a result, there is a gap in the literature and empirical data surrounding IPV. This study therefore examines the perception of the phenomenon of intimate partner violence by residents of Enerhen community, Warri, Delta state, Nigeria. Other specific objectives of this study are to examine the nature and prevalence of intimate partner violence in Enerhen Ccommunity, Warri, Delta State; explore the causal factors and manifestation of intimate partner violence in Enerhen Ccommunity, Warri, Delta State and to determine the role that social workers can play in the management of intimate partner violence in Enerhen Community, Warri, Delta State.

Literature Review

Intimate partner abuse in Nigeria

Intimate partner abuse is highly perverse in Nigeria, both in frequency and reputation because it is deeply ingrained in cultural and religious beliefs and time-honored customs (Benebo et al., 2018). It is a known truth that different societies and cultures have different definitions of intimate partner violence, which can include formal relationships like marriage as well as informal relationships like cohabitation or other types of regular intimate partnerships (Abramsky et al., 2019). However, all definitions and categorizations share the concern that they affect all women who may be exposed to intimate partner violence. Benebo et al. (2018) stated that all types of intimate partner violence (marriage, lovers, live-in lovers, ex-lovers, partners, acquaintances, etc.) are common in Nigeria.

Benebo et al (2018) further stated that cases of intimate partners violence are on the increase in Nigeria and the increase is attributed to the deep seated cultural heritage and belief systems that expressively approved of the hitting, beating or discipline of a woman as a form of correction, hence the high cases of intimate partner violence shows no sign of abating, rather it is on the increase and such

cases cut across the social statues, religious divide, ethnic clearage and geo-political location. Intimate partner abuse episodes in the country like Nigeria consist of various violence acts such as physical attack with punches or objects, battery, acid-baths, forceful sexual intercourse and, more lately, the harvesting of critical organs from the dead women, just like in other regions of Africa and the world (ThisDay Live, 25 April, 2022). The Guardian (2021) claimed that physical attacks, which are the most prevalent form of intimate partner abuse, are occurring more frequently than ever in some regions of Nigeria, with thousands of cases being unreported.

In Nigeria it is a common phenomenon for women to be abused on flimsy excuses by their male counterparts (The Guardian, 2020). As mentioned earlier, the most common of such violence is physical assault in form of beating, hitting and kicking, rape, slapping and murder. The unfortunate era of unwholesome desire for immediate stupendous wealth by ritualistic youths popularly called yahoo boys makes violence against women with intention to kill them for purposes of organ harvest a recurring incident. Now and then, there are reports of murder of one lady and another by their supposedly male lovers (Eisenbruch, 2018).

In Nigeria, there is a correlation between violent intimate partner relationships and HIV and other STD's. Being infected with STD's, including HIV, frequently leads women with HIV to remain in abusive relationships where they must deal with the assaults and abuse on a daily basis (Abiodun et al., 2022). The majority of women with HIV were and remain at high risk for intimate partner violence. Intimate partner violence was shown to be most prevalent among men (husbands) between the ages of 25 and 33. These men were also more likely to have completed secondary education and be associated with polygamous marriages (Iliyosu et al., 2011).

Intimate partner violence is a widely known problem across the world. It remains one of the similar felonies of our day, nevertheless. This was shown even recently in the rise in incidents of women being abused during the COVID-19 outbreak. The public's safety and the prevention of spreading infection were the goals of stay-at-home orders, but they also imprisoned many IPV victims with their abusers (Evans et al., 2020). According to reports of the studies conducted during the COVID-19 lockdown by Fawole et al. (2021), showed that, majority of the time, complaints described intimate partner violence (IPV) that had already been occurring but had become more severe or involved new kinds of violence while

the area was under lockdown. Many types of IPV that are often reported, including physical, economic, psychological, and sexual violence, were described in the case scenarios. Many women also stated that the perpetrators had threatened to evict them from their houses, which puts their capacity to protect themselves against COVID-19 exposure in jeopardy and also puts them in danger of being stuck without access to transportation, social services, or other resources during the lockdown. Additionally, a number of women experienced IPV that interfered with their ability to raise children and custody of those children. IPV was also recorded in reaction to the lockdown's accompanying economic concerns. Similarly, the study conducted by Bagheri et al. (2022), also revealed that comparing the quarantine period to before the outbreak, the intimate partner violence increased by 37.5%. The COVID-19 epidemic increased the prevalence and incidence of the aforementioned abuse. As in other countries of the world, the pandemic and the ensuing lockdown heightened the level of child abuse and the incidence of intimate partner violence among some members of the family (The Guardian, 2021).

The role of Social Workers in the management of intimate partner violence

The International Association of Schools of Social Work and the International Federation of Social Work (2014) defined social work as a practice-based profession and an academic discipline that promotes social change and development, social cohesion, and the empowerment and liberation of people. The principles of social justice, human rights, collective responsibility and respect for diversities are central to social work. The major concern of social workers is to help the individual, to attain social functioning, and certain quality of life and protection from harm or harming others (Association of Directors of Social Work, 2004). Social workers draw on various theories of social work, social sciences, humanities and indigenous knowledge, so as to be able to focus on the interface between the individual and the environment and recognize the impact of social, political, economic and cultural factors on the health and well-being of individuals and communities. With their dedication to human rights, social justice and an understanding of an individual's experience, social workers are able to provide a significant contribution in the prevention and intervention of intimate partner violence (Australian Association of Social Workers, 2019). Intervention practices can be carried out through direct service provision; policy initiatives, legislative review, research and advocacy for structural changes needed to fight against IPV. Social workers work at different levels when addressing IPV/violence against women through: Individual client level, paying attention to

the clients' psychological needs. At family and cultural level; an example is to rebuild parent-child relationships and working with communities. At organizational level, advocating for a change in their own organization. In the societal /community level, advocating for change at a governmental and policy level, and at the community level to bring about attitudinal change. At personal level, making sure that their practices are ethical, non-discriminatory and not reproducing inequitable gender norms.

Social workers are important to the delivery of support and intervention services for women who are exposed to violence or are survivors of IPV. Social workers are often contacted by victims of violence for all issues of emotional, physical, sexual and financial abuse. They possess the knowledge and skills to detect IPV and to work closely with programs that are critical to safe and suitable intervention strategies. The injuries, stigma, trauma, psychological and emotional strain of IPV call for social work intervention (Mojoyinola, 2006). The scope of social work practice in the management and prevention of IPV includes counselling, advocacy, crisis intervention, policy development as well as consultation and community development (AASW, 2019). Recent studies have shown that social workers provide some level of interventions that have a strong emphasis on empowerment to help trauma survivors recover from incidence of intimate partner violence. These treatments, according to Heffernan et al. (2012), are meant to give domestic violence survivors back control over their lives and resilience. Social work professionals enable survivors to make choices, establish objectives, and restore confidence by creating empowerment. These therapies can improve survivors' autonomy and feeling of agency, which can aid in their long-term recovery and healing. Similarly, Fellin et al. (2019) also stated that social workers help to create individualized plans for the protection and well-being of survivors of abusive relationships. This method tries to recognize possible threats, create networks of support, and get access to tools that might aid victims in fleeing abuse and safeguarding themselves. Putting safety strategies into action gives victims of domestic abuse the ability to make wise decisions and move toward reclaiming control of their life (Fellin et al., 2019). In addition, social workers also help to effectively assist domestic abuse survivors who require trauma-informed treatment. This entails acknowledging the effects of trauma on survivors' health and fostering a setting that is secure, compassionate, and understanding. According to United States for center for substance abuse treatment (2014), trauma-informed treatment promotes healing and resilience by assisting survivors in coping with the psychological and emotional effects of

domestic abuse. Social workers can modify their treatments to match the particular needs of survivors by taking into account the trauma they have experienced, therefore fostering their recovery and empowerment. Furthermore, numerous studies have demonstrated the value of counselling and therapy in supporting trauma survivors. Both Johnson et al. (2020) and Lakin (2022) stress the critical role that these therapies play in assisting survivors in overcoming the psychological effects of trauma and promoting healing and emotional recovery. Social workers provide survivors with a safe place to process their experiences, create coping skills, and get assistance via counselling and therapy, which improves their general well-being and resilience.

Theoretical Framework

This study is anchored on the social learning theory. Albert Bandura (1986 and 1997) first proposed and developed the social learning theory, which holds that a variety of psychological, social, and environmental factors influence social learning by the growing child during the formative years. For learning to be successful, there must be individual attention, retention, reproduction, and motivation to imbibe and internalize the behavioural dispositions (Laisser, 2011). This theory posits that children are the products of their environment hence children learn and manifest what they see and experience. In this context when a child observes a certain behaviour the child naturally remembers such behaviour in a similar situation and attempts to replicate (model after the person observed) and adopt such behaviour dispositions (mimicking) hence such behavioural dispositions is perpetuated, replicated and spread (Dababa, 2008; Laisser, 2011).

The social learning theory otherwise known as behavioural family theory was developed by Albert Bandura as earlier mentioned in 1997. Bandura (1997) posited that human behaviour is mainly learned and a function of the family, environment and the individual. In other words, Bandura actually meant that cognitive factors and the environment of an individual as well as the circumstantial contingencies pressing upon the individual, all combine for a learning to take place and be replicated by the learner. Human behaviour is primarily learned through observation and imitation, according to the theory of social learning. Bandura showed the results of observation and imitation with his experiment involving the *bobo doll*, in which children acted more aggressively toward the toy after observing how adults behaved. Social learning theory, a subset of sociocultural perspectives, asserts that children who witness or personally experience parental conflicts are more prone to commit violent acts as adults (Bandura, 1997; Mahalik & Elliot, 1997)

Social learning theory explains how children learn and are influenced by seeing the behaviours and imitating the behaviours of significant/important others. Children acquire behaviours that seem to them to have produced desired results (the parents and siblings). In social interactions with siblings, peers, in the media, and in the immediate social milieu in the community, these learned behaviours are modelled and imitated. In this context, social learning theory may be used to understand why intimate partner violence is in the family of origin and why men in a family are typically perpetrators in adult life having learned the culture of violence in their formative years as children. Such behaviour are internalized, rooted, and replicated in future social interactions especially in similar situations like when they eventually enter into a relationship or marriage in the future (Ormrod, 1999). According to studies, there is a higher rate of abuse and violence against women whose partners were subjected to or saw violence against their mothers as children (Vung & Krantz, 2009). This theory is pertinent in this situation since it sheds light on the underlying causes of intimate partner abuse viz-a-viz its manifestations and effects as acquired behavioural tendencies in intimate partners. This theory also helps to establish that the perception of intimate partners violence are learned and internalized by the members of the society and their reactions to such phenomenon is determined by the tenets of the attitude they formed about the phenomenon. The theory demonstrated that intimate partner violence is part and parcel of the learned behavioural dispositions and personality makeup which is a reflection of the lived experiences of the individual's social milieu.

Research Method

This study utilized both quantitative and qualitative data. The study employed the cross-sectional survey method. The study population of the study comprised residents, irrespective of their religious, ethnic, educational status or affiliations, who are 20 years and above and have resided in the study area for at least one year with prior knowledge of the subject. According to the 2018 population projection, there are 4,235,600 persons in Delta State of which 50.5% are males and 49.5% females. Of this number, Uvwie Local Government Area has 742,600 persons (2018 Nigeria population projection) while Enerhen Ccommunity has a population of approximately 340, 600. Therefore, the population of this study was 340, 600. The sample size for the study was 400 research participants that were systematically selected from the study area. The desired sample size was estimated using the Krejcie & Morgan (1970) sample size formula to arrive at the number.

In using the Krejcie and Morgan (1970) formula for known population, the study has an estimated population of 342,600. The study made use of the nearest population sample size of 350,000. This is due to the fact that the difference in the sample size table value for 95% confidence level and 5% margin of error is very minimal. Hence from the table, with a sample size of 381, additional five percent (5%) was added for non-person = $381 + 19 =$ total sample size 400. The sample size for the qualitative research was 10 participants who were purposively selected because only those who are privy to the information relevant to the research were selected. The participants who were interviewed were community leaders, head of social welfare department of the local government, marriage counsellors and church leaders in marriage and counselling departments. The sampling technique for the study was the multi-stage sampling technique which involved the use of different techniques. This study employed a one-time sample survey design in order to deliver a structured questionnaire and conduct a semi-structured interview with the selected research participants in the study area.

The semi-structured and structured questionnaire and in-depth interview were the study's instruments. The responses from the questionnaire administered were analysed using descriptive statistics. The analysis was carried out using the Statistical Package for Social Sciences (SPSS) (Version 22.0). Tables and charts were used in presenting the results while the variables were cross tabulated. The data from the in-depth interview were first screened, transcribed and thereafter analysed using the thematic content analysis technique to ensure that important themes and information were utilized in arriving at the findings of the study. The data from the qualitative analysis were used to complement the data from the quantitative in addition to the information/data from secondary sources. The triangulation resulted in comprehensive and all-embracing findings that fulfilled the canons of scientific inquiries.

Data Presentation

List of Tables

Table 1: the nature and prevalence of intimate partner violence in Enerhen Ccommunity, Warri, Delta State

S/N	Variables	Response	Numbers	Percentages
1	What is the level of prevalence of intimate partner violence in this community?	High	254	63.5
		Moderate	88	22
		Low	58	14.5
2	What is the nature of intimate partner Violence in Enerhen community?	Hitting of any kind	101	25.3
		Verbal assault	87	21.8
		Forced sexual intercourse	109	27.3
		Deprivation of resources	59	14.8
		Others	44	11
3	Has anyone ever made you have sex using force or threatening to harm you or someone close to you in this community?	Yes	109	27.3
		No	135	33.3
		I really can't say	156	39
Total			400	100

Source: Field survey, 2023.

Table 2: the perceptions of the intimate partner violence by residents of Enerhen Community, Warri, Delta State

S/N	Variables	Responses	Numbers	Percentages
	Have you or someone you know in this community ever been involved in intimate partner violence?	Yes	221	55.5
		No	179	44.8
	Would you say that there is high rate of intimate partner violence in this community?	Yes	246	61.5
		No	154	38.5
Total			400	100

Source: Field Work, 2023

Table 3: the causal factors and manifestations of intimate partner violence in Enerhen Ccommunity, Warri, Delta State

S/N	Variables	Responses	Numbers	Percentages
1.	What is the manifestation of IPV in your community?	Low education	87	21.8
		Substance abuse	132	33
		Anger and hostility	109	27.3
		Low intelligent Quotient (IQ)	72	18
2.	What is the major manifestation of intimate partner violence in your community?	Physical harm like kicking, slapping	139	34.8
		Sexual assault	79	19.8
		Emotional abuse	83	20.8
		Financial abuse	51	12.8
		Others	48	12
Total			400	100

Source: Field Work, 2023

Table 4: role that social workers can play in the management of intimate partner violence in Enerhen Community, Warri, Delta State

S/N	Variables	Responses	Numbers	Percentages
	Social workers help in sensitization and advocacy against intimate partner violence	Yes	189	47.3
		No	116	29
		I can't say	95	23.4
		Total	400	100
	Social workers help to provide psycho-social support to couples particularly women who are experiencing intimate partner violence in this community	Yes	239	59.8
		No	97	24.3
		I can't say	64	16
		Total	400	100
	Social workers provide therapeutic counseling to victims involved in intimate partner violence	Yes	251	62.8
		No	103	25.8
		I can't say	46	11.5
		Total	400	100

Source: Field Work, 2023.

Result presentation

Research Objective One: examine the nature and prevalence of intimate partner violence in Enerhen Ccommunity, Warri, Delta State

Three questions were raise to analyze the objective in order to examine the nature and prevalence of intimate partner violence in Enerhen Ccommunity, Warri, Delta State. First, the respondents were asked the level of prevalence of intimate partner violence in the study area. Three scales which were high, moderate and low were used in the questionnaire to measure the level of prevalence of intimate partner violence in the study area. Of the 400 respondents, 254(63.5%) were of the opinion that the level of prevalence of intimate partner violence in the study area was high, 88(22%) stated that the level of prevalence of intimate partner violence was moderate as against 58(14.5%) who stated that the level of prevalence of intimate partner violence was low. From the forgoing, it is pertinent to state that the level of prevalence of intimate partner violence in Enerhen community Warri, Delta State is high. This means that there is need for intervention strategies to curb this menace.

Second, the respondents were also asked the nature of intimate partner violence that is prevalent in Enerhen community. Of the 400 respondents, 101(25.3%) identified physical abuse like hitting, 87(21.8%) of the respondents identified verbal assault while 109(27.3%) isolated forced sexual intercourse is the most prevalent nature of intimate partner violence in the study area. In addition, 59(14.8%) of the respondents stated that deprivation of material resources to meet their basic household need was the most prevalent nature of intimate partner violence in Enerhen community, Warri, Delta State. Lastly, 44(11%) of the respondents identified other forms of intimate partner violence as shaming, name calling etc. as the commonest types of intimate partner violence in the study area. Participants were also asked if they have ever been engaged in sexual intercourse without consent or feeling of threat over disapproval to engage in sexual intercourse. Of the 400 respondents used in this analysis, 109 respondents representing 27.3% affirmed 'yes' to the term as against 135 respondents representing 33.8% who disagreed to the term and 156 respondents representing 39% were of the opinion that they really can't say if they have ever had sexual intercourse without consent or been threatened to harm by an abuser in an intimate partner relationship with them.

Research Objective Two: explored the perceptions of the intimate partner violence by residents of Enerhen Community, Warri, Delta State

The participants were asked if they know anyone that in the community that was involved in intimate partner violence. Of the 400 participants, 221 respondents representing 55.5% responded “yes” to the term as against 179 respondents representing 44.8% who responded “no” to the term. The participants were also asked if there is high rate of intimate partner violence in the study area. Of the 400 participants, 246 respondents representing 61.5% responded “yes” to the term while 154 respondents representing 38.5% responded “no” to the term. From the foregoing, it is pertinent to state that there is high level of perception by respondents of Enerhen community with regards to the issue of intimate partner violence.

Participants described IPV among young people as subtle, normalized, and daily, with the most common forms of violence being psychological abuse, controlling social relationships (deciding who the girl should and should not see), and controlling appearance, for example. They could recall specific cases or made reference to official reports of severe physical and sexual violence against this population. A male participant in the study also noted thus:

"I agree that it is subtle. Although there are cases of violence - let's say physical violence, of course, there is - I would say that generally, what I find is mainly a lot of subtle violence, symbolic violence, blackmail, of certain things that are not so easy to distinguish and identify that I can perceive that occur here... and, moreover, are quite frequent, although this is a personal interpretation based on my personal perception and opinion though even though who live within my neighbourhood here can also attest to same" (Single/female/MSc/Itsekiri)

Research Objective Three: explored the causal factors and manifestations of intimate partner violence in Enerhen Community, Warri, Delta State

First, table 3 showed the major causal factors of intimate partner violence in Enerhen community Warri, Delta State. Of the 400 respondents, 87, representing 21.8% stated that the major causal factor of intimate partner violence was low level of education of the abuser, 132 respondents representing 33% stated that the major causal factor of intimate partner violence was substance abuse. In addition, 109 respondents representing 27.3% stated that anger and hostility is the major causal factor of intimate partner abuse in the study area while 72 respondents representing 18% identified low intelligent quotient (IQ) as the major causal factor of intimate partner violence in Enerhen community Warri, Delta State. From the foregoing it is pertinent to state that majority of the respondents

identified the use and abuse of illicit substances as the major causes of intimate partner violence. One of in-depth interviewees lent credence to the above assertion thus:

It's not that I'm easily irritated... I don't ... I believe that I've occasionally lost my anger, even at home. One thing I know is that, I'm not a flawless person; I have flaws and occasionally have temper tantrums in addition to being incredibly stubborn. My mouth is practically touching my heart. She was aware of my rigid nature. (Married/42-49 years/ Christian/ Self-employed)

People frequently blamed their lack of emotional or self-control, as well as other variables, for their violent behaviour, even if such tendencies are considered to be outside of their control. As a result, people tended to see alcohol as the primary cause of violent behaviour and link quitting drinking to stopping aggression against partners. This much was alluded to by a respondent who confessed in the following words:

"I wasn't the one who struck. Alcohol was the cause..... Now that it has ended, I don't hit her because I no longer drink... Alcohol, not I, was the culprit in the collision. Just half a glass of wine, according to a doctor, would cause my head to spin." (Married/26-33years/Urhobo/unemployed)

The offender once more denied responsibility for the violence and blamed other forces for its occurrence. This blaming of the violence on circumstances beyond their control, which absolves them of culpability, was particularly widespread in the presence of phrases downplaying their consumption, which lessens the guilt related to the means (violence) utilized as demonstrated in the following assertion by one of the respondents:

"I used to drink, but not for dramatic purposes. I've always been someone who drinks while eating. On weekends, I would occasionally engage in some abuse with a friend or another. If I abused it, it was only a few of times. In addition, I always had self-control". (Divorced/50-57years/ Isoko/ Self-employed)

Furthermore, the table 1 also outlines the major causal factors and manifestation of intimate partner violence faced by women in Enerhen community, Warri, Delta State. From the table, of the 400 research respondent, 139 respondents representing 34.8% were of the opinion that physical harm such as kicking, hitting, slapping etc. were the major manifestations of intimate partner violence in

Enerhen Community, Warri, Delta State. 79 respondents representing 19.8% were of the opinion that sexual assault is the major manifestation of intimate partner violence faced by women in the community, Delta State, 83 respondents representing 20.3% were of the opinion that emotional abuse is the major manifestation of intimate partner violence faced by women while 51 respondents representing 12.8% were of the opinion that financial abuse is the major manifestation of intimate partner violence faced by women in Enerhen community Warri, Delta State. A total of 48 respondents representing 12% opined that there are other major manifestation of intimate partner violence faced by women in Enerhen community Warri, Delta State. An interviewee responded thus:

“I react poorly if I'm upset about something....the nervous system was functioning at the moment. I'm a bit abrupt. In as much as I have jealousy for my wife. She left without saying where she was going, and later that day, all was revealed. But I never had any suspicions ... but I believe that I was more at the time because I was envious. I remember being wary of everyone at the time, or perhaps I was enraged when she turned to face someone. Due to my mistrust of her, there were arguments that made me just slapped her unconsciously.” (Separated/Male/Ijaw/civil servant)

Another interviewee put it this way:

"My husband gets upset quickly over even the most minor concerns, and he frequently blames our constant problems at home on being underprivileged or unemployed to the point where, following our most recent argument, he stopped eating the meals I made for around two weeks. He stayed up late instead of coming home from work early, which generally gets on my nerves and makes me feel abandoned and uncared for because if I dare question him where he was upon his return, it results in uncontrollable beating and yelling. (Married/Female/Christian/34-41 years/ MSc/PhD)

Intimate violence was described in the individual's narratives as an uncontrollable and accidental behaviour, i.e., as being affected by events outside of their control. This conception of violence has a strong connection to a belief that no one is to blame for the violence; although based on this study, the causes of this act may be due to poverty, uncontrolled anger, continuous or unsettled marital dispute, unemployment etc. This study is in agreement with a similar study conducted in Useh community, Edo State by Bello (2022) which revealed that intimate partner

violence is caused by poverty, low level of education, and other socio-cultural factors like unemployment among others.

Research Objective Four: determined the role that social workers can play in the management of intimate partner violence in Enerhen Community, Warri, Delta State

The analysis in table 4 showed that out of 400 participants, 189 respondents representing 47.3% gave a positive response to the statement; 116 respondents representing 29% gave a negative response while 95 respondents representing 23.4% were undecided in their response. The participants were also asked if social workers helped to provide psycho-social support to couples particularly women experiencing intimate partner violence. Out of the 400 participants, 239 respondents representing 59.8% stated that social workers helped to provide psycho-social support to couples particularly women experiencing intimate partner violence within the study area, 97 respondents representing 24.3% stated that that social workers did not, while 64 respondents representing 16% were undecided. With regards to whether or not social workers provided therapeutic counseling which involved couples communicating their feelings of love, admiration, likes and dislikes to each other in order to avoid intimate partner violence, 251 respondents representing 62.8% affirmed that social workers provided therapeutic counseling to victims involved in intimate partner violence; 103 respondents representing 25.8% disagreed while 46 respondents representing 11.5% were undecided.

Interviews revealed that IPV is frequently experienced by young people. Participants cited both current government reporting and personal knowledge of certain incidents to bolster their perceptions. Meanwhile, they described the attitudes and behaviours of some colleagues and politicians regarding IPV among young people as ignoring this scenario and claiming that equity has already been attained, thus neither more resources nor efforts should be directed towards this issue. While without referring to it as IPV, one participant described controlling behaviour in young marriages as common, such as controlling females' social relationships.

"I have been working with politicians for many years, and when you challenge even the smallest thing about inequality between men and women, they range from those who deny it - and that happens with technicians and civil servants as well - to those answering that a lot has already been done and so we shouldn't complain so much because in other

issues less has been done, to those who think we are exaggerating because equity has already been achieved, to those who feel resentful. Then there are some that consistently avoid doing business with you". (Male/Islam/HND/BSc/Urhobo)

Another IDI expressed his own opinion thus:

"What exactly are we sending over there? I know it's challenging, but I've often asked my friends why we don't start advising our sons to do the same things now that there are warnings like "Don't go alone, don't wear that miniskirt, and don't whatever. Listen, interviewer, treat women nicely and on par with you. Avoid touching buttocks in public. Why? Because we recognize that our daughter may be a potential victim of rape and that she may be seductive if she arrives home late or wears provocative clothing, but we never consider that our son or anybody else may [be the perpetrator], do we? Sincerely social workers have great roles to play in helping out in this issue through sensitization and counselling." (Male/self-employed/MSc/PhD/Urhobo)

When considering the messaging of preventive programme, the interviewees expressed worry that there are no messages for males. The paucity of messaging for males, according to study participants, is consistent with what occurs in households; namely, that all of the messages are directed towards encouraging girls to take care of themselves rather than encouraging men to respect women even though some stated the roles of various professionals like social workers and welfare officers who can help ameliorate or alleviate this menace in the study area.

Discussion of Finding

Based on the findings of the study, the result of the study in objective one and two established that there is high level of prevalence of intimate partner violence in Enerhen Community. The results showed that hitting or throwing of objects which is a form of physical abuse and forceful sexual intercourse which is a form of sexual violence constitute the nature and manifestations of intimate partner violence experienced by women in Enerhen Community, Delta State. This is consistent with the findings of Bello (2022), Omoroguiwa and Amas (2020), whose studies found that physical abuse entails a partner using coercive control over another. The findings of the present research are also consistent with those of the Botswana Ministry of Nationality, Immigration, and Gender Affairs (2018)

and the United States Agency for International Development [USAID] Botswana (2014), which indicated that sexual violence is a common form of intimate partner violence experienced by women, with far-reaching consequences for individuals, families, communities, and the country as a whole.

In addition, the result of the study in objective three revealed that residents of Enerhen Community were aware of the occurrence of intimate partner violence as they also agreed that there is high rate of intimate partner violence in the study area. This may be due to the fact that a high proportion of the youths live in slums and are also engaged in the use of alcohol and substance. This study supports Leonard and Jacob (1988) findings that there is a strong correlation between alcohol use and violence against women. They also claim that women who have been abused attribute their beatings or attacks on their husbands' drinking habits. It is undeniable that drinking leads to spousal abuse. Research conducted by Čopić (2004) revealed that between 36% and 52% of wife batterers also misuse alcohol. These studies suggest that males who drink alcohol are more likely to mistreat their wives or partners physically, emotionally, or sexually. According to Abramsky et al. (2011) alcohol misuse is one of the risk factors associated with domestic violence, as it was discovered that alcohol intake is connected with the incidence of intimate partner violence.

According to Sudhinaraset et al. (2016), the abuser or batterer was socialized in a context where alcohol intake was connected with aggressive drunken conduct. Renzetti et al. (2002) added that alcohol appears to have both direct and indirect impacts on people's conduct. It appears that abuse is connected to the adult's familial background. This suggests that socialization has a significant impact on a person's conduct patterns. According to Crane et al (2014), drugs and alcohol are disinhibitors in circumstances when males are angered, and alcohol usage may result in aggression towards their spouses. This demonstrates how alcohol may cause a person to get agitated and unable to manage his anger, resulting in him assaulting his companion. Xue et al. (2009) appear to concur that alcohol offers a social environment for violence and that it is most likely to be connected with a general violent subtype, meaning violent males both within and outside the family. Alcohol appears to provide abusers an excuse to be aggressive toward others. Alcohol abuse has been demonstrated to be a cause of women's abuse, as Crane and Eckhardt (2013) indicate that binge drinking and alcohol abuse have been consistently connected with partner violence occurrences.

Furthermore, the findings of the objective four analyses demonstrated that social workers play critical roles in the management of intimate partner violence in the Enerhen community in Delta State. This is accomplished via advocacy, psychosocial assistance to couples, particularly women, facing intimate relationship abuse in this community, and employees giving therapeutic counseling to victims of intimate partner violence. This finding is consistent with Bello (2022) study, which found that social workers aid in the sensitization and advocacy against marital violence. Bello further mentioned that social workers assist in providing psycho-social assistance to couples, particularly women, who are going through a divorce. He went on to state that social workers offer therapeutic treatment to victims of spousal abuse and divorce. This also supports the work of Cordoba (2019), as referenced in Bello (2022), who claims that social workers play a significant role in the prevention and intervention of marriage breakdown due to their dedication to human rights, social justice, and contextual awareness of individuals' experiences. This may be done to provide patient-centered treatment. The study also backs up the work referenced in Bello (2022) by the Department of Health (2010) and Omoroguiwa and Amas (2020), which indicated that social workers are responsible for working with women and their families to offer specialized care depending on their requirements.

Conclusion and Recommendations

The study examined the perception of the phenomenon of intimate partner violence by residents of Enerhen community, Warri, Delta state, Nigeria. Intimate partner violence occurs as a result of uncontrolled factors which could have actually been avoided in order to avert the unpleasant event or crises. However, they may be controlled when they happen or avoided altogether, to prevent future re-occurrence. This will mostly depend on how the individuals in intimate relationships handle disagreements together. Therefore, individuals in an intimate relationship should learn to be fair, objective, mind the choice of words or language in expression of feelings or ideas during heated arguments with their partner(s) in intimate relationships. These factors which when addressed, can help partners avert the incidence of intimate partner violence that would have resulted in harms or injuries to the victim(s) in the intimate relationship. Although social workers and caregivers have numerous roles to play in helping individuals who would have found themselves as victim of intimate partner violence.

For the purpose of preventing and managing incidence of intimate partner violence among individuals in an intimate relationship, pre-marital counseling is

necessary for prospective couples to better understand one another before going into marriage. They ought to be made aware of some of the issues that could spark disputes and how to handle them.

Society should be made aware of the potentials for IPV among men in order to prevent stigmatization of such victims and promote open communication among both male and female victims while communities should be encouraged to have healthy, nonviolent, and secure relationships by highlighting socially unacceptable behaviour and toughening penalties for offenders as the chance of youth violence and bullying prevention projects have the opportunity to address issues of relationships, gender roles, power, and coercion. IPV is most prevalent among younger women, and schools are an ideal location for initial prevention actions.

In addition, through marital counselling and guidance, there must be sufficient provision for counseling treatments that are preventive, remedial, and rehabilitative. Mores so, couples should regularly attend seminars and workshops on topics related to marital harmony and conflict resolution. Family counsellors should organize workshop, seminars and conferences whereby couples would be sensitized on causes of intimate partner violence and feasible resolution strategies for resolving such occurrence and breakdown. Couples should be encouraged to adopt resolution strategies in resolving their conflict. Couples should also visit family counsellors when they need help. Couples should endeavour to accentuate attitudes of co-operative, valuing partnership, demonstrating trust, general good will towards one another and positive values in their intimate relationships. Finally, family counsellors and social workers should inculcate the communication of forgiveness when one partner wrongs the other.

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Rice Farmers' Perception of Climate Change and its Effects on Rice Production and Livelihoods in Kura Local Government Area of Kano State, Nigeria

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Abstract

This study examined the perception of rice farmers' on climate change, its pattern of change and how it affects rice production and livelihoods in Kura Local Government Area in Kano State, Nigeria. A survey research design was employed using semi structured questionnaire. Four hundred (400) respondents were selected randomly from the selected 10 wards based on their availability for the study. The data obtained was analyzed using descriptive statistic in the SPSS version 20.0. The study revealed that rice farmers in the area have very good knowledge on climate change, its pattern of change and effects on rice yield. The study further revealed that the existence of climate change due to its effects on rice yield in the area makes farmers in the area to have a positive perception on the changing pattern of climate change and their effects on rice production. Also the study established that the farmers' positive perception on the presence of changing pattern of climatic variables in the area affects the growing yield of rice in the inputs and the outputs. The study recommends that Kano state government and non-governmental organizations should gear up towards motivating the farmers to actively adopt mitigating measures of climate change for sustainable rice farming system and sustenance of livelihood options in the area. The rice farmers association and the agric department of the local government in collaboration with government at both state and federal should put more efforts in providing drought resistance seedling to farmers and adopt effective mitigation measures through early warning to control loss of farm products during harvesting. Creating awareness on effects of climate change and crop management practices to control dreadful crop loss in the area was also recommended.

Keywords: Climate Change, Crop yield, Rice Farmers, Perception and Livelihoods

1.0 Introduction

The threat of climate change, manifested in the increase of extreme weather condition such as drought, deforestation and flood, has been recognized as a global priority issue (Sabine, 2004). Climate change is a sustainable development challenge, with broad impact not only on the environment, but also on economic and social development. The effect of climate change varies among regions, and

between different generations, income groups and occupations as well as between women and men (Odjugo, 2010). A number of countries in Africa already face semi-arid conditions that make agriculture challenging, and climate change will most likely reduce the length of the growing season as well as force large regions of marginal agriculture out of production (IPCC, 2007). Due to their lower adaptive capacities, developing countries and people living in poverty are likely to experience a significant impact (Salick *et al.*, 2007). Nigeria is already experiencing a range of impacts from climate change including more frequent heavy rainfall episodes, erratic rainfall and unpredictable onset/retreat of rain and increasing air temperature which threaten the ecosystem, food production, livelihoods and infrastructure (Babatolu & Akinnubi, 2016). These changes are not uniform in the country as some areas are severely impacted and hence, more vulnerable to climate change than others.

Agriculture which is highly vulnerable to climate change is an important sector in the economy of most developing countries, particularly Nigeria. Smallholder farmers constitute the single most important occupational group in Nigeria and contribute significantly to the national economy. It employs over 70 percent of the population, contributes about 41 percent to gross domestic product (GDP) (Falaki, Akingbe & Ayinde, 2013), accounts for 5 percent of total export and provides 88 percent of non-oil earnings in Nigeria.

Rice is valued as the most important staple food for over half of the world population (Food and Agricultural Organization FAO, 2003). In Nigeria, it has become a staple food such that every household; both the rich and the poor consume a great quantity (Godwin, 2012). In terms of local production, rice is now one of the major cereals produced by Nigerian farmers; it is cultivated in virtually all the agro-ecological zones of Nigeria. It covers both the upland and the swamps, depending on the variety, (Kano State Agricultural and rural development Authority, KNARDA, 2007). Rice production needs to increase to meet future population growth needs. Any decline in rice production through climate change would thus critically impair food security in the country. Agricultural production and food security are severely hampered by climate change in many African countries. Most local farmers lack basic scientific knowledge of how the environment works, including awareness of climate and even modern farming techniques. While some farmers are conscious and aware of the apparent change in climate and weather characteristics in their geographical environment, some other farmers, especially in rural localities have negative perception about the phenomenon. This could largely be attributed to their literacy

level and other socio-economic dispositions. This study interrogates rice farmers' perception of climate change and its effects on rice production and livelihoods in Kura Local Government Area of Kano State, Nigeria.

Kura Local Government Area of Kano State is vulnerable to climate change which adversely affects its agricultural productivity. The existence of warming and rainfall variety leads to reduction in the agricultural production of the farmers. Therefore, the area is seriously affected by climate change and weather variability which has pushed farmers, especially rice farmers to adopting a number of strategies to mitigate the adverse effect of climate change.

On the basis of this background that this study intend to assess the rice farmers' perceptions of climate change, its pattern of change and how it affects rice production and livelihoods in Kura LGA in order to ascertain their dynamic knowledge on the effects of climate change and how they cope with climate change and finding means to sustain it.

2.0 Description of study area

Kura Local Government Area of Kano State is located between Latitude $8^{\circ} 25' 49''$ N and $8^{\circ} 49' 09''$ N of Greenwich Meridian and Longitude $11^{\circ} 41' 07''$ E and $11^{\circ} 54' 17''$ E of the equator covering an area of about 206km^2 (80m^2) of cultivable land. It shares common boundaries with Garun Malam Local Government Area from the west, Madobi Local Government Area from the North, Dawakin Kudu Local Government Area from the East and Bunkure Local Government Area from the South as shown in Figure 1. It is geographically located in the southern part of the State along the Zaria-Kano express way which is a distance of about 35km from the State capital. The climate of the area is part of the Hot Dry Tropical Climate obtainable in Northern Nigeria, generally characterized by warm rainy season and cool/hot dry season. The temperature regime is warm to hot almost throughout the year, even though there is a slightly cool period between November and February which is referred to as the harmattan (Olofin, 1987). The rainfall pattern of the area is characterized by only four wet months, (June-September). However, the first rain is usually recorded in early May. The vegetation of the study area is part of the open savannah woodlands of Northern Nigeria.

But the vegetation pattern has changed considerably due to human activities such as frequent bush burning, farm clearing, and tree cutting for fuel wood and over grazing.

The study area is part of Kano Closed Settled Zone lying on the portion of a dissected pene-plain development on the crystalline pre-Cambrian rocks of the basement. Soil in the area consists of young alluvial soils which are strongly layered in the lower parts of the profile. The dominant texture is loamy sand, although very sandy or sandy loam layers are often present.

The drainage system of the study area is part of the general drainage of the Kano River. It is directed to the Kano and the Shimar River. The later river ultimately joins the former, after which it is called Hadejia system. The study area is part of the Kano River Project Area, which is intensively cropped. The main crops grown on the well-drained soils are sorghum, millet, rice, maize, groundnuts, vegetables and cowpeas. Mixed cropping is generally practiced with inter-planting of millet and groundnuts or millet and sorghum.

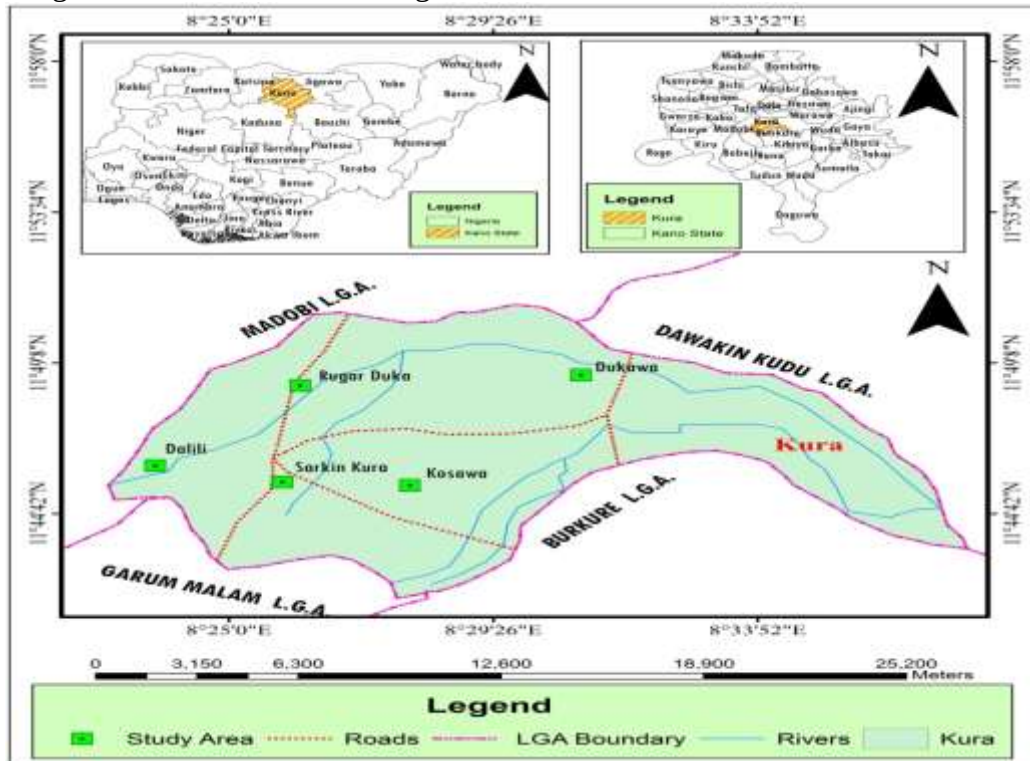


Fig. 1: Map of Kura Local Government Area, Kano State
(Source: Cartography laboratory, Geography Department, Federal University of Education, Kano)

3.0 Materials and Methods

This research adopted a survey design conducted to farmers living around the selected areas in order to have good and clear perspective of their perceptions of climate change and how it affects rice production and livelihoods in Kura LGA, in order to ascertain their dynamic knowledge on the effects of climate change on livelihood for sustainable agricultural practice. Four hundred (400) respondents were drawn from the 10 rice-farming communities such as; Karfi, Imawa, Gajingiri, Dalili, Guraza, Bugau, Domawa, Kosawa, Kadani and Fegin Malu, in Kura LGA using stratified sampling frame for the study based on their availability.

The data obtained for the study pertaining to the perception of farmers on climate change were sourced from primary data using self-administered questionnaire survey designed on five Likert scale. The questionnaire was open ended questions and was divided into three sections, the first section deals with demographic characteristics of the respondents (gender, age, level of education, length of residency, household size, size of the farmland, means of acquiring the farmland and net income). Section two addresses the farmer's perception on climate change and its changing pattern. The section three addresses their perception on climate change effects and how it affects rice production as well as their livelihoods. The data obtained was analyzed using descriptive statistics using Statistical Package for Social Sciences (SPSS) version 20 where the level of their perception on climate change, its changing pattern and its effects on rice production as well as their livelihoods based on a scale of 1-5 (Strongly agree 5, Agree 4, Undecided 3, Disagree 2, Strongly disagree 1) were identified. Frequencies and percentages were used to analyze the demographic variables of the respondents. The mean values and standard deviations were used to analyze the farmer's perception on climate change, its changing pattern and how it affects rice production as well as their livelihoods. Data obtained from the mean value on each farmer's perceptions on a scale of 1-5 (Very good 4.0-5.0, Good 3.00-3.99, Fairly Good 2.00-2.99, Poor 1.00-1.99, Very poor 0.00-0.99) was also used to judge the positive and negative perceptions on the farmer's perception on climate change, its changing pattern and how it affects rice production as well as their livelihoods.

4.0 Results and Discussion

4.1. Demographic characteristics of the respondents

The results obtained from Table 1 on the demographic characteristics of the respondents indicates that almost 9 out of every 10 of the respondents (93%) were male due to the influence of culture in the state which shoulder the responsibility of family feeding on men and were limited in association with people other than their family members. The higher percentage of male respondents serves as factor in explaining the reason of high level of farmer's perception of climate change and its effects on livelihood in the area. This finding is in agreement with the study of Browna and Brabyn, (2012) in New Zealand where more proportion of male respondents participated in the study than female, and not in compliance with the study of both Stockton (2011) and Niekerk (2016) conducted in Morro Bay, California and South Africa respectively, where females have the dominant proportion of responses.

Table 2: Demographic characteristics of rice farmers in Kura LGA

		Frequency	Percent	Cumulative Percent
Sex	Male	373	93.3	93.3
	Female	27	6.8	100.0
	Total	400	100.0	
Age	21-30	76	19.0	19.0
	31-40	142	35.5	54.5
	41-50	147	36.8	91.3
	51 and Above	35	8.8	100.0
	Total	400	100.0	
Level of Education	Primary	105	26.3	26.3
	Secondary	157	39.3	65.5
	Tertiary	80	20.0	85.5
	Others	58	14.5	100.0
	Total	400	100.0	
Length of Residency	Less than 10years	31	7.8	7.8
	11-20 years	53	13.3	21.0
	21-30years	152	38.0	59.0
	31 and above	164	41.0	100.0
	Total	400	100.0	
Household Size	1-5	117	29.3	29.3
	6-10	196	49.0	78.3
	11-15	48	12.0	90.3
	16 and above	39	9.8	100.0
	Total	400	100.0	

Size of the farmland	Less than 5 hectares	167	41.8	41.8
	6-10	171	42.8	84.5
	11-15	33	8.3	92.8
	16 and above	29	7.3	100.0
	Total	400	100.0	
Means of acquisition of the land	Inheritance	203	50.8	50.8
	Purchase	136	34.0	84.8
	Lease	53	13.3	98.0
	inheritance and Purchase	8	2.0	100.0
	Total	400	100.0	
Bag of rice produce	Less than 20 bags	61	15.3	15.3
	21-39 bags	189	47.3	62.5
	40--59 bags	67	16.8	79.3
	60 bags and above	83	20.8	100.0
	Total	400	100.0	
Net income	Less than N 50000	34	8.5	8.5
	N 51000- N100000	151	37.8	46.3
	N101000- N150000	115	28.8	75.0
	N150000 and above	100	25.0	100.0
	Total	400	100.0	

Source: Fieldwork, 2022

Table 1 further indicates that 36.8% of the respondents were between the ages of 41 to 50 years. This shows that they are at their youthful age and are in a better position to explain. However, 35 out of 400 of the respondents with age of 51 and above years are the most advantage group with more knowledge of climate change and its effects on livelihood. The result of the study as indicated in Table 2 revealed that 74% of the respondents can read and communicate in the formal language to appreciable level. The level of access to formal education by the respondents enhances their awareness levels relating to their perception of the changing pattern of climatic variables and their effects in the area. In terms of Length of Residency of the respondents in the area as contained in table 2, 4 out of 10 farmers lived in the area for over 30 years while almost 5 out of the 10 respondents have family size between 6-10. However, 4 out of the 10 respondents in the area have farmland size between 6 to 10 hectares of land and almost half (5 out of 10) of the total farmers in the area acquire their land through inheritance. Also, the table 2 further indicated that due to limited number of the acquired farmland of between 6 to 10 hectares of land in the area makes only 47.3% of the

farmers to be able to produce 21-39 bags of rice throughout the farming season. As indicated in the table the low level of rice production by individual farmers in the area makes almost every 4 out of the 10 farmers to earn between N51,000 to N100,000 in a year as net income.

4.2 Perception of farmer's on climate change

The results of the study from table 2 on the perception of farmer's on climate change reveals that farmers in the area have very good perception of mean value of 4.2425 on the knowledge of changes in rainfall pattern compared to 1980 due to changes in climate variability. It was further revealed that over the last 40 years farmers in the area have very good perceptions on observed changes of the Onset of the rainfall and Cessation period of rainfall received with mean value of 4.0375 and 4.3100 respectively. Based on the findings the Onset of rainfall in the area and the general pattern of the onset of rainfall in the state, the Onset of rainfall deviate from what was observed in the past where rainfall start from end of March to early April. But today the Onset of rainfall begins late usually from May and early June and ceases early which consequently have direct bearing on the Hydrological growing season in agricultural productions.

Table 2: Farmers Perception on Climate Change

	N	Mean	Std. Deviation	Variance
Farmer's Perception of Climate Change				
Have you noticed any change in rainfall pattern compared to 1980	400	4.2425	0.76167	0.580
Onset	400	4.0375	1.11992	1.254
Cessation	400	4.3100	0.80344	0.646
Intensity	400	3.8675	0.94189	0.887
Observed August peak	400	3.8550	1.13455	1.287
Noticed of any change in heat wave	400	1.0575	0.23309	0.054
Farmer's Perception on the Changing Pattern of Climate Change				
Drought	400	4.0000	1.26253	1.594
Floods	400	3.5075	1.40530	1.975
Off seasonal rainfall	400	3.6875	1.02590	1.052
High wind	400	3.7075	1.14465	1.310
Cold	400	3.9825	1.14694	1.315
Higher rainfall	400	3.7475	1.02781	1.056

Heat	400	3.9350	.89598	0.803
Dew	400	3.5825	1.08911	1.186
Effects of Climate Change on Livelihood				
Reduce crop yield	400	4.4900	0.87281	0.762
Spoilage of farm produce	400	4.5600	0.81120	0.658
Increase in pests and diseases	400	4.5575	0.77343	0.598
Food shortage	400	4.6550	0.59317	0.352
Increase cost of Input	400	4.5375	0.84876	0.720
Shortage of Income	400	4.5225	0.93363	.872
Valid N (listwise)	400			

Source: Fieldwork, 2022

The findings supported the study of Ekoh (2020) which shows that the Onset and Cessation of annual rainfall in Northern Nigeria is relatively distant from the early Onset in recent time which makes the area to relatively experience dryness. In table 2, it was further established that the farmers have good perception on the Intensity of the rainfall and peak August period. The findings from the August peak period reception of rainfall corroborate with the findings of Ogunrinde *et al.*, (2019) who reported that Kano recorded low rainfall in July, August and September, with values of 6.30, 9.29 and 12.57 mm/year, respectively. The August break observed in the area is conspicuous period to farmers and it is significant because it allows re-tending certain crops which require frequent tending. Also from the table 2, observed changes in heat wave enjoyed poor perception by the farmers with mean value of 1.0575. The farmers' opinions toward pattern of observed change in heat-wave in the study area tilt towards total of highly decrease.

4.3 Farmer's Perception on the Changing Pattern of Climate Change

On the observed pattern of drought over time in the area, the result from table 2 indicated that the perceived mean value of drought occurrence in the area is very good (4.0000). This indicated that the pattern of observed occurrences of droughts in the area over time shows that the phenomenon occurs very often options in all the 10 sampled communities in the local government due high level of the respondents' knowledge of what drought is. The finding of the study on drought agree with the findings of Chukwudi and Adebawale (2018) who revealed that Kano is at higher risk of more than near normal drought situations for the 6-month time scale and will likely increase human vulnerability.

The perceived occurrence of flood in the area based on table 2 revealed that the mean value of the farmers' perception on the incidence of drought is found to be Good (3.5075). This indicated that the changes of climatic elements that causes flood in the area is evidently visible by the respondents. Similarly, the findings from table 2 on Off-seasonal occurrence of rainfall in the area based on the farmers good perception of mean value of 3.6875 of the incidence of Off-season of rainfall in the area adjudge to be evidently visible. This indicated that Off-seasonal rainfall occurs outside the range of the usual rainy days, either at beginning (onset) or at the end (cessation) of the days.

From table 2, it was revealed that strong winds often damage cereals crops especially at eve of harvesting period due to climate change. The perceived knowledge of farmers' perception on the changing pattern of climate change in the area perceived to be good with mean value of 3.7075. This indicated that strong winds often occur in the study area over time. The result of the study was supported by Onyewole, (2018) that the mean wind speed in Kano varied between 8.9ms^{-1} to 12.4ms^{-1} which occurred in September and January respectively, and as at October, it was 7.88ms^{-1} , the least in all the months. On the Observed Pattern of change in cold (harmattan) over time in the area, the farmers perception on the changing pattern of the cold season indicate Good perceived value of 3.9825 on the changes. The farmers in the area observed that there is change in the patterns of cold (harmattan) season towards the extreme as a result of change in climate. From table 2, of the observed pattern of higher rainfall over time in the area, the result indicated that the farmers have good perception on the changes of higher rainfall with mean value of 3.7475. The finding shows that there is observed evidence of higher rainfall amount received in the area which had been occurred often in the area.

Meanwhile on the observed Pattern of Change in Heat over time in the area, the findings of the study from 2 revealed Good mean perceived value of 3.9350 due to their good awareness of climate change. The table further shows that there is Good farmers' perception of the observed pattern of dew (*raba*) over time as indicated by the mean value of 3.5825. The observed changes in dew in the area occurred due to the importance of dew (*raba*) for the maturity and amount of yield for certain crops and is greatly further affected by other elements of weather such as rainfall and wind. A study by Elemo *et al.*, (2021) in Abuja indicates that the dew point temperature and the relative humidity (RH) for each month of the

year 2020 showed that the peak of the relative humidity was at 51%, while the peak of the Dew point temperature (D) was at 18°C.

4.4 Effects of Climate Change on Crop Yield over time

The farmers' opinions on the effects of climate change on increased crop yield over time were observed in the area. The result of the study from table 2 established that the effects of climate change on crop yield is evidently observed and experienced to be Very good by the farmers as the effects causes spoilage of farm produce, increase in pests and diseases, food shortage, increase in cost of inputs and shortage of income with mean value of 4.4900, 4.5600, 4.5575, 4.6550, 4.5375 and 4.5225 respectively.

Generally, the view of respondents on the effects of climate change on reduced crop yield, spoilage of farm produce, increase in pests and diseases, increase in cost of farm input and shortage of income have multiplier effects of farmers livelihood due to prolonged incidence of climate change in the area. It can be deduced from the findings that the effects of climate change on crop yield could have a profound influence on both pre-harvest and post-harvest periods of farmers in relation to his livelihood standard as all the affected variables where they occurred are very good manifestations of climate change.

5.0 Conclusion and Recommendations

From the foregoing discussion, it could be deduced that rice farmers in Kura local government area have very good knowledge of climate change, its pattern of change and effects on rice yield. The ranges of farmers' perception from Good to Very good clearly voiced their understanding, perceptions of climate change and its attendant consequences on rice cultivation. The existence of climate change due to its effects on rice yield in the area makes farmers in the area to have a positive perception on the changing pattern of climate change and their effects on rice production. The farmers positive perception on the changing pattern of climate change are evidently visible on drought, occurrence of flood, off-seasonal occurrence of rainfall, strong winds, change in cold (harmattan), changes of higher rainfall, change in heat wave over time in the area and changes in dew (*raba*) over time. The study further revealed that the presence of changing pattern of climatic variables in the area affects the growing yield of rice in the inputs and the outputs. These can be seen in the positive perception of farmers on the observed and experienced effects on the spoilage of farm produce, increase in pests and diseases, food shortage, increase in cost of inputs and shortage of

income which consequently create an un-sustainable farming system in the area and have direct effect on the rice production and invariably the livelihoods of the rice farmers in the area. Following the findings in this study, the following recommendations were made:

1. Government (at both Federal and State levels) and non-governmental organizations should gear up towards motivating the farmers to actively adopt mitigating measures of climate change for sustainable rice farming system and sustenance of livelihood options in the area.
2. The rice farmers association and the agric department of the local government in collaboration with government should put more efforts in providing drought resistance seedling to farmers and adopt effective mitigation measures through early warning to control loss of farm products during harvesting.
3. Kano state ministry of agriculture and ministry for rural development in collaboration with farmers associations and related non-governmental organizations should be engaged in creating awareness on effects of climate change and crop management practices to control dreadful crop loss in the area.
4. Farmers' perception should always be considered when designing climate change coping and adaptation strategies for effective implementation.

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Effect of Perceived Organizational Justice on Project Success; the Role of Employee Creativity

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Abstract

Past research studies reviewed have stated that there is a challenge with the success of construction sector; this was further discovered by statistical records. It is on this note that this study seeks to examine the effect of perceived organizational justice on project success, moderating role of employee innovation. The study employed a cross sectional research design, unit of analysis in this study is employee of construction sector in Jalingo LGA of Taraba State (TAROMA), population of the study is 1900, and sample that was used for data analysis is 320 questionnaire used to collect the required data. The data were analyzed using statistical package for social sciences version 23 (SPSS) and PLS Ver4. In the direct relationship, the result has shown that distributive, procedural and interactional justice-have a positive and significant effect on project success. On the moderating relationship, distributive and interactional justice's relationship on project success were moderated by employee creativity, however, the effect of procedural justice on project success was not moderated by employee creativity. It was recommended that construction sector managers should ensure that employees are treated fairly so that they can be motivated to initiate innovative ideas into Construction Companies.

Keywords: Organizational justice, Distributive Justice, Procedural Justice, Interactional Justice, Employee Creativity, Project Success.

Introduction

The significance of project success is enormous around the world, even in the context of Nigeria, a number of factors have been established that might increase or enhance the success of projects in the constructions sector. The employee's perception regarding organizational justice, the project manager's function, the tools, procedures, and assistance available to them at work are several instances of this antecedence. The significance of the construction industry to the economy of any country of the world, including Nigeria, cannot be understated in light of the above submission, in accordance with the report reviewed on National Bureau of Statistics (2021), in Nigeria, the constructions sectors' contribution to the real GDP of Nigeria was over 2.33% in the year 2019, this report has clearly shown

that construction sector contributes significantly to the Nigerian economy as contained in the report of National Bureau of Statistics (2021).

Despite the fact that these industries contribute extensively to the global economy and the economy of Nigeria in particular, construction sector success and performance is still becoming worse, according to the Project Management Institute (2020), substantial sums of money are lost on projects every day as a result of an organizational injustice within the management team, including overspending, scope creep, time overruns, non-conformity to standard, and non-attainment of the stated goals and objectives. Moreover, report from National Bureau of Statistics (2021) has further revealed that Construction sector witnessed great contraction by -7.68% in full year 2020, this implies a declined in performance of construction sector. Numerous studies in the past (e.g., Aga, Noorderhaven, & Vallejo, 2016; Jitpaiboon, Smith, & Gu, 2019; Yean & Yusof, 2016) have stated that, there are many antecedence that are responsible to failure of project success. Some of these factors may include among the following; lack of distributive justice, procedural justice, interactional justice, employee creativity, lack of job satisfaction, lack of organizational commitment of employee among others. When the above factors are not properly manage by the management, it may affect project success of the construction company as stated by Unterhitzenger and Bryde (2019), its on the bases of the above argument that this study examined the effect of perceived organizational justice on project success the moderating role of employee creativity.

In accordance with a number of researches in the past (Unterhitzenger & Bryde, 2019; Colquitt et al., 2018), the treatment employees receive from project managers is claimed to have an effect on both their job performance and the success of an organization. The authors further contended that an organization's resource allocation practices have an important effect in determining how its workers will perceive the establishment. Huang et al. (2017) claimed that managers' attitude toward the employee on his or her team affects and inspires them to accomplish their goals. In the work of Subhitzenger and Bryde (2019) the kinds of treatment employees receive from the managers usually influence their decisions at the work place, which could be either negative or positive. In accordance with the findings of past extant studies such as Zaman, Florez-Perez, Abbasi, Nawaz, Farías, Pradana, (2022) and others have maintained that organizational justice has been found to improve both employees' and project

success, according to Amabile and Pratt (2016). Colquitt (2018) examines how the three dimensions of perceived organizational justice affect project success. According to Amabile and Pratt (2016), creativity is an approach through which a single person or a small group of individuals working together in an establishment produce innovative and useful ideas. An idea needs to be both unique and useful in order to be regarded as innovative in the context of this study; creativity is used as an intervening variable in the relationship between perceived organisational justices' dimensions on project success in construction industry in Jalingo metropolis areas of Taraba State as recommended by Dong et al., (2017).

The study of Jitpaiboon, Smith and Gu, (2019) have recognised that despite the fact that past studies such as (Du, Li, Du, Wang & Fan, 2021; Wang, Li, Liang, Ye & Ge, 2018) have conducted several researches and have found out that there is a relationship between perceived organization justice and on project success, most of these studies reported an inconsistencies on their findings, for a researchers to better understand this relationships. However it has been suggested in the studies of (Gafni, Marom & Sade 2019; Whitman, Caleo, Carpenter, Horner & Bernerth (2012) that project success may not always be affected or influence by organizational justice, therefore, to better understand ways in which project success may be affected by organizational justice, it was suggested by Jang, Lee & Kwon (2019) that subsequent studies may introduce a moderator on the relationship between the two variables. Thus, it is on the basis of the above justification that this study introduces employee creativity to moderate the relationship.

This study may be important in the numbers of ways; if the findings of this study are implemented in the construction industries, it will help to address the problem of deterioration of project success in construction companies. Secondary, this study contributes greatly to the literature in times of the intensive literature reviewed on dimensions of organizational justice and the introduction of moderator (employee creativity) in the model of this study. Therefore, the general objective of this study is to examine the moderating role of employee creativity on the relationship between organizational justices on project success, the specific objectives are: to ascertain the relationships between distributive justice on project success, procedural justice on project success. Also to examine whether Employee creativity significantly moderate the relationships between distributive justice and project success, and procedural justice and project success, also interactional justice and project success

The hypotheses of this study are presented were all formulated and presented in a null form as:

H0₁: Distributive justice has no significant effect on project success

H0₂: Procedural justice has no significant effect on project success

H0₃: Interactional justice has no significant effect on project success

H0₄: Employee Creativity does not significantly moderate the relationship between distributive justices on project success

H0₅: Employee Creativity does not significantly moderate the relationship between procedural justices on project success

H0₆: Employee Creativity does not significantly moderate the relationship between interactional justices on project success

Literature Review

Conceptual framework

1. Project Success

The concept of project success is viewed by scholars in different ways, according to the study of Velichety, Ram and Bockstedt (2019) a project is conceptualized as a discrete, condensed endeavor that must be completed within the confines of a defined budget, timetable as well as scope. The main project success elements in a corporation at the time when cost, time, and quality is needed. Moreover, how successfully the construction processes for the projects attained their intended goals may be used to measure project management success as stated by Khan, Malik and Saleem, (2020). If a project's cost, timing, and quality meet the predetermined requirements, the project manager will deem it successful (Rasool, Wang, Zhang & Samma, 2020). However, the project can be considered a failure if it doesn't meet the client's expectations (Rasool, Samma, Wang, Zhao & Zhang, 2019). Success in project management, according to this author, essentially entails carrying out the necessary tasks, while keeping the organization's budget, schedule, and project quality in mind respectively.

2. Perceived Organizational Justice

The culture of an organization, the behavior of its members and perception of justice in the organization greatly influenced project success (Ouyang et al., 2015). Organizational justice has been conceptualized in various manners and ways by researchers. For instance, organizational justice, according to Khan, Idris and Amin, (2021) is a subjective perception employees have about the degree of fairness with which management handles employee in an organisation. The

perception of members of an organization, as to whether or not they are being treated fairly is justice within the organization, according to Suifan (2019). Furthermore in the study of Moorman (1991), Tyler and Bies (1990) who have subdivided organizational justice construct into three viz distributive justice, procedural justice and interactional justice. Thus in this study three dimension of perceived organizational justice are examined as adopted from the study of Benson and Martin (2017).

One of the key dimensions of organisational justice concepts in this study is distributive justice, which refers to the extent in which managers in organizations may divide benefits like promotions, resources, knowledge, time and money among project participants. The main foundation of this variable is from Equity Theory, propounded by Adams (1965). It has to do with how people feel that the results they get are fair. Pignata, Winefield, Provis and Boyd (2016) defined distributive justice as the fairness connected to the choice linked to the distribution of resources within the business. As a result, distributive justice emphasizes the distribution of money and/or non-financial resources, such as awarding a bonus to a worker who meets performance targets. The resources that are distributed may be physical, or financial (such as a wage), or intangible, or non-financial (such as praise). Employers may be able to limit or even get rid of the problem of unequal or unjust resource distribution if they emphasize the rule of equality and allocation based on need, as recommended by Tziner, Fein, Kim, Vasiliu and Shkoler (2020).

Procedural justice, which in this study refers to employees' perceptions of the fairness of management rules and procedures that govern the processes leading to a decision, is another crucial independent variable of the dimension of perceived organizational justice (Colquitt, 2001). The actions performed by management in order to arrive at a just choice are the main emphasis of the process. To improve employees' view of procedural fairness, procedural concerns which includes equitable employment possibilities in manpower planning, a fair system of disciplinary action and reward, and the reliability of the decision-making authority are critical (Tziner, Fein, Kim, Vasiliu & Shkoler, 2020). Employee will be happier and more likely to have a favorable opinion toward management's decisions if the managerial processes methods and procedures are seen as fair (Yean & Yusof, 2016). This, in turn, can indirectly result in reduced levels of conflict between employees and employer. People's commitment to and contentment with the organization might drop when they believe that the

decision-making process is not transparent and equitable. This can also have an impact on their performance and the ability of project management to achieve the project's goals.

Another important dimension of organizational justice is interactional justice, which refers to perceptions of organizational justice and is sometimes referred to as interpersonal justice since it incorporates emotions related to interpersonal communication, interactional justice is another significant independent variable in this study (Colquitt, 2001). According to Benson and Martin, (2017) interactional justice refers to how well employees feel treated interpersonally when organizational processes are being implemented. Furthermore, since decision-makers' justifications have an impact on people's views of the fairness of their judgments, justice based on interaction should take these into account. Even if the end result of the decision is predicted to be unfavorable, a person may nevertheless feel that it was fair if sufficient justification was provided for them (Ivcevic & Hoffmann, 2017). Therefore, interactional justice is connected to how staff members are treated and how they interact with those in positions of power (Colquitt, 2001). This kind of justice, in the opinion of Colquitt, Zipay, Lynch and Outlaw (2018) can be improved by giving the required details on the managers' justifications for their judgments. So, this study looks at how three aspects of perceived organizational fairness affect project success.

3. Employee Creativity

According to Cropley and Cropley (2017) employee creativity is the creation of original and helpful ideas or solutions to issues. For project leaders, it is much more difficult because project teams frequently need to use creativity and innovation to accomplish their duties. Individual team members provide innovative ideas; consequently a supportive atmosphere and leadership that fosters such idea generation are crucial (Dong et al., 2017). Inventing new methods for carrying out activities or discovering goods or services to better suit client wants are just a few examples of how creative employees come up with unique solutions, while dealing with the demands of the job (De Silva, Howells & Meyer, 2018). According to Jahanzeb, Fatima, Bouckenooghe and Bashir (2019) employee creativity is the most important indicator of an organization's ability to survive and compete in the global market. Since employee creativity is a personally motivated work behavior (Leone & Schiavone, 2019). It is expected that the employee's perception of organizational justice will play a role in the motivational process that influences employee creativity (Anderson, Potocnik &

Zhou, 2014). It is debatable whether or not perceived organizational fairness influences workers' decisions to exhibit a given behavior such as creativity (Kerwin, Jordan, & Turner, 2015). According to past studies when workers believe they are not being treated fairly by their employer, their conscious duty to the business becomes seriously compromised and their performance and positive attitude toward work tend to decline. Several researchers (e.g., Darvishmotevali, Altinay & De Vita, 2018; Florida, 2014) looked at how organizational justice affected employees' innovative work behaviors. However, these researches lacked a complete organizational justice paradigm. Additionally, the moderating impact of employee creativity on justice dimensions in the organization and project success has not before been examined. This study thus examines the moderating impact of creativity on perceptions of organizational justice and project success.

Empirical Review

Relationship between Perceived Organizational Justice on Project success

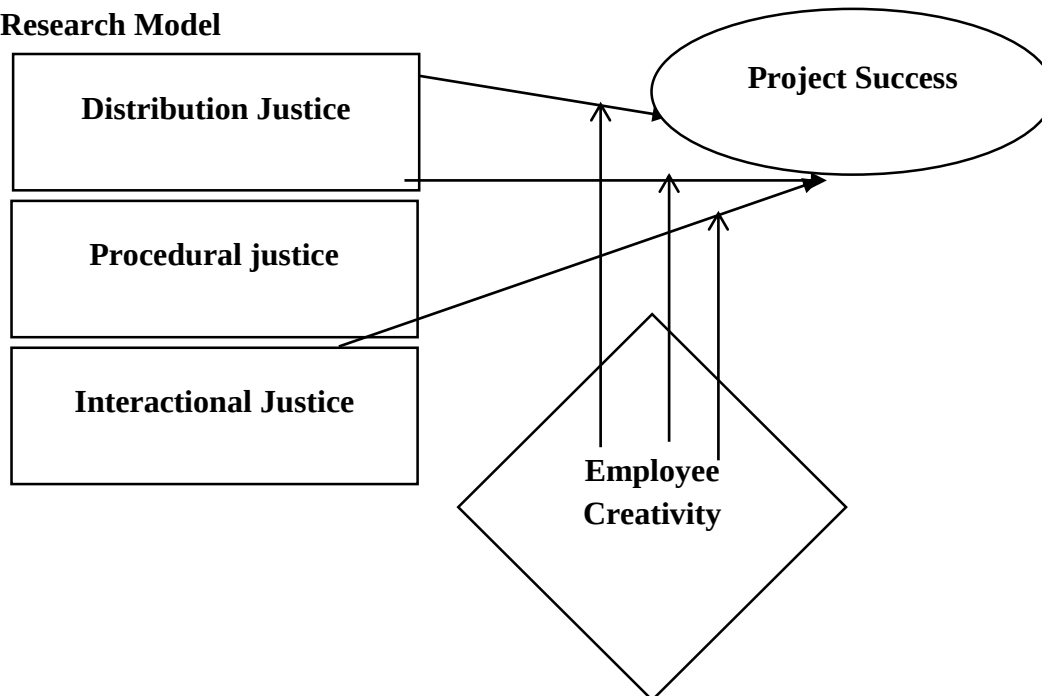
Past researches have conducted a number of studies on the relationship between perceived organizational justice on project success (Swalhi et al., 2017; Mahajan & Benson, 2013), Unterhitzenberger & Bryde, 2019). The studies come out with the findings that organizational justice is a significant variable that can affect organizational success in the service sector. Furthermore, in the studies of Mahajan and Benson, (2013); Swalhi et al., (2017) discovered in their studies that among the dimensions of organizational justice only procedural justice that is a significant variable that can influence project success, but distributive and interactional justice are not significant dimensions of organisational justice. And again, in the studies of Khan, Malik and Saleem (2020); Gibbs, Jewkes, Willan, et al., (2019) had reported in their studies that Workplace violence in Bangladesh's garment industry, does not always affect project success and such it has been observed that there is an inconsistencies in the findings of these past studies as some of them reported a strong relationship, while others reported a weak relationship, it is on the bases of the above justification and suggestion of prior studies that employee creativity serves as a moderator in this study. We contend that additional research and clarification are necessary in this study to fully understand the connections between the distributive, procedural, and interactional justice components on project success. Taking into account the aforementioned debate, the current study offers and empirically evaluates a theoretical model by looking at how perceived managerial fairness affects project performance with moderating impact of employee creativity.

Theoretical Framework

Supporting Theory

The theory that supported this study is the equity theory by Adams (1965) also provided support for this investigation. John Stacey Adams created this theory in 1963. According to equity theory, employee calculates the ratio of inputs (i.e., contributions) to outputs (i.e., results) that have been obtained from the organization (Adams, 1965). Inputs are the employee's (e.g., training, performance, work experience), whereas outputs are the incentives that workers receive in return for their contributions to the organization (e.g., pay, promotions, and career development chances). Employees are likely to compare the ratio of their contributions and reward for their contributions with that of their co-worker to see if they are rewarded fairly in relation to other employee. So, if the employee of Construction Company perceived that the resources are not fairly distributed by the management, their contribution toward the company will reduce and this will affect the success of construction sector. On the other hand, if the employee perceived that they are been treated well, their contribution will be positive and this will improve project success respectively.

Research Model



On this framework, it shows the relationship between the predictor variable and the criterion variable, and such in the context of this study, the organizational justice dimensions: distributive justice, procedural justice and interactional justice are the independent variables while, project success is the dependent variable, and employee Creativity performed the moderation role respectively.

Methodology

This study uses a survey research design, the choice of this design was on the basis that it is less expensive, because only the sample population that may be contacted not the entire population. Moreover, on the basis of time limit cross-sectional method was used in which data was collected just once for the study and then statistically analyzed and interpreted. This was achieved through the use of face to face medium to administer the questionnaire, unit of analysis (respondent) in this study include all employees of Taraba State Construction and Maintenance Agency (TARCMA), as listed in Taraba State Ministry of Work. The sample size for a population of 1900 is 320, as reported in the work of Krejcie and Morgan's sample size table (Krejcie & Morgan, 1970). In order to address various problems that the survey designs may run into, such as the mutilation of some questionnaire or the non-return of some of them that is (attrition of questionnaire). Therefore, as recommended by Israel (2013), arrangements must be made for attrition of questionnaire as advised by the researcher 10-30 percent should be added. As a result, the sample size is increased by 10% to take care of possible reduction. Thus, 10 % (320) is 32, therefore, 32 plus 320 equals to 352 sample size. The questionnaires were analyzed using partial least square structural equation modeling (PLS-SEM 4), the reason behind the choice of this tool is that it creates interaction term and run moderator analysis without any problem, secondary it allows the researcher to do advanced bootstrapping, blindfolding, it also allows for the assessment of validity (convergent and discriminant) and reliability as well as AVE and loading and weight simultaneously.

Variables' Measurement

Project success variable consist of twelve (12) items scale based on the work of Aga et al. (2016), organizational justice has been evaluated using an instrument established by Price and Mueller (1986), and employee creativity was measured using a 13-item scale developed by Zhou and George (2001). The questionnaires were modified, at first they were sent out to an expert in the area for modification so as to suit the unit (respondents) in this study, moreover, each item in the research was graded on a five-point Likert scale, ranging from strongly disagree

(1) to strongly agree (5). The research's instrument's validity was initially tested in a pilot study using 30 sub-samples to establish the validity and reliability of the instrument.

Table 1

Questionnaire Distribution and Response Rate

Questionnaire Details	Frequency	Percent
Questionnaire Distributed	352	100
Returned Questionnaire	344	97
Unreturned Questionnaire	8	2
Copies of questionnaire deleted	5	1
Questionnaire Usable	339	96

Source: Research Work (2023)

The questionnaire distributed were 352, out of these total copies of questionnaire distributed, 344 copies of the questionnaire were returned by respondents, and this constituted 97% of the distributed questionnaire. 8 copies of the questionnaire given out to respondents were not returned, and they constituted 2 of the total number of copies of questionnaire given to respondents. Outliers were detected using Mahalanobis distance (D^2), 5 copies of questionnaire were detected from the data set. As a result of the deletion of the 5 copies of questionnaire, only 339 copies of questionnaire were deemed to be usable for analyses, and this constituted 96 percent of the distributed copies of questionnaire to respondents respectively.

Measurement Model Evaluation (Outer Model)

Smart PLS4 Algorithm was used in the present research for assessing the quality of measurement model. The variance inflated variables suggested by Kock (2015) were produced using a full collinearity test. The present study supported the recommendation made by Neter et al. (1996) that VIF values should be less than 10. The investigation in this study revealed VIF value levels ranging from 1.50 to 2.99, proving that common method CMV is not a serious hazard to the ongoing study.

Accordance with the guidelines set out by Hair et al. (2017) in order to confirm the validity and reliability of the analysis. At the initial step, Factor Loadings, Cronbach's Alpha, Composite Reliability, and Average Variance Extracted were primarily utilized to apply for standard reliability and validity criteria to the

measurement model, in order to assess its convergent validity and discriminant validity (Hair et al., 2019). The suggested value of 0.60 was consistently surpassed, as shown in Table 1 (Chin, Peterson & Brown, 2008). The estimated Cronbach's alpha and composite reliability indicator values that were higher than the suggested value of 0.7, as suggested by Hair et al., (2017) and Sekaran and Bougie (2016) all point to 0.70 as the cutoff point for both measures, which was supported by the data from this investigation. According to Hair Jr, Hult, Ringle and Sarstedt (2014) total variation in average variance extracted also exceeded its suggested value of 0.5.

Result and Discussion

Figure 1

Measurement model for direct relationship

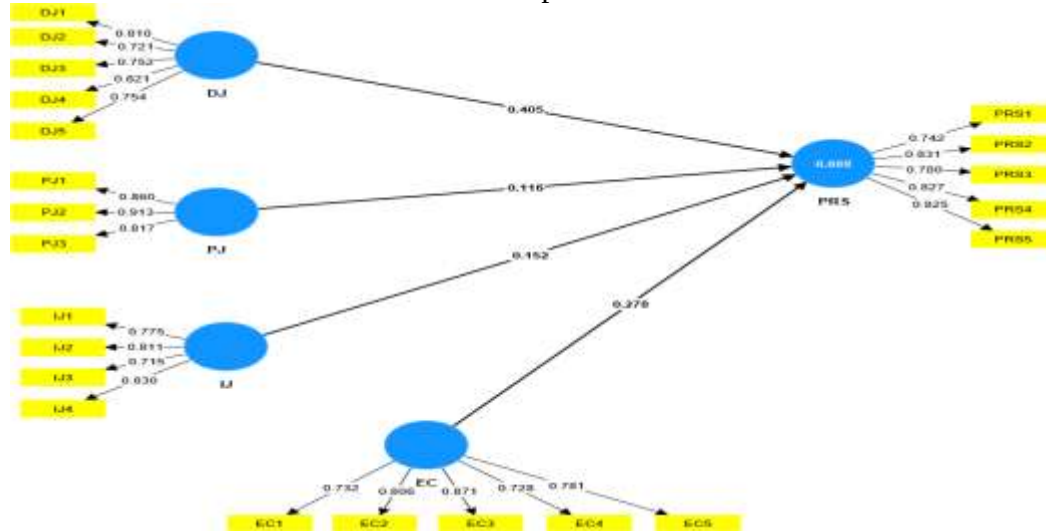


Table 1
Validity, Reliability and AVE Result of the study

Constructs	Items	Outer loadings	VIF	CA	CR	AVE
Distributive justice	DJ1	0.810	2.766	0.831	0.881	0.597
	DJ2	0.721				
	DJ3	0.752				
	DJ4	0.821				
	DJ5	0.754				
Employee creativity	EC1	0.732	2.997	0.844	0.889	0.617
	EC2	0.806				
	EC3	0.871				
	EC4	0.728				
	EC5	0.781				
Information justice	IJ1	0.775	2.311	0.792	0.864	0.615
	IJ2	0.811				
	IJ3	0.715				
	IJ4	0.830				
Procedural justice	PJ1	0.860	1.501	0.831	0.898	0.747
	PJ2	0.913				
	PJ3	0.817				
Project success	PRS1	0.742		0.860	0.900	0.643
	PRS2	0.831				
	PRS3	0.780				
	PRS4	0.827				
	PRS5	0.825				

Source: Smart PLS4

The Fornell-Lacker criteria, HTMT, and Cross loadings may all be used to assess discriminant validity. Henseler, Ringle and Sarstedt (2015) claimed that the

Fornell and Larcker approach for validating discriminant validity is not very trustworthy therefore the scholar recommended HTMT for discriminant validity.

Table 2
Heterotrait-Monotrait Ratio (HTMT) Ratio

Constructs	1 (DJ)	2 (EC)	3 (IJ)	4 (PJ)
Employee creativity	0.385			
Information justice	0.791	0.185		
Procedural justice	0.672	0.555	0.504	
Project success	0.609	0.467	0.201	0.634

Source: Smart PLS4

Henseler et al. (2015) proposed a threshold value of 0.90 for HTMT in order to identify a trustworthy criterion for the evaluation of validity in discrimination. If a value is greater than this threshold value, discriminant validity is lacking, as shown above all the values above are less than .90 that means discriminant validity has been met in this study.

Figure 1

Structural model for indirect relationship

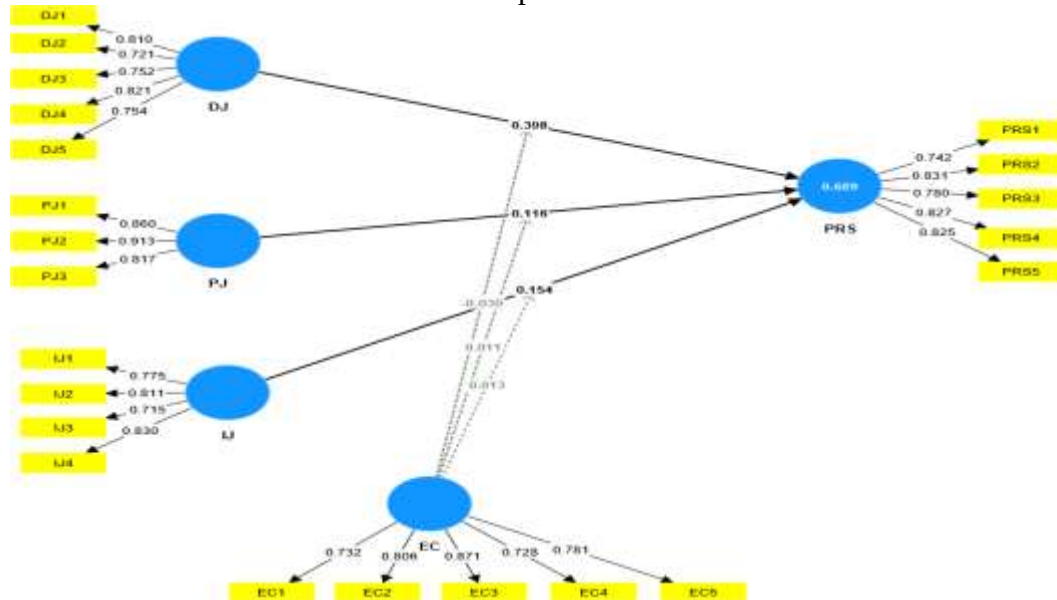


Table 3*Hypotheses for direct and moderating relationship (inner model)*

Hypotheses/relationship	Original sample	Standard error	T statistics	P values	Hypotheses verdicts
Direct effect					
H01: DJ -> PRS	0.405	0.054	7.479	0.000	Rejected
H02: IJ -> PRS	0.152	0.049	3.079	0.002	Rejected
H03: PJ -> PRS	0.116	0.046	2.499	0.012	Rejected
Moderation effect					
H04: EC x DJ -> PRS	-0.030	0.049	2.615	0.039	Rejected
H05: EC x IJ -> PRS	0.013	0.043	3.309	0.007	Rejected
H06: EC x PJ -> PRS	0.011	0.042	0.255	0.799	Accepted

Source: PLS Version 4

The significance of path coefficients was evaluated using a bootstrapping approach with 5,000 re-samples. The findings on the direct relationship indicate that distributive justice positively and significantly improves project performance, with a t value= 7.479 and a p value of 0.000; thus, the null H01 is not supported. The result in hypothesis two with a t value of 3.079 and a p value of 0.002, it can be said that interactional justice has a substantial positive impact on project success, so we reject the null hypothesis. Additionally, with a t-count of 2.499 and a p-value of 0.012, it was discovered that procedural justice significantly improved project success; null hypothesis therefore was equally rejected.

These result on the direct relationship between perceived organizational justices as a multifaceted variable on project success has proven that all the dimensions of organizational justices may significantly affect project success positively among the employee of construction sector as indicated in this respectively.

Additionally, the study evaluated the moderating impact of employee creativity on distribution justice and project performance, and the t value of 2.615, and p-value of 0.039 we failed to accept the null hypothesis, that means there is significant evidence to reject the null hypotheses stated, thus, the alternative hypothesis is accepted which means there is relationship. In the second

moderation hypothesis, the t count is 3.309 and the p value of 0.007, this result indicates that, H_{05} is rejected as employee creativity moderates the association between interactional justice and project success. However in hypothesis 6 in moderation the t value of 0.255 and the p value of 0.799, indicates that the p value is more than 5%, therefore, the null hypothesis is accepted meaning that employee creativity does not significantly moderate the relationship between organisational justices on project success respectively.

From the result presented on both direct and on the moderation it shows that, this model is a good model because most of the hypotheses are significant. By implication it means in an organization like the construction company when employee perceived that the management of the organization is fair to them in times of sharing the organisation's resources, it will motivate them to put in their best for the progress and success of the construction company, because they perceived that the organization treat them equitably.

Furthermore, the (R^2) value of (0.689) moderately explains that perceived organizational justice dimensions (distributive, procedural and interactional justice) predict 68.9% of variation in project success. According to Hair Jr et al. (2014), R^2 values of .75, .50, and .26 are regarded as substantial, moderate, and weak, respectively. In addition, the study analyzed the individual effect sizes (f^2) of the model. Effect size of .35, .15, and 0.02, shows that the f^2 value is large, medium and small effect influence as stated by Cohen (1988). The association between perceived organizational justice dimensions and project performance, according to the study's findings, has an impact size of (0.190, 0.082, 0.032 and 0.029) for a direct relationship and (0.001, 0.000, & 0.211) for a moderating relationship. In addition to that a blindfolding strategy is used to assess the predictive relevance (Q^2), which quantifies the quality of the endogenous latent components in the path model (Chin et al., 2008). Predictive relevance values more than zero ($Q^2 > 0$) show the model is predictively relevant, whereas values lower than zero ($Q^2 < 0$) indicate the model is not predictively relevant. According to the study's Q^2 value, of our endogenous variables have acceptable predictive relevance values of (0.434) for direct and (0.433) for moderation relationship.

Discussion of Findings

This work examined the effect of perceived organizational justice dimensions on project success with particular reference to construction industries in Taraba

State. The study found that distribution justice has a significant and positive effect on project success. This finding agrees with the findings of prior studies, example Wilson, (2010), Serrador & Turner (2014). That distribution justice improves the project success in an organization. The study also found that interactional justice has a significant and positive effect on project success. This finding, tallies with the findings of Ouyang, Sang, Li and Peng (2015), Kerwin, Jordan and Turner (2015) that significant relationship exists between interactional justice and project success. The results further showed that procedural justice has a significant positive effect on project success. This agrees with the findings of Folger and Konovsky (1989). That procedural justice promotes project success. In the moderation relationship distributive justice and interactional justice effect on project success was significantly moderated by employee creativity. However, procedural justice's influence on project success was not moderated by employee creativity.

Implications of the Study

Theoretical implications

The study responses to demands made by (Cheung,2013; Basu, Pradhan & Tewari, 2017) who argued that the relationship between perceived organizational justice dimensions and project success has been expanding significantly, as the majority of studies to date have not determined the strength and direction of a causal link. As a result, this study adds to the body of literature by proposing an integrated regulated interactive variable to deepen comprehension of the relationship by taking into account employee creativity (Davis, 2018). Additionally, the study found a significant moderating effect, which supports other theories that have been advanced regarding the importance of different social and contextual factors in igniting the motivation process and achieving a desired goal and alternative status in relation to employees. These theories are anticipated to have an impact on the project success of the construction company in line with equity theory. This study has expanded the concept of organizational justice, project success and employee creativity as various relevant and extant literatures were thoroughly reviewed, the study contributes to the body of knowledge greatly.

Managerial implications

To improve employee performance inside an organization most especially in the construction company, which will eventually result in project success, management at the construction firm must understand what the workers are

requesting which is fairness. Reduced employee mistreatment and increased employee happiness are the two main goals that the management of the construction organization is working toward. The equity idea states that perceived organizational fairness results in project success (Gu, Jitpaiboon, & Smith, 2019). According to the findings of Almarri, et al., (2017), employee perception of perceived organizational fairness has a stronger impact on the project success of a construction company. In order to motivate employees to contribute to the project's success, management of the construction company should concentrate on treating its employees well and fairly. Furthermore, positive relationships with customers enhance a company's reputation (Carvalho & Berssaneti, 2015). Thus, putting the findings of this study into practice it will improve the success of the construction sector in Taraba State.

Conclusion and Recommendation

Perceived organizational justice dimensions from the results of the study was discovered to have a positive and significant effect on project success of the construction company. This implies that organizational justice is a sig. variable that may influence project success as stated above. Whereas, employee creativity did not significantly moderate the relationship between procedural justice and project success thus, it was recommended that management and stakeholder of construction companies should ensure that procedures adopted by the management of the construct company in sharing organizational resources should be free and fair plain to all the employee of the organisation most especially construction company staff.

It was recommended from the above findings that stakeholders of the construction sector may ensure that, distributive justice, procedural justice and interactional justice are properly implemented in an organization which will motivate the employee to be committed and in turn their performance will boost up and it will lead to the success of the construction company.

Suggestion for future study

This research was only conducted at a limited research location, Taraba Road Construction and Maintenance Agency (TARCMA), so the results of this study may not necessarily be generalized to construction company in other areas, so for those who wish to use the findings of this study, it is necessary to review literature and conduct another study in other part of the country for generalizing the results of the study, because it is not necessarily the same research results if carried out

on different research respondents. The study was cross sectional in nature, Subsequent study may employ longitudinal research design which may be used in place of cross sectional research design in subsequent studies.

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