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THE COST OF HUMANITARIAN CRISES AND SUSTAINING PEACE AND SECURITY IN NORTHEASTERN NIGERIA

O. O. OGUNSAKIN¹

ABSTRACT

This study examined the cost of humanitarian crises and sustaining peace and security in Northeastern Nigeria. The region faces a lot of terrorist attacks and violent conflicts, which have resulted in the loss of lives and properties in recent years. The estimated economic cost of humanitarian crises continues to increase every year, and the wave of displacement of people is appreciated in numbers. This study adopted qualitative methodology and applied content analysis to analyze secondary data sources. These sources include articles, academic journals, government reports, and the internet. The findings from the study shows that people's lives and properties are victims of conflicts and insecurity in northeastern Nigeria. The low development and growth also account for the region's economic cost of humanitarian crises. The high rate of money put into security vote has been increasing every year. To secure peace and security, there is a need to build a better architecture and framework that will protect the lives of the citizens and should be geared toward a better country. The humanitarian crises in northeastern Nigeria deserve better attention from the government and international stakeholders like the United Nations. The paper concluded that the cost of humanitarian crises should be understood and analyzed to bring peace and security to people in northeastern Nigeria.

Keywords: Cost, Economic, Humanitarian, Peace, Conflict, Nigeria

INTRODUCTION

Nigeria is the most populous and largest democracy in Africa, home to more than 200 million people (Green, 2023). It's also one of the most culturally varied nations in the world, with over 500 languages, over 300 ethnic groupings, and numerous unique religious and regional distinctions. Conflicts based on overlapping ethnic, religious, political, and regional divides plague the nation; these include disputes over resources in the Niger Delta, divisions between Christians and Muslims across the nation, and the emergence of Islamist terrorist in the north, by Boko Haram (Onakuse & Jatula, 2021). Founded in Maiduguri, the largest city in Northeast Nigeria and the capital of Borno state, Boko Haram's motto is, "Western education is a sin," in 2002 (Pérouse de Montclos, 2014).

Northeastern Nigeria is one of Nigeria's six political and geographical geopolitical zones. The state comprises Adamawa, Bauchi, Borno, Gombe, Taraba, and Yobe (Bashire, 2006). With a land area that makes up almost one-third of Nigeria, the North East is the country's largest geopolitical zone. The tropical West Sudanian savanna ecoregion and the semi-desert Sahelian savanna make up the majority of the zone's environmental divisions.

Northeastern Nigeria is faced with conflicts and terrorism invasion from Boko haram, banditry, herder-farmers conflict, and other displacement issues. The insurgency of Boko Haram, a terrorist organization that has attacked local populations in Nigeria, Chad, Cameroon, and Niger, is primarily to blame for the humanitarian crisis in northeastern Nigeria (UNHCHR, 2015). The worst humanitarian disaster in Nigerian history was brought on by the actions of this terrorist organization and the government's counterinsurgency (Hamid et al, 2017). It is believed that Boko Haram was able to flourish in this area due to the unstable socioeconomic conditions brought on by the region's delicate climate and the central government's negligence (Rizzo, 2015; Kamta, Azadi and Scheffran, 2020).

The cost of humanitarian crises in northeastern Nigeria is creating lot of inequality, and creation of Internally Displaced Persons (IDPs) camps across the region. Nigeria is still dealing with several social and economic issues, such as insecurity brought on by banditry and kidnappings, particularly in the northwest, ongoing terrorist insurgencies in the northeast, and separatist movements in the southeast (World Bank, 2024). Despite

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the region's abundance of resources, the poverty rate in Nigeria's northern region is highly concerning (Jaiyeola & Choga, 2020). Mass internal displacement has also resulted from insurgency attacks. According to report by United Nations Development Programme (2021), most displaced Nigerians, nearly 1.5 million are spread over Adamawa, Borno, and Yobe, totaling over 1.8 million. Furthermore, in 2020, 1.8 million students did not attend school, and in 2030, the average Nigerian residing in the northeast will have missed an entire academic year due to a lack of funding for development initiatives. The region is also plagued by chronic conflicts and climate change, both of which hinder regional development including peace and security (Olatunji, 2021).

With the exception of the civil war in Nigeria in the late 1960s, the insurgency led by Boko Haram poses the country's greatest security threat. For many years, there has been nearly constant news coverage of horrific bomb explosions, suicide bombings, murders, kidnappings, thefts, robberies, torture, and rapes in addition to the willful destruction of both public and private property, including assaults on educational institutions (Balami, Ahmed, & Yusuf, 2016).

The lack of peace and security has hindered the growth of the manufacturing, small-scale business, and agricultural sectors in Northeastern Nigeria, particularly in Borno. It has also resulted in a generation of internally displaced people and refugees in the states of Adamawa, Zamfara, Benue, Taraba, and Yobe, as well as a high rate of economic loss and reduction in government revenue and food security (Jonah & Olawale, 2019). On this background, the study examined the cost of humanitarian crises and sustaining peace and security in Northeastern Nigeria.

Northeastern Nigeria has been affected by a high degree of attacks from Boko haram terrorist groups, banditry, the Islamic State of West African Province (ISWAP), and other criminal groups. This study identified that People are being displaced due to the general unrest in North-East Nigeria, which is still present in several Local Government Areas (LGAs) in the Borno, Yobe, and Adamawa (BAY) States. Many variables affect food security, including persistent conflict, growing food prices, and climate change-related vulnerability. This is happening in an area where residents already face significant challenges. The violence of non-State armed organizations like Boko Haram has caused years of conflict and instability in North-east Nigeria. Approximately 80% of the 8.4 million individuals needing humanitarian aid are women and children. Over 2.2 million individuals have lost their houses as a result of the violence (OCHA and UN RC/HC Nigeria, 2022). Millions of individuals have lost access to vital support, and the ability to maintain themselves and their families due to the devastation caused to livelihoods, health care, education, and other important sectors.

Research Questions

With the need to achieve the study on the cost of humanitarian crises and sustaining peace and security in Northeastern Nigeria, the following research questions will be considered:

1. What is the nature of the cost and causes of humanitarian crises in Northeastern Nigeria?
2. What impact do humanitarian crises have on sustaining peace and security in Northeastern Nigeria?
3. What are the challenges of addressing the cost of humanitarian crises in sustaining peace and security in Northeastern Nigeria?

LITERATURE REVIEW

Humanitarian Crisis: A humanitarian crisis is generally described as an occurrence or sequence of occurrences that pose a serious risk to the health, safety, security, or well-being of a community or other sizable population, typically over a vast geographic area (Bloxham, 2022). It typically takes place over a huge land area and might be either internal or external. In such cases, responses on a local, national, and international level are required.

Since the causes of each humanitarian crisis vary, each one calls for a distinct kind of response aimed at the affected sectors. There may be immediate or long-term consequences from this. Natural disasters, artificial disasters, or complicated circumstances can all be considered humanitarian crises. When this happens, several things create a complex emergency that keeps many people from accessing necessities like food, clean water, or safe housing (Gharib, 2019).

Peace: The two elements that characterize peace are the absence of violent conflict and mutual respect and understanding among individuals and groups (Mustafa et al., 2023). The Latin term "pax," which originally

meant "a pact, a control or an agreement to end war or any dispute and conflict between two people, two nations, or two antagonistic groups of people," is where the word "peace" gets its literal meaning (Khemando, 1995). Like many theoretical concepts, peace is hard to describe. Similar to contentment, harmony, fairness, and liberty, we can frequently identify the absence of peace. As a result, among others, Johan Galtung—a pioneer in the field of peace studies and peace research—has put out the crucial differentiation between "positive" and "negative" peace. "Positive" peace refers to the coexistence of several desirable social and mental conditions, including equity, justice, harmony, and so forth. In the past, the term "negative" peace has been used to describe the "absence of war" and other major violent human conflicts.

Security: Security is the ability to withstand possible danger or other forms of unwelcome compulsion. Security beneficiaries, or referents in technical terms, might include individuals and social groups, things and establishments, ecosystems, and any other phenomena or organization that is susceptible to unintended change. Although the term "security" is most commonly used to describe defense against hostile forces, it can also refer to a bigger range of other concepts, such as the absence of harm (such as freedom from want), the presence of a necessary good (such as food security), resilience against potential harm (such as secure foundations), secrecy (such as a secure phone line), containment (such as a secure room), and a state of mind (such as emotional security) (Kuner, Svantesson, Cate, Lynskey, and Millard, 2017; Uzoigwe, 2024).

Nigeria has a wide range of security issues, including banditry, secessionist agitation, and terrorism. The menace of Boko Haram terrorists continues in the north. At the same time, in the south, agitations such as the Yoruba nation agitation in the southwest and the Biafra agitation in the southeast contribute to the region's complicated security environment.

METHODOLOGY

This study adopted the qualitative research method. A deeper understanding of and exploration of real-world issues is provided by qualitative research (Moser and Korstjens, 2017). Qualitative research generates hypotheses for additional investigation and knowledge of quantitative data instead of gathering numerical data points or intervening or introducing treatments as in quantitative research. The desk research approach was applied to derive data from articles, journals, government reports, newspapers, and the Internet. A purposive sampling of various secondary sources was done to ensure that the different research questions were answered properly. Meanwhile, the study adopted the content analysis of secondary data was done to understand the study's various themes.

FINDINGS AND DISCUSSION

The Situation and Causes of Humanitarian Crises in Northeastern Nigeria

In northeastern Nigeria, the fighting in the states of Borno, Yobe, and Adamawa has destroyed cities and villages and left millions of families without a place to live or a means of subsistence (UN Crises Relief, 2023). The majority of the crises' victims are still civilians, with women and girls suffering the most and being more vulnerable to violence. The three main factors behind Northeastern Nigeria's ceaseless humanitarian crises and insurgencies are political, religious, and economic. Poverty, inequality, unemployment, low levels, and lack of education are a few examples of economic factors. It is not far to seek the reason. While "high rates of unemployment and inequality, combined with low levels of education and development, are thought to soften the ground for recruitment and provide motives to fight," poverty also exacerbates "vulnerability to insurgency at the individual and community level by lowering the opportunity cost of mobilizing for violence" and weakens government institutions, which in turn reduces resilience to conflict (Marks, 2016).

However, political causes of violence include issues like bad leadership, widespread corruption, arming, using, and abandoning young people without jobs as political campaign fodder, among other things (Alao, 2023). As is the situation in the Northeast of Nigeria, poor governance and corruption are the root causes of humanitarian crises, violent conflicts, and factors that impede development. Additionally, they give criminal organizations and armed groups a means of funding, hinder the growth of strong institutions of governance, impede social and economic advancement, and exacerbate already existing conflicts (United States Institute of Peace, 2010). Furthermore, after politicians have won elections, the majority of unemployed youngsters who are armed and deployed as political thugs frequently find themselves abandoned.

The religious component, which has to do with radicalism, rigid beliefs, and ideas held and espoused by some religious leaders, makes up the third group of factors contributing to violence in the northeastern region of Nigeria. In the past, such ideas and philosophies have encouraged indulgence in the North. The violent Maitatsine movement in Kano, a state in North-West Nigeria, throughout the 1970s and early 1980s is the example that naturally comes to mind (Adimbola, 2011). Mohammed Marwa's organization drew a sizable contingent of young, jobless individuals known as the Yan Tatsine. Its strict and divisive interpretation of Islamic law prohibits using automobiles, radios, wristwatches, and other devices. Following multiple armed conflicts with government security forces, a significant proportion of the group's members, including the leader, eventually perished in 1980 (Albert, 1997).

Mohammed Yusuf, the leader of Boko Haram, developed his religious beliefs in the Izala Society movement before opening the Ibn Taymiyyah Center in Maiduguri (Afolabi & Yusuf, 2019). There, he taught his large following to take up arms against the government, security personnel, and "infidels," or non-Muslims and those who do not practice true Islam (Aparid, 2015). He also preached against Western education. These were some of the radical ideologies that stoked unrest in the Northeast.

A research study was commissioned by UNICEF (2023), the United Nations Children's Fund, to estimate the economic impact of the conflict in North East Nigeria. The study specifically focused on violence and grave violations against children. The North East war has persisted for many years; in 2015, there were 10,000 direct conflict-related deaths annually (Uppsala Universitet, 2022). Conflict-related deaths have decreased to about 3,000 annually (Uppsala Universitet, 2022). However, the humanitarian effects are still severe, with 2.6 million people displaced domestically in North East Nigeria (UNHCR, 2022).

More than 1,400 schools have experienced attacks, according to a 2018 UNICEF report (UNICEF, 2018). Armed criminal groups have more recently carried out similar armed attacks on schools in Nigeria, copying the strategies of Jama'atu AhlisSunna Lidda'awati Wal-Jihad (JAS). UNICEF projected that almost one million children could not attend school in 2021. Approximately 300,000 children experienced acute malnutrition, and 920,000 children were reported to be malnourished overall (Integrated Food Security Phase Classification, 2021).

Famine is defined by extremely high levels of food insecurity, malnutrition, and disease exposure; the conflict has contributed to this (United Nations Development Programme, 2020). According to earlier research, the BAY states' conflict-attributable effect on child malnourishment is expected to be 21.5% in 2020 (United Nations Development Programme, 2020). This implies that in the absence of war, the region's child malnourishment rate would be 21.5% lower by that year.

Impacts of Humanitarian Crises on Sustaining Peace and Security in Northeastern Nigeria

The more than 15 million people who live in the northeastern Nigerian region have been profoundly affected by the bloody attacks that Boko Haram has carried out since 2009 (The World Bank, 2021). The fighting has resulted in about 2.2 million people being forcibly relocated and about 20,000 deaths. Borno, Adamawa, and Yobe are home to over 70% of the displaced people. For instance, Taylor, Bohl, Rafa, and Moyer (2020) and other scholars conducted researches on the impacts of conflict in northeast Nigeria. According to the Humanitarian Outcome (2020), Northeastern Nigerians have been subjected to varied degrees of armed warfare since 2009, when Boko Haram, an extremist organization, declared its intention to create an Islamic State province encompassing the states of Adamawa, Borno, and Yobe. In 2013, the Nigerian government declared an emergency, initiating law enforcement and military measures.

Schools are frequently destroyed or closed due to war, making it difficult or impossible for children to attend in northeastern Nigeria. Children who are displaced by war frequently do not have access to an education. Even children who have not been relocated may quit school because they fear being kidnapped, want to protect their household from shock, or are afraid of being attacked or experiencing violence when they leave the house (Blattman & Annan, 2010; Justino, 2011).

In northeastern Nigeria, agriculture is the primary economic sector, employing 65–80% of the people in Adamawa, Borno, and Yobe and accounting for more than half of the region's (GDP FAO and ICRISAT, 2019).

A scenario marked by low productivity, high sensitivity to climate influences, and environmental deterioration has only been made worse by conflict throughout the last ten years. Crop productivity and production have been shown to have decreased in correlation with Boko Haram activities, as have wages and the amount of contracted agricultural labour. Attacks on markets regularly have resulted in market closures, decreased regional activity, and a decline in agricultural trade (ACAP, 2016). Fallow land and land abandonment have resulted from mass displacement (Adelaja & George, 2019). Many farmers lack access to land, assets, capital, and essential inputs and cannot make agriculture investments. Farmers may encounter limitations in certain regions that restrict the kinds of crops they can plant and the distances they can travel for farming-related purposes.

In addition to human casualties in northeastern Nigeria, one of the most obvious outcomes of violent conflict is the damage of infrastructure (Adelaja & George, 2019). For strategic purposes, critical infrastructure may be the target of an attack. Infrastructure damage has an impact on many facets of economic and human development. It increases production costs, impedes the flow of aid and goods, and encourages the spread of contagious illnesses in the case of water and sanitation infrastructure. Moreover, conflict deflects funding and raises the price of brand-new infrastructure projects.

Additionally, humanitarian organizations have needed help recognizing the scope of the issue and acting quickly enough (International Crisis Group, 2016). In order to effectively respond to one of the worst humanitarian crises facing the globe today, UN agencies and international humanitarian NGOs must take a more proactive approach to working with authorities. By doing this, more foreign funding—currently woefully inadequate—will be mobilized, and international expertise will be more effectively utilized. The humanitarian crisis will have major political and security ramifications if it is not resolved quickly. In the short term, it might force people to return to Boko Haram-controlled areas or to other parts of Nigeria where their ability to survive is in doubt (Walker, 2012).

Violent conflict in the northeastern Nigeria significantly reduces the criteria of a healthy life, particularly for children, by destroying vital health infrastructure and worsening living conditions for the populace (UNICEF, 2023). The violent conflict frequently impedes preventative and treatment initiatives in addition to reducing access to health services in the northeast region of Nigeria. Boko Haram has targeted and abducted women in particular. Between 2009 and 2014, there were reportedly 500 abductions of women (Human Rights Watch, 2014). Women who were kidnapped and exploited as spies, warriors, and suicide bombers experienced cruelty and abuse (International Alert and UNICEF, 2016). Reintegration, counseling, and training programs designed for men are not available to women returning from captivity or involvement with armed groups, and women who have fled or been released are not necessarily accepted back into their communities (Alert International and UNICEF, 2016).

The gendered effects of the conflict on schooling are yet unclear. Teachers polled stated that females' attendance has decreased because of their fear of being attacked and kidnapped. However, Bertoni et al. (2018) discovered that Boko Haram activity close by is linked to a higher decline in boys' total educational attainment than in girls. This may be because boys are more likely to be enrolled in school. However, it may also be because fewer educated men are leaving the community or because men's educational attainment began at a higher level.

Challenges of Addressing Cost of Humanitarian on Sustaining Crises in Northeastern Nigeria

The military in Nigeria, which is overworked, underfunded, and beset by corruption, has had difficulty holding onto its victories. In many areas of the northeast, counterterrorism efforts and rebel attacks pose a constant threat to civilians (Hussain, Okeke, Oyebanji, Akunne & Omoruyi, 2021). The Nigerian government's civilian response to the crisis has been hindered by widespread corruption and inefficient coordination, with several local, state, and federal elites profiting from the crisis' prolongation (Brechenmacher, 2019). Furthermore, although international partners emphasize regional response to the crisis, the region needs an efficient political infrastructure, and collaboration has mostly come from outside sources.

A lack of cross-border strategies is needed to address issues, including the return of displaced people, the reintegration of Boko Haram members, and the socioeconomic recovery of rural communities. Because boundaries in the region are so brittle, failing to coordinate might result in the conflict simply shifting from one

government to the next.

The camp is extremely crowded, and daily arrivals have made scaling up attempts to declutter it impossible. As a result, the living conditions of already vulnerable individuals are significantly worsened, and many struggle to have restricted access to essential amenities.

Other challenges include:

1. Corruption in managing funds in supporting IDPs in the region.
2. Poor coordination mechanism in supporting the security design in the region.
3. Poverty and lack of socioeconomic empowerment for women and young people.
4. Religion extremism and other ethnic cleansing are creating a lot of humanitarian issues in the region.
5. Poor political will in addressing the insecurity and other safety issue in the region.

During this humanitarian crisis, persistent insecurity has interfered with overland transit routes and made it more difficult for relief organizations to reach people affected by the fighting. According to USAID (2022), there are especially serious access issues in Borno, where 4.4 million people are estimated to need aid. According to the International Organisation for Migration (2023), about 263,000 internally displaced people live in makeshift camps, on top of the 1.3 million displaced people who are dispersed over 1,413 self-established locations inside host communities. IDPs are subject to various vulnerabilities, including health concerns and insecurity, at these locations since they frequently lack adequate infrastructure and access to humanitarian aid.

CONCLUSION

The aforementioned clarifies how important peace and stability are to any country's economic ability. The process of delivering long-term solutions to the various humanitarian crises in northeastern Nigeria deserved urgent responses and strategic implementation. In addition to hindering socioeconomic development and other investments in regional goals, the issues of conflict, terrorism, poverty, displacement, starvation, banditry, food insecurity, corruption, and other social criminals should be addressed to ensure that people in northeastern Nigeria are safe. It is impossible to achieve inclusive peace, security, and development, which benefits the vulnerable and the elite when the cost of humanitarian crises is curbed across the region.

RECOMMENDATIONS

The study recommended the following in tackling the cost of humanitarian crises and sustaining peace and security in northeastern Nigeria:

- i. Effective conflict prevention and resolution techniques have been shown to work locally, but they are challenging to expand. These initiatives have enhanced communication between the public, law enforcement, and security agencies while also assisting in addressing local security issues.
- ii. Donor programs have contributed to restoring essential services and infrastructure, the political objectives of stabilization programming still need to be clarified.
- iii. The involvement of humanitarian organisations in providing aid relief to displaced people should be done collectively.
- iv. The government is to provide a haven for people living in the IDP camps and the host communities across northeast Nigeria.
- v. There is a need to consolidate military victories over Boko Haram by putting in place a comprehensive aid and social and economic agenda for the government of Nigeria.
- vi. International partners should fund and provide technical assistance to the government of Nigeria and northeastern states for their comprehensive post-conflict peacebuilding programs for the region. These programs should focus on developing a citizen-centric security governance culture in the relevant institutions and the security sector.
- vii. Finding a balance between interacting with the community and ensuring the military's and civilians' safety is necessary while addressing security concerns. Military and civilian leaders can collaborate with local law enforcement and security personnel to guarantee the safety and security of community engagement events.

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INVESTMENT IN INFRASTRUCTURE AND PER CAPITA INCOME IN NIGERIA

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ABSTRACT

Investment in infrastructure and per capita income are interrelated. Effective and efficient investment in infrastructure is therefore paramount to uphold macroeconomic stability and promote sustainable growth. This study examined the impact of investment in infrastructure on per capita income using variables such as investment in health infrastructure, investment in road and construction infrastructure, investment in education infrastructure, investment in transport and communication infrastructure, and per capita income treated as the dependent variable. Secondary data was sourced from various issues of the National Bureau of Statistics and the World Bank for the years 1990 to 2022. The Vector Error Correction Model (VECM) was used for analysis. This study reveals that investment in health infrastructure, road, and construction infrastructure has a positive relationship with per capita income. This emphasizes that effective and efficient investment in health infrastructure and road and construction investment significantly influences per capita income. In light of these findings, it is recommended that investments should be made heavily on health infrastructure and road and construction infrastructure as this would increase the per capita income of Nigerians. It is also important to ensure monitoring on transport and communication and education infrastructure. This would ultimately lead to the advancement of these sectors and improved standard of living of Nigerians.

Keywords: investment, education, healthcare, infrastructure, capita income

INTRODUCTION

Infrastructure investment has long been recognized as a fundamental driver of economic growth and development worldwide. In fact, development economists have recommended that both physical and social infrastructure are necessary prerequisites for a booming economy (Sawada, 2015). The theoretical exposition by Keynes (1936) revealed that without adequate infrastructure in key sectors such as telecommunications, transportation, energy, healthcare, housing, and education, achieving optimal living standards and sustainable development in any dimension remains daunting. Investing directly in infrastructure yields manifold benefits, including the provision of essential production facilities, reduction of trade transaction costs, and creation of employment opportunities, thereby generating positive externalities for society (Ogunlana, Yaqub & Alhassan, 2016).

Over the past few decades, Nigeria has made significant efforts to invest in infrastructure across various sectors including transportation, energy, water, telecommunications, and social infrastructure such as healthcare and education (Abdulkarim, 2023; Onwuemeka, Nwogwugwu & Onwuka, 2022). A significant challenge facing investment in infrastructure is inadequate funding. Available statistics show that the allocation of the federal budget to education spending was 10.79 percent in 2015 and this reduced to 7.9 percent in 2016. A further reduction to 6.13 percent was experienced in 2017. Although the allocation later increased to 7.12 percent in 2019, this is still low compared to what it was in 2015 (Statista, 2024a). Sadly, inflationary pressures in the economy imply lower value for this allocation. The available statistics on health expenditure are also not encouraging. For instance, between 2008 and 2021, health expenditure as a share of the GDP increased slightly from 3.7 percent to 4.08 respectively (Statista, 2024b). This is only about a 10.27 percent increase.

Other challenges include poor maintenance and corruption. These have hampered the effectiveness of investments made on infrastructure. Many Nigerians still lack access to quality education, electricity, potable water and proper sanitation (Wasurum & Kpagih, 2023). This is even worse in the rural areas (Potrafke &

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Roesel, 2019). Improved transportation networks have facilitated the movement of goods and people, thereby reducing transaction costs and stimulating economic activity. Yet, a lot of gaps still exist in the transportation sector. Nigeria's waterways cover a total of 10,000 kilometers, but only about 3,800 kilometers are suitable for navigation. Industry players have also opined that of over 195,000 kilometres of roads in Nigeria, only 37 percent are in good condition (Augusto & Co, 2024). Despite these challenges, investment in infrastructure remains a critical determinant for improved growth and poverty reduction in Nigeria (Atapattu, 2020; Wasurum & Kpagih, 2023). This is however a function of the definition and implementation of investment strategies (Vagliasindi, 2022).

Per capita income has increased from \$567.5 in 1990 to \$2,065.8 (about 263.8 percent increase) in 2021. On the other hand, investment in health infrastructure has increased from N500,000 in 1990 to N423 million in 2022 (over 800% increase) (National Bureau of Statistics (NBS), 2022; World Bank, 2024). This clearly reveals that the increase in investment in infrastructure is not synonymous with that of per capita income. Again, standard of living has remained low evidenced by high multidimensional poverty rates and inequality index. The NBS (2022) revealed that over 63 percent of Nigerians are multidimensionally poor. Estimates for Nigeria's inequality is stark, but it has remained relatively high since the 1990s. However, after 2010, inequality began to decrease, initially driven by a rise in incomes for the lower and middle classes from 2010 to 2015. Following the 2016 economic slowdown, average incomes have been declining (Chancel et al., 2022).

From the foregoing, this study seeks to empirically examine the impact of investment in infrastructure on per capita income in Nigeria between 1990 and 2022. Infrastructure investment is a critical driver of economic growth and development. By examining its impact on per capita income, this study seeks to provide insights into how infrastructure projects can enhance the overall economic well-being of Nigeria's populace. Also, by examining how infrastructure investments affect economic outcomes, this study supports the strategic planning and implementation of policies that align with the SDGs. It emphasizes the role of infrastructure in promoting sustainable development, reducing inequalities, and improving the overall quality of life, thereby contributing to the all-inclusive achievement of the SDGs in Nigeria.

The subsequent sections of this paper are structured as follows: section 2 presents the review of conceptual, and empirical literature; while section 3 explains the methodology and theoretical framework that was used. Section 4 presents and discusses the results of the analysis and section 5 concludes the study by providing relevant recommendations.

LITERATURE REVIEW

Investment involves the acquisition of new capital assets, including machinery buildings, and other production tools, which enhance the economy's productive capacity. It is crucial for a nation's economic growth as it enables the adoption of modern production techniques, fosters invention, facilitates knowledge transfer, and enhances efficient production (Abdulkarim, 2023). Per capita income represents the average income earned by each person in a specific area, like a country, region, or city, during a particular year. It is calculated by dividing the total income of that area by its population. This metric provides an indication of the economic well-being of the residents of the area and is often used to compare the economic performance of different regions or countries. A country's per capita income is expected to increase relative to the capital abundance of that country (Ramezzana, 2000).

Theoretically, at the core of the relationship between infrastructural investment and per capita income lies the neoclassical growth theory, which posits that capital accumulation, including investments in physical infrastructure, contributes to economic expansion and rising incomes over time. Building upon this framework, endogenous growth theories emphasize the role of infrastructure in fostering technological progress, enhancing productivity, and sustaining long-term economic growth. Adequate infrastructure, such as transportation networks, energy systems, and communication technologies, reduces production costs, improves resource allocation, and enhances market efficiency, leading to increased productivity levels and economic output (Keynes, 1936). The endogenous growth theory suggests that investing in capital and creating new processes and products are essential for driving long-term growth, and these efforts prevent the occurrence of diminishing returns (Abdullahi & Sieng, 2023).

Additionally, the Solow Growth Model, introduced by Solow in the 1950s, is a key economic theory that explains long-term growth by focusing on the impact of capital accumulation, labour, and technological advancements. The model emphasizes that investment in physical capital (e.g., machinery, buildings, infrastructure) can lead to capital accumulation (Solow, 1956). This accumulation is a key driver of economic growth. According to the model, higher levels of investment increase the stock of capital, which in turn raises the productive capacity of an economy. This boost in productivity can lead to higher output per worker, thereby increasing per capita income.

Various studies have been conducted to investigate the relationship between infrastructural investment and economic growth in Nigeria. The results of these studies are different from each other; depending on the methodologies, time frame & variables displayed in the models. For instance, Enya and Ezeali (2021) examined the relationship between infrastructural investment made by the government and economic growth of Nigeria using variables such as Real Gross Domestic Product (RGDP), Public Investment in Education (PIED), and other independent variables. The data was sourced from the CBN Statistical Bulletin from the years 1980 to 2020. The analysis (Ordinary Least Square Regression) showed that the logged public investment in transportation had a negative relationship with the Real Gross Domestic Product. On the other hand, public investment in technology, and other variables had a positive relationship with the Real Gross Domestic Product. The study subsequently recommended enhancing public investment in technology and education to benefit the country, particularly in light of the growing need for economic diversification.

Abdulkarim (2023) again emphasized the importance of investment in reducing poverty and promoting economic growth. The study disaggregated different investment measures and their impact on economic growth between 1981 and 2020 in Nigeria. The study used conventional and structural break stationarity tests, and the ARDL approach. The findings demonstrate a significant co-integrating relationship among the variables studied. The results indicate that specific factors such as private sector credit, internal investment, economic openness, foreign investment, and interest rate positively impact economic growth in the long-term growth. Conversely, foreign direct investment (FDI), capital spending, and inflation rate significantly hindered long-term growth. Supporting this proposition, Atapattu (2020) also asserted that spending on infrastructure is important for poverty reduction. Focusing on Asian countries for years 1990 to 2015, the study used unidirectional causality test. Findings showed that a larger reduction in poverty is expected in the long-run due to access to infrastructure in the selected countries.

Furthermore, Onwuemeka et al. (2022) considered the relationship between public spending on infrastructure and economic growth in Nigeria between 1989 and 2018. The GDP was the dependent variable, while public expenditure on transportation and communication, government spending on energy at the time, and employment rate were adopted as the independent variables. The autoregressive distributed lag bounds method to co-integration techniques was used to ascertain the relationship between the dependent and independent variables. The results showed that government spending on power had a negative, albeit insignificant effect on the Real GDP of Nigeria. However, government spending on transport and communication demonstrated a positive impact in the short run but a negative effect in the long run. The study also recommended that for Nigeria to achieve successful infrastructure development, the government should focus disproportionate revenue on critical sectors of the economy and ensure effective monitoring of fund implementation after allocation. In addition, Kolawole (2020) asserted that government capital expenditure, private sector credit, and increased level of GDP led to infrastructural development.

The impact of infrastructural spending by the government on economic growth was also examined by Babatunde (2018). This study employed both primary and secondary modes of data. On one hand, reported yearly expenditure on selected infrastructure and annual GDP between 1980 and 2016 were the secondary data. On the other hand, responses from a sample of 242 respondents were focused upon as primary data. The secondary data were analyzed using unit root and co-integration tests, specifically the Augmented Dickey-Fuller and Phillips-Perron tests. Additionally, the weighted least squares method was employed to examine a 37-year yearly time series, utilizing the Vector Error Correction Model for the analysis. The study revealed that government expenditures on the various infrastructural sectors exert substantial positive impacts on economic growth in Nigeria. This is also in line with the findings of Onwuemeka et al. (2022). Conversely, investment in

agriculture and natural resources infrastructure exhibits a significant negative association with economic growth. The study suggests that the government should increase infrastructural spending on agriculture and natural resources to benefit the citizens.

Moreover, similar to the study by Babatunde (2018), Okoli *et al.* (2023) investigated the effect of government spending on economic growth in Nigeria. Hirschman's approach was used to analyze annual data from 1970-2020. Secondary data was sourced from the Central Bank of Nigeria's Statistical Bulletin to examine public spending on selected infrastructure including transportation, healthcare, education, amongst others. An autoregressive distributed lag model was used, and the results indicated that spending on the communication and utility sectors had a positive, but not significant, impact on Nigeria's economic growth in the short term. However, it showed that there was a negative but non-significant short-term effect of other infrastructural spending (transport, healthcare, and education) on the nation's economic growth. The study suggested that Nigeria should focus on harnessing its abundant natural resources in the petroleum and agricultural sectors. By directing government spending toward these areas, the country could achieve significant infrastructural development, which would, in turn, positively influence economic growth. Furthermore, Sawada (2015) examined the causal impact of infrastructure in the reduction of poverty and how infrastructure provision complements the efforts market, state and the larger community. The study found that on one hand, through various channels, infrastructure provision reduces poverty. On the other hand, market and government failures are critical factors in the provision of infrastructure.

Owolabi-Merus (2015) investigated the infrastructural development and economic growth nexus in Nigeria. This study employed the use of Ordinary Least Squares and Granger Causality techniques. Analyzing annual data for the period between 1983 and 2013, data was generated from the World Bank's Development Indicators. The study highlighted that infrastructural development, measured by Gross Fixed Capital Formation (GFCF), significantly and positively affects Nigeria's economic growth, as indicated by Gross Domestic Product (GDP). The research recommended that Nigerian government and policymakers should focus on implementing policies that promote infrastructure development. Such measures are expected to enhance economic efficiency, boost productivity, and attract foreign direct investment (FDI) into the country. In a similar vein, Ohalete, Anyanwu, Azuka and Ohalete (2023) examined how transportation infrastructure investment can impact economic growth in Nigeria. Using the ARDL approach, the study examined the impact of various metrics of transportation infrastructure investment on economic growth. The study found that investment in transportation infrastructure significantly improved economic growth. This is also similar to the findings of Babatunde (2018); and Onwuemeka *et al.* (2022).

METHODOLOGY

This study is built on the Endogenous Growth Theory (EGT). Romer formulated the endogenous growth theory, highlighting that technological advancements stem from the endeavors of researchers and entrepreneurs, motivated by economic incentives. Fundings and initiatives can significantly impact the endeavours of entrepreneurs which would consequently shape the economy's growth in the long term (Jones, 2019). Datasets were generated from various issues of the National Bureau of Statistics and the World Bank.

The specific infrastructural investment used in this study refers to investment in health infrastructure, education infrastructure, road and construction infrastructure, and transport and communication infrastructure. Investment in health infrastructure refers to investing in hospitals, medical facilities, equipment, and technology to improve healthcare services and accessibility. Investment in education infrastructure has to do with building and upgrading schools, universities, and other educational facilities, as well as investing in technology and resources to enhance learning. Investment in road and construction infrastructure refers to the development and maintenance of roads, highways, bridges, and buildings to facilitate transportation. Lastly, investing in airports, seaports, public transportation, internet connectivity, and telecommunications is the crux of investment in transport and communication infrastructure. These sectors were specifically chosen because of their significant role in Nigeria's overall economic development (Abdulkarim, 2023; Onwuemeka, Nwogwugwu & Onwuka, 2022) and the availability of data.

From the foregoing, the functional model for this study is specified as follows:

$$IPCI = f (INHI, INEI, IRCI, INTC)$$

Eqn 1

Where:

LPCI = natural log of Per Capita Income (PCI)

INHI = Investment in Health Infrastructure

INEI = Investment in Education Infrastructure

IRCI = Investment in Road and Construction Infrastructure

INTC = Investment in Transport and Communication Infrastructure

The unit root testing shows that the variables are of order I(1) and co-integration is seen among the variables, therefore implying a long-run relationship. The long-run relationship can be expressed as:

$$lPCI_t = \alpha_0 + \alpha_1 INHI_t + \alpha_2 INEI_t + \alpha_3 IRCI_t + \alpha_4 INTC_t + \epsilon_t \quad \text{Eqn 2}$$

Where:

α_0 is the constant term

$\alpha_1, \alpha_2, \alpha_3, \alpha_4$ are long-run coefficients

ϵ_t is the error term (residual) that captures any deviations from the long-run equilibrium.

As a result, the Vector Error Correction Model (VECM) as stated by Engle and Granger (1987) was used for analysis. The VECM is really helpful because it does two important things: it shows how different variables are connected in the long run, and it also models how they react and adjust to sudden changes in the short term, eventually getting back to a stable state.

The VECM is specified as:

$$\Delta lPCI_t = \gamma_0 + \sum_{i=1}^{p-1} \beta_{i1} \Delta lPCI_{t-i} + \sum_{i=1}^{p-1} \beta_{i2} \Delta INHI_{t-i} + \sum_{i=1}^{p-1} \beta_{i3} \Delta INEI_{t-i} + \sum_{i=1}^{p-1} \beta_{i4} \Delta IRCI_{t-i} + \sum_{i=1}^{p-1} \beta_{i5} \Delta INTC_{t-i} + \lambda EC_{t-1} + v_t \quad \text{Eqn 3}$$

Where:

Δ denotes the first difference of the variables

p is the number of lags

β_{ij} are the short-run coefficients for the differenced variables

EC_{t-1} is the error correction term, which is derived from the cointegrating equation ($EC_{t-1} = \epsilon_{t-1}$)

λ is the speed of adjustment coefficient, which indicates how quickly the variables return to equilibrium after a deviation

v_t is the white noise error term, accounting for unexplained variations.

DATA PRESENTATION AND DISCUSSION OF FINDINGS

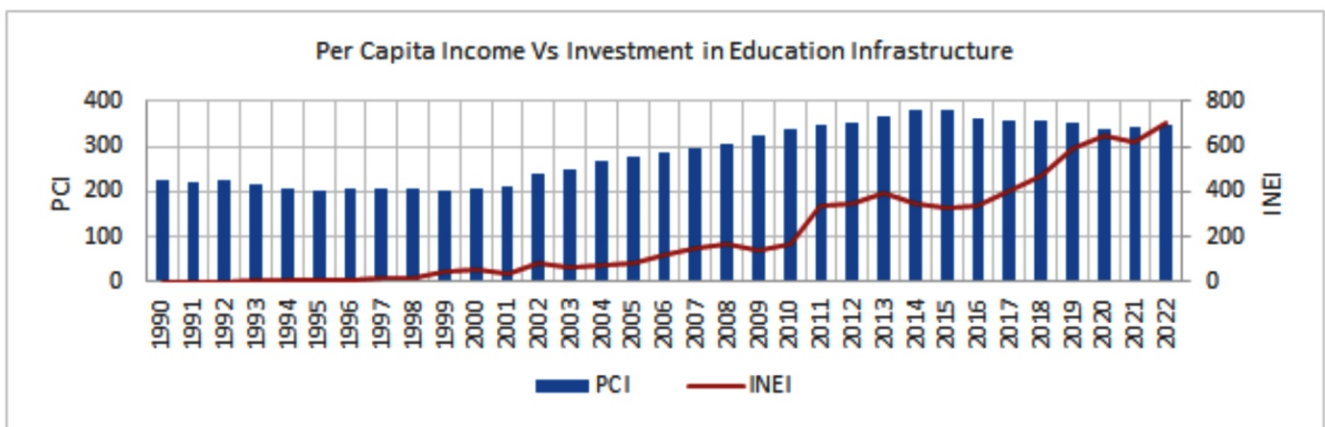


Fig 1: Trend of Per Capita Income and Investment in Education Infrastructure

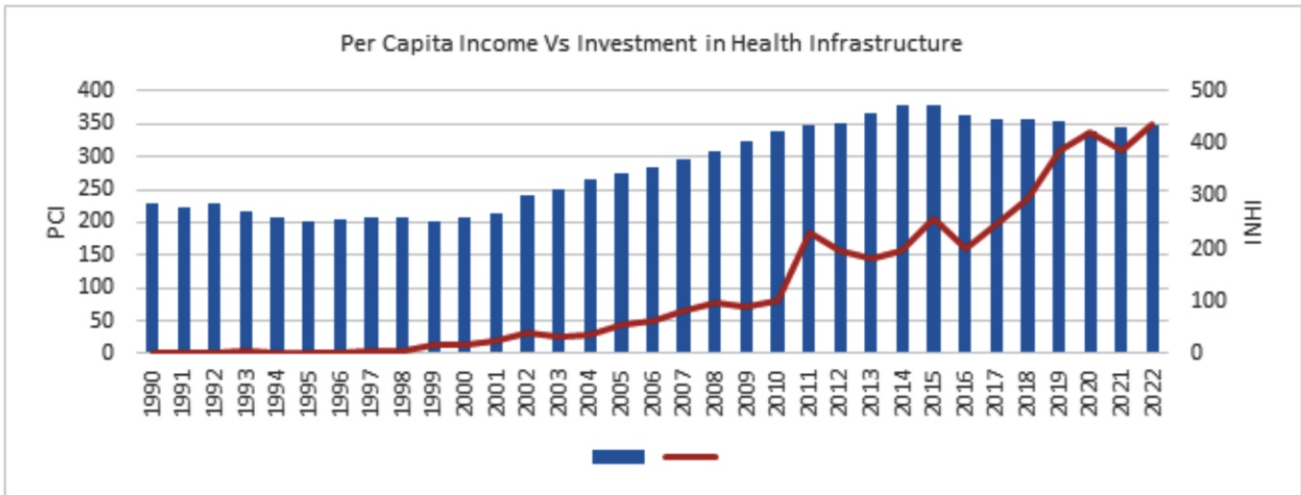


Fig 2: Trend of Per Capita Income and Investment in Health Infrastructure

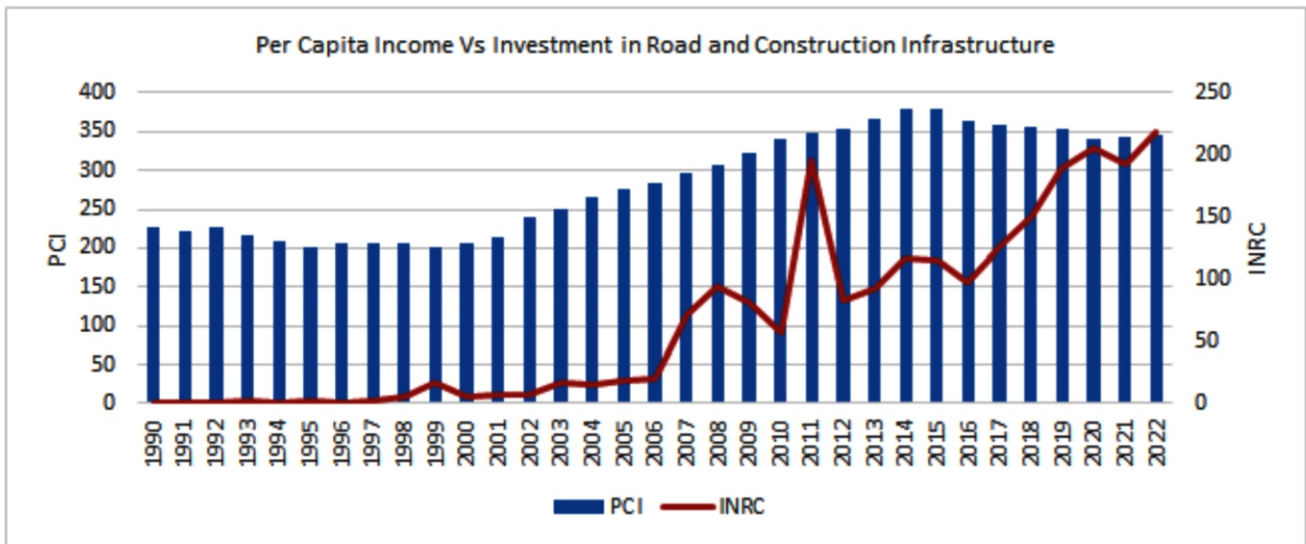


Fig 3: Trend of Per Capita Income and Investment in Road and Construction Infrastructure

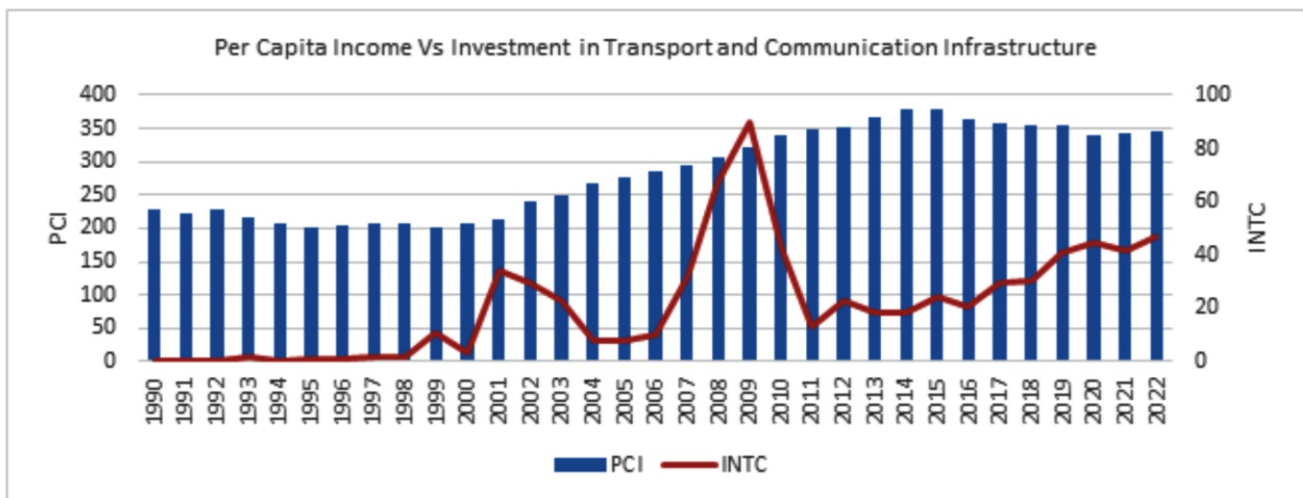


Fig 4: Trend of Per Capita Income and Investment in Transport and Communication Infrastructure

The trend analysis in Figure 1 shows that there have been fluctuations in the INEI, INHI, INRC and INTC trends over the period (1990-2022). However, the PCI appears to have only slight fluctuations. For instance, PCI reduced between 1990 and 2002 and increased significantly between 2002 and 2016. There was a drop again from N363 billion in 2016 to N346 billion in 2022.

For INTC, there was a marginal change in the values between 1990 and 1998. However, in 1999, investment in transport and communication infrastructure significantly increased to N11.12 million N42 million in 2010. Between 2010 and 2022, the values fluctuated and then stood at N47.24 million in 2022. The INEI and INRC followed similar patterns over the period. However, between 2012 and 2014, there was a reduction in INHI while an increase was recorded in INEI.

Table 1: Unit Root Result

Variables	ADF statistics	Critical Values	Order of Integration
PCI	-2.96849	-2.96041	I(1)
INEI	-4.52284	-2.96041	I(1)
INHI	-6.19784	-2.96041	I(1)
INRC	-6.59147	-2.96397	I(1)
INTC	-4.55885	-2.96041	I(1)

Source: Authors' Computation

The result of the unit root test using Augmented Dickey-Fuller (ADF) is presented in Table 1. The result shows the presence of unit root at first difference. This shows that the existence of short-run equilibrium. The Johansen Cointegration was thereafter carried out to establish the existence of long-run equilibrium.

Table 2: Johansen Cointegration Test

Hypothesized	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
No. of CE(s)				
None *	0.855025	125.9952	69.81889	0.0000
At most 1 *	0.800679	68.0594	47.85613	0.0002
At most 2	0.339843	19.67423	29.79707	0.4452
At most 3	0.213786	7.215918	15.49471	0.5527
At most 4	3.89E-06	0.000117	3.841466	0.9928

Source: Authors' Computation

The Johansen cointegration test is used to determine the number of cointegration relationships among several time series variables. The table above shows that two cointegrating equations are present. Therefore, the existence of long-run relationship is valid. As a result, the Vector Error Correction (VECM) analysis was carried out.

Table 3: Vector Error Correction Model Results

Cointegrating Eq:	CointEq1
LPCI(-1)	1
INEI(-1)	-0.124358 (-0.01368)
INHI(-1)	0.147715 (-0.01842)
INRC(-1)	0.129058 -0.01655

INTC(-1)	-0.207816 (-0.02114)				
C	-9.395037				
Error Correction:	D(LPCI)	D(INEI)	D(INHI)	D(INRC)	D(INTC)
CointEq1	-0.014131	-15.0052	-16.1599	-6.55571	2.493724
Std error	-0.00434	-8.28617	-5.72699	-5.50893	-2.82791
t-Stat	[-3.25661]	[-1.81087]	[-2.82172]	[-1.19001]	[0.88182]
D(LPCI(-1))	0.09787	-585.5958	-530.053	-325.717	156.1343
Std error	-0.21088	-402.704	-278.329	-267.731	-137.435
t-Stat	[0.46409]	[-1.45416]	[-1.90441]	[-1.21658]	[1.13606]
D(LPCI(-2))	-0.209812	-487.4512	-549.527	-105.322	-65.8036
Std error	-0.21893	-418.065	-288.945	-277.944	-142.678
t-test	[-0.95836]	[-1.16597]	[-1.90184]	[-0.37893]	[-0.46120]
D(INEI(-1))	-0.000762	-0.657949	-0.77124	-0.10627	0.226588
Std error	-0.00033	-0.63579	-0.43943	-0.42269	-0.21698
t-Stat	[-2.28912]	[-1.03485]	[-1.75510]	[-0.25141]	[1.04427]
D(INEI(-2))	-0.000504	-0.934676	-0.55967	-0.23345	0.092357
Std error	-0.00028	-0.54419	-0.37612	-0.3618	-0.18572
t-Stat	[-1.76996]	[-1.71755]	[-1.48802]	[-0.64525]	[0.49728]
D(INHI(-1))	0.000821	1.368535	1.018163	0.461533	-0.47356
Std error	-0.00045	-0.85778	-0.59286	-0.57028	-0.29275
t-Stat	[1.82794]	[1.59543]	[1.71738]	[0.80930]	[-1.61764]
D(INHI(-2))	0.000933	0.967733	0.490348	0.076447	-0.13859
Std error	-0.00042	-0.795	-0.54947	-0.52854	-0.27132
t-Stat	[2.23995]	[1.21727]	[0.89241]	[0.14464]	[-0.51081]
D(INRC(-1))	0.001125	0.815995	1.259864	-0.16846	0.130885
Std error	-0.00042	-0.80638	-0.55733	-0.53611	-0.2752
t-Stat	[2.66402]	[1.01193]	[2.26054]	[-0.31422]	[0.47560]
D(INRC(-2))	0.0002	0.775156	0.722962	0.160076	0.049311
Std error	-0.00028	-0.53566	-0.37022	-0.35613	-0.18281
t-Stat	[0.71439]	[1.44710]	[1.95278]	[0.44949]	[0.26974]
D(INTC(-1))	-0.000684	-2.50932	-2.69887	-1.31853	0.443952
Std error	-0.00055	-1.05893	-0.73188	-0.70401	-0.36139
t-Stat	[-1.23330]	[-2.36967]	[-3.68758]	[-1.87287]	[1.22845]
D(INTC(-2))	-0.002254	-1.728683	-1.398	0.125549	0.032412
Std error	-0.00072	-1.37245	-0.94857	-0.91245	-0.46839
t-Stat	[-3.13605]	[-1.25956]	[-1.47380]	[0.13759]	[0.06920]
C	0.014007	36.3019	30.28446	15.18537	-0.28502
Std error	-0.007	-13.3657	-9.23772	-8.886	-4.56147
t-Stat	[2.00120]	[2.71604]	[3.27835]	[1.70891]	[-0.06248]
R-squared	0.727381	0.355829	0.555203	0.58316	0.388907
Adj. R-squared	0.560781	-0.037831	0.283383	0.328424	0.015462
Sum sq. resids	0.010247	37366.84	17849.71	16516.34	4352.224
S.E. equation	0.02386	45.56244	31.49049	30.29149	15.54961
F-statistic	4.36602	0.903899	2.042539	2.289273	1.041403

Source: Authors' Computation

The coefficients under the Error Correction term represent the speed of adjustment towards the equilibrium. In both the short run and long run, there exists a negative relationship between the investment in education infrastructure and per capita income. This implies that a unit increase in education infrastructure will cause per capita income to reduce by 0.007 percent. While this impact may not be significant, it is not beneficial to improved standard of living in the economy. Also, investment in transport and communication infrastructure showed a negative impact on PCI. This is contrary to the position of Abdulkarim (2023) and Sawada (2015). They asserted that the provision of robust infrastructure networks, encompassing transportation, energy, water, telecommunications, and social infrastructure, lays the foundation for fostering productivity, enhancing connectivity, and improving the quality of life for citizens. The negative impact recorded in this study could be as a result of misappropriation which would hinder investment in these infrastructural amenities to have a negative impact on PCI. On the other hand, investment in health, and road and construction infrastructure show a positive relationship with PCI in both the short run and long run. Francis *et al.* (2023) and McPake *et al.* (2023) also found a positive relationship between investment in health and economic growth. On another hand, Onwuemeka *et al.* (2022) found a positive relationship between transport and communication and real GDP, while this study found a positive relationship in both the short run and long run.

The coefficient of determination is 0.73 and showed that 73% of the variation in per capita income is explained by the Investment in health infrastructure, investment in education infrastructure, investment in road and construction infrastructure, and investment in transport and communication infrastructure. Other variables not included in the model account for the remaining 27%. The error correction term is negative and significant showing that disequilibrium in the previous periods is adjusted for at 1.4% annually.

CONCLUSION AND RECOMMENDATIONS

This study investigated the impact of infrastructure investment on the standard of living, measured by per capita income, in Nigeria. Utilizing the Vector Error Correction Model for analysis, the research revealed a long-term relationship among the variables under examination. Results revealed that investment in education and transport/communication infrastructure had a negative effect on per capita income, while investment in health and road/construction infrastructure positively influenced per capita income. Following these findings, the following recommendations are made:

Reevaluate and Reallocate Education Infrastructure Investments: Given the negative impact of education infrastructure investments on per capita income, it is necessary to reevaluate the current strategies and focus on enhancing the quality and accessibility of education. This may involve reallocating resources to address critical gaps and ensuring that investments are directed towards initiatives that directly improve educational outcomes and, consequently, the standard of living.

Increase Investment in Health and Road/Construction Infrastructure: The positive relationship between investments in health and road and construction infrastructure and PCI highlights the importance of these sectors in promoting economic growth. Therefore, the government and other concerned stakeholders should prioritize and increase investments in these areas to further enhance the standard of living.

Enhance Policy Framework for Transport and Communication Infrastructure: To reverse the negative impact observed, there is a need to develop and implement robust policies that ensure the efficient use of funds in the transport and communication sectors. This includes establishing clear guidelines for project implementation, regular audits, and stringent penalties for mismanagement.

Foster Public-Private Partnerships: Encouraging public-private partnerships can bring additional expertise, efficiency, and funding to infrastructure projects. Collaboration with private entities can enhance the quality and sustainability of infrastructure developments, particularly in the health and road construction sectors.

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FEMALE POPULATION AND SOCIO-ECONOMIC
DEVELOPMENT IN NIGERIA

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ABSTRACT

The study examined the impact of female population on socio-economic development in Nigeria economy. The study employed descriptive and econometric procedures. Annual secondary data spanning from 1980 to 2022 was used. The data for analysis were sourced from the world development indicator (WDI) and international labour organization (ILO). Data were analyzed using tables, graph, autoregressive distributed lag (ARDL), fully modified ordinary least square (FMOLS) and bounds test. Despite the increase in female population in Nigeria economy, the impact of the female population on socio-economic development is inversely related. The Statistic value (2.140068) in the long run bound test indicates that there is no long run relationship between the variables in the model at both 1% and 5% level of significance. The analysis conducted using the ARDL shows that for every one unit increase in the growth rate, female population falls by 72.6779 but it is not statistically significant at either 1% or 5%. The Durbin Watson statistic of 1.868(less than 2.6) shows no presence of serial correlation among the variables in the model. The study concluded that for Nigeria to have significant impact of female population on socio-economic development, some cultural beliefs need to be adjusted. More empowerment and increase in the ratio of female to male in employment opportunity is also recommended.

Keywords: Gender, Education, Employment, Labourforce

INTRODUCTION

Women make up a significant proportion of Nigeria's population. (Onuoha&Alom,2024). Despite being recognized globally as key drivers of socio-economic progress, women continue to face systemic marginalization, hindering their access to education, financial empowerment and cultural equality (Onuoha &Alom,2024). This disparity is manifest in Nigeria's uneven distribution of socioeconomic and political opportunities. Although Nigeria has made progress in addressing women's socio-economic challenges over the last decade, there is still much work to be done to achieve gender equality and meaningful representation in key decision-making roles. This topic has fueled lively debates in Nigeria, shedding light on the pivotal functions women have performed throughout the nation's history, as passionately argued by advocates. (Okolo-Obasi & Uduji, 2024). According to Mbatha, (2024), Nigeria's women have a long history of participation in key social and economic activities, predating colonialism. In pre-colonial Nigeria, women's roles included specialized occupations like cooking, pottery-making, fishing, farming and trade, demonstrating a gender-based division of labor. Furthermore, Nigerian communities practiced communal living, with women holding ownership and access to land through familial ties, either by birth or marriage. Although men held formal authority, older women played a vital role in managing household labor, supervising younger family members. Petty trading was a common occupation among Nigerian women, who actively participated in local markets. (Oyeku, 2024). The patriarchal nature of Nigerian society, coupled with economic difficulties, exacerbates gender-based challenges, undermining women's economic potential and ultimately affecting national development. (Anam et al., 2024). Uchendu, Roets and Vandebroek (2019), believes that women are institutionally conditioned to adopt submissive roles in societies plagued by entrenched social and economic disparities. The economic well-being of women is largely dominated and restricted by men, spanning from domestic to professional and public environments. Numerous women face barriers that prevent them from fully utilizing equal opportunities, thereby limiting their ability to enhance their quality of life.

Women's economic advancement in Nigeria is severely impeded by the pervasive influence of patriarchal structures, which entrench systemic inequalities. Okoroafor, (2019) emphasizes that Nigeria's societal framework which is deeply rooted in patriarchy significantly impacts women's economic opportunities and

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went further to state that this structure perpetuates gender-based division of labour within households, limiting women's participation in wage work and service industries.

Nigeria's female population represented 49.46% of the total population, as indicated by the World Bank's collection of development indicators. (1,026 males per 1,000 female) as of 2023. Irrespective of the little gap, a significant gender disparity persists between men and women, particularly in areas such as political representation, socio-economic development, economic management and leadership. The persistence of these inequalities in a modern developing economy is staggering, contradictory to the global movement towards inclusive, diversified and competitive economic growth.

Furthermore, empirical debates around the impact of female population on socio-economic development have attracted contributions from international organization and scholars. The issue around the impact is still inconclusive since the impacts vary from developing to developed countries. The necessity to identify the impact of female population in Nigeria economy, considering the little gap. Some studies on developed economy, have observed aspect of positive impact (Akhtar, Masud, Jafrin, & Shahabudin, 2023; Duflo, 2012) while others identified a negative impact between the female population and socio-economic development (Alwago,2023; Anam et al.,2024; Owoibiae et al, 2024; Obianefo, Mailafia & Yusuf, 2022; Belcher, 2016). However, female population is fraught with many irregularities in Nigeria economy compared with the developed economy in line with this empirical assertion and the problem explained earlier, this research aims to examine the correlation between female population and the socio-economic development of Nigeria's economy.

LITERATURE REVIEW

Understanding the role of the female population in the socio-economic fabric is imperative, as it reflects broader societal norms and profoundly impacts the nation's overall progress. The significance of comprehending the relationship between the female population and socio-economic development in Nigeria cannot be overstated. Historically, women have faced marginalization, hindering their full participation in economic activities and decision-making processes (Bissel&Duke,2019). Recognizing and addressing these disparities is crucial for fostering inclusive development and ensuring sustainable progress. The socio-economic well-being of a nation is closely linked to the empowerment and involvement of its female population, where women constitute a substantial portion of the workforce, their contributions to various sectors play a pivotal role in shaping the economic landscape (Bissel&Duke, 2019). Moreover, empowering women economically can have a ripple effect on their families and communities, creating a more equitable and prosperous society. This literature review provided a comprehensive analysis of existing research on the relationship between the female population and socio-economic development in Nigeria. By synthesizing and critically evaluating relevant literature, this review elucidated the current state of knowledge, identified research gaps, and proposed directions for future studies.

Conceptual Review

Understanding the historical context of the female population in Nigeria provides valuable insights into the roots of current demographic trends. Historically, women in Nigeria have held diverse roles within their communities, contributing to economic, social, and cultural spheres. In pre-colonial times, women played essential roles in agriculture, commerce, and governance in various ethnic groups (Oyeku,2024). However, the advent of colonialism introduced new dynamics that influenced the socio-economic status of women. The evolution of female workforce participation in Nigeria reflects both progress and persistent challenges. Historically, societal norms often limited women's involvement in formal employment. However, a pronounced shift has occurred in recent decades, marked by rising female engagement in the workforce. According to Obianefo, Mailafia & Yusuf (2022), the female labor force participation rate has increased steadily, reaching 47.5% in 2020. This upward trend is driven by multiple influences, including expanded education opportunities, evolving societal attitudes and a diversified economy. Government initiatives promoting women's empowerment and entrepreneurship have also contributed to these positive shifts (Okafor, et al 2022). Despite these advancements, challenges persist, particularly in certain sectors and regions. Cultural expectations, gender stereotypes, and inadequate support systems often impede women's entry into specific professions and discourage their sustained engagement in the labor force.

Theoretical Review

The feminist theory propounded by Mary Wollstonecraft (1759-1797) provides a critical lens for examining power structures, gender relations, and the socio-cultural dynamics that shape women's lives. Rooted in the quest for gender equality, Feminist Theory acknowledges the historical subordination of women and seeks to challenge and dismantle patriarchal structures. In the Nigerian context, Feminist Theory is crucial for unpacking deep-rooted cultural norms and traditional gender roles that influence female empowerment. It enables an analysis of how societal expectations, stereotypes, and discriminatory practices intersect with women's socio-economic status. For instance, examining the impact of cultural practices like child marriage and inheritance norms through a feminist lens reveals how these practices contribute to the economic vulnerabilities of women (Mbathu, 2024). Moreover, Feminist Theory emphasizes the importance of agency and the need for women to have control over their bodies and lives. The theory encourages scrutiny of policies and practices that limit women's reproductive rights, hinder access to education, or perpetuate domestic violence. The study unveiled the power dynamics shaping women's opportunities and challenges in Nigeria, offering insights into the transformation of gender relations for genuine empowerment.

Empirical Review

Female empowerment in Nigeria has been a subject of growing interest, with researchers examining various dimensions of women's socio-economic status of the current state of female empowerment in Nigeria. Several empirical studies have investigated the trends and determinants of women's participation in the labor force in Nigeria.

Alwago (2023) opined that there exist high gender inequality occupational segregation and economic growth in sub-Saharan Africa. With the use of simultaneous least square. The finding revealed that gender inequality and occupational segregation account for a significant portion for economic growth in sub-Saharan Africa. Recommendation was that SSA should fully implement the international labour organization (ILO) treaties on gender inequality.

Oweibi et al., (2024) assessed inequality among gender and development of an economy in less developed economy, with the use of disk methodology, findings revealed that gender inequality impedes the full realization of human resources. It hinders several growth and stability of economy in different country. Conclusion was on policies to address the disparities.

Okolie- Obasi and Udiji (2024) assessed Government Enterprises and Empowerment Program with the women's performance in entrepreneurial development in less developed Nigeria, making use of the difference-in-difference (DID) a quasi-experimental statistical design. The finding indicates that GEEP significantly impact turnover of enterprises, reduction in cost per unit of production and increase in investment return. Conclusion was embracing increase GEEP intervention entrepreneurship development and raising women economic status. Izugbara and Wekesah (2020) conducted a longitudinal study examining the long-term effects of women's education on socio-economic outcomes. Their findings suggested a positive correlation between higher levels of education and improved health outcomes for women. Additionally, women with increased educational attainment will engage in income-generating activities which contribute to general output and increase in the empowerment.

Ogunbameru (2019) explored the impact of occupational segregation on women's economic opportunities. With the use of data from Demographic and health survey in Nigeria economy, the finding revealed that women were often concentrated in lower-paying and less prestigious occupations, contributing to the gender wage gap. The study emphasized the need for policies that address occupational segregation to enhance women's economic empowerment.

Tsani, Paraoussos, Fragioudakis, Charahambidis and Capros, (2012) posits that Female labour force participation and economic development in the southern part of the country are intricately linked, an assertion supported with the use of a two- step statistical methodology involving econometric estimation and the use of a general equilibrium statistical model. The econometric model suggested a U-shape relationship and the result concluded that lower female participation rate may lower the economic growth of the region. The research concluded that the removal of the barrier is essential for optimizing women's contributions to development.

METHODOLOGY

Method of Data Collection

Annual secondary data was collected and used from a period of 1980 to 2022. The source is from World Bank Development Indicator (2022) and International Labour Organization, ILO (2022).

Presentation of variables measurement and sources

Variables	Symbols	Measurement	Sources
female with education	FD	Educated female with at secondary school certificate. percentage of the population age and above	World development indicator WDI 2022
Female with employment	FM	employed female population ratio 15+ Female percentage of national population	World development indicator WDI 2022 and international labor organization. labor force statistic. Soc protection and labour
Female Population	FP	population of female percentage total population	World development indicator WDI 2022
female with selfemployed	FSP	percentage of the female employed that work for themselves to contribute income	International labor Organization. I modelled estimation WDI, 2022
Technological infrastructure	RSV	Reserve and related item. the changes in a country international monetary fund, balance of payments statistic economic policy and de	world development indicator WDI 2022
Total labour force	TLF	comprises of people ages 15 and older in an economy.	world development indicator WDI 2022
Growth rate of the economy (a proxy socio-economic development)	GDPGR	annual percentage growth rate of GDP at market price world national account	world development indicator WDI 2022

Author's computation, 2024

Theoretical Framework

The established framework examined how the theories explained the possible linkages among the variables, fitting the existing literature and findings; focusing on the early studies of female population in Nigeria economy and how relevant it is on social economic development of the country. Based on Feminist theory, the importance of agency and the need for women to have control over their bodies and lives were clearly stated. The theory considered the policies and practices limiting women access to education, reproductive rights, and perpetuate domestic violence. With the application of Feminist Theory, the dynamics in restructuring the female gender in Nigeria economy, offering insights into the transformation of gender relations for genuine empowerment.

Model Specification

The relationship among the variables (female population and economic growth (to proxy socio-economic development)) was analysed based on adopted model by Stella et al., (2012). The model states that female labour force participation rate is a function of growth rate of an economy (GDPGR) and other variables (X).

The adopted model is stated below:

$$FTLF = (GDPGR, X) \dots\dots\dots 1$$

$$TLF = F(GDPGR, FD, FM, X) \dots\dots\dots 2$$

$$FP = F(FD, GDPGR, FM, RSV, X) \dots\dots\dots 3$$

X is a set of variables comprising: Fertility, Education control, Urbanization, Religious norms and unemployment. GDPGR is the Gross Domestic Product Growth rate used to proxy socio-economic development, FD represents educated female, FM represents employed female, TLF represents Total Labour Force, FSP represents self-employed female and RSV is reserve used to proxy technological infrastructure.

Techniques of Analysis

The adopted estimation techniques for the regression model are based on the result of the unit root test with the use of stationarity test. The major technique of estimation is the auto regressive distributed lag test used as a result of the stationary test where the variables were stationary at level and at 1st different.

4.0 RESULTS AND DISCUSSION

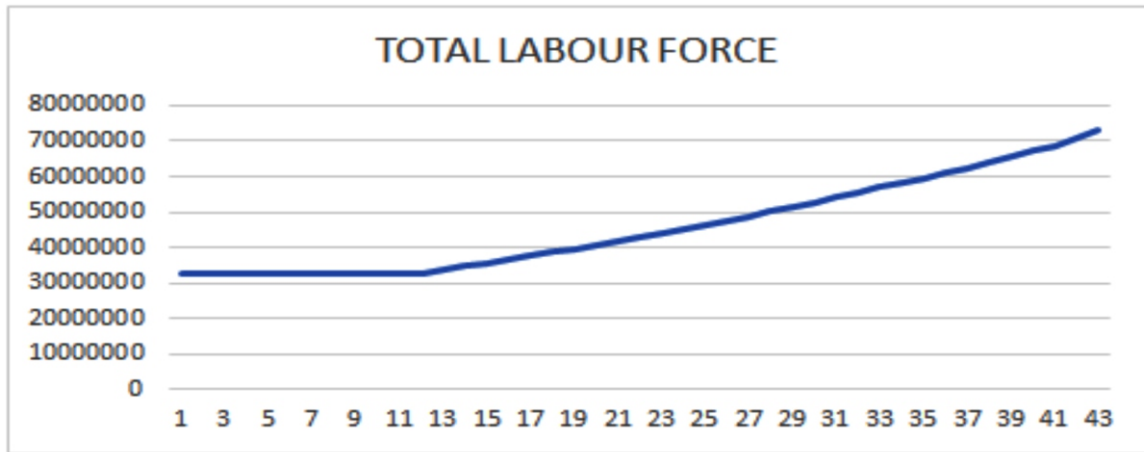


Figure 1: Trend in Labour Force

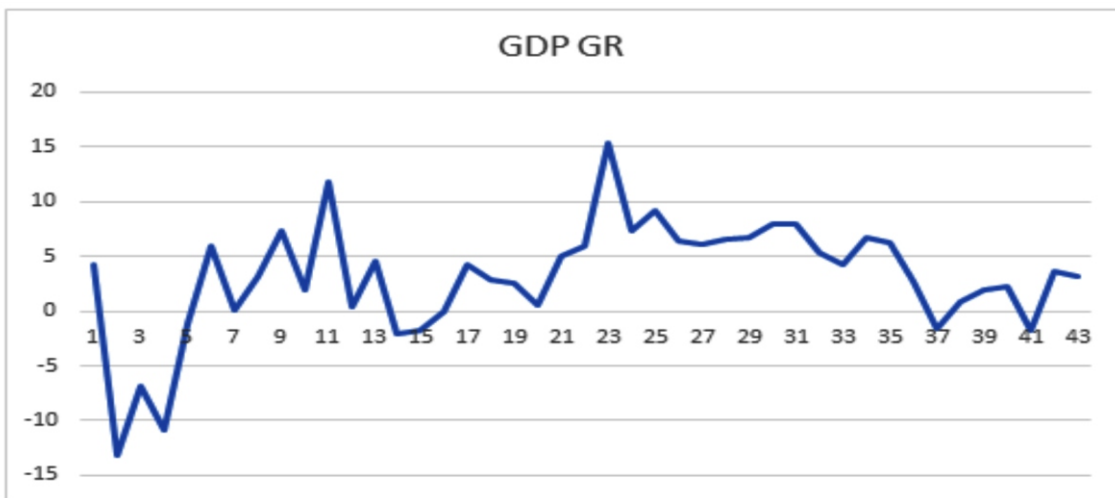


Figure 2: Trend in GDP growth

Figures one and two shows the trend in total labour force and growth rate of the Nigeria economy respectively. Figure one shows that there has been a steady increase in the total labour force due to increase in the population

of the economy without an economic increase in the productive sector. Figure 2 indicates that the growth rate of the economy (GDPGR) which was used to proxy socio-economic development has been fluctuating probably due to majority of the sectors not performing up to the task. The non-economic growth has been the result of arithmetic increase in productive output and geometric increase in the population.

Table 1: Correlation matrix

VARIABLES	GDPGR	FM	FP	FSP	LOGTLF	RSV	FD
GDPGR	1.0000						
FM	0.3438	1.0000					
FP	-0.2563	-0.5335	1.00000				
FSP	-0.3316	-0.6630	0.7821	1.0000			
LOGTLF	0.2517	0.6949	-0.6712	-0.7454	1.0000		
RSV	0.1970	0.1675	-0.0287	-0.1536	0.0893	1.0000	
FD	-0.1609	-0.2489	0.6987	0.6089	-0.5311	0.1548	1.0000

Author's computation

Table 1 shows the correlation statistic between the variables in the model. There exist positive, negative, and weak correlations among the variables. There is no threat of multicollinearity among variables as depicted in the correlation matrix. The coefficient of correlation among the variables has a low correlation with a few having weak correlation but this does not constitute any serious threat of multicollinearity among the variables.

Table 2: Unit root test

Variables	@LEVEL	PROB	F – STAT	@1 ST DIFF	OOI
			PROB	
GDPGR	-2.85555	0.0595	-12.0896	0.0000	1
FM	-1.11112	0.9029	-6.4566	0.0000	1
FP	1.99267	0.9999	-1.53502	0.0506	1
FSP	-0.51381	0.8781	-6.6749	0.0000	1
LOGTLF	-1.9073	0.0032	-0.37815	0.0000	0
RSV	-5.6707	0.0000	-6.7589	0.0000	0
FD	-0.62583	0.05821	-0.13761	0.00021	1

Author's computation @level = at level. @ 1st diff = at first different. OOI = order of integration

Table 2 shows the stationary test for the variables with individual effects. The statistical analysis result shows

that log of total labour force (LOGTLF) and infrastructural technology (RSV) were stationary at level $i(0)$ using the augmented dickey fuller test statistic. After taking the first different, other variables (GDPGR, FM, FP, FSP, and FD) became significant. As a result of the unit root test, auto regressive distributed lag test was used for the short run analysis while the bounds test was used for the long run statistical analysis.

Table 3: Long Run Bounds Test

Test statistic	VALUE (K)	SIGNIF	LOWER B I(O)	UPPER B I(1)
F- Statistic	2.140088	10%	2.152	2.89
Actual Sample size 40		5%	2.523	3.21
		15%	3.402	3.51

Authors' computation, 2024

Table 3 shows that the long run bounds test conducted resulted to a value of (2.140088) for F- statistical which is a figure lower than the lower boundary $i(0)$ and the upper boundary $i(1)$ at both 1% and 5% . It revealed that there is no existence of long run relationship among the variables at 1% and 5% significant statistical level. Therefore, the null hypothesis of no long run relationship between the variables in the model was accepted and the alternative hypothesis was rejected.

Table 4: Short run ARDL analysis

VARIABLE	CORFF	STD ERROR	T-STATS	PROB
GDPGR $\hat{\rho}$	0.360941	0.179914	2.006188	0.0436
FP	-72.67792	47.26040	-1.537818	0.1342
FM	-0.188871	0.285873	-0.660681	0.5137
FD	0.727045	0.728008	0.998677	0.3257
FSP	-3.183870	3.814471	-0.834682	0.4103
LOGTLF	-21.55430	23.92372	-0.900959	0.3746
RSV	1.486952	1.756847	0.084858	0.9329
ECT($\hat{\rho}$)	-23.84845	17.63844	-1.352073	0.1861
C	4254.609	2712.963	1.568252	0.1270
R square	0.364221	Mean Dep Va	3.130580	
Adj R square	0.200150	Schwarz Criterion	6.576730	
F – Statistic	2.219890	Hanna-Quinn C	6.334127	
Prob (F stat)	0.053315	Durbin Watson St	1.868271	

Authors' Computation, 2024.

The short run Autoregressive Distributed Lag (ARDL) analysis as shown in Table 4 revealed that the lag of the gross domestic product growth rate (GDPGR) is positively related to the present growth rate and significant at 5%. The test as shown in table 4 also revealed that Female population (FP) in the economy is inversely related to the growth rate of the economy (used to proxy socio-economic development). For every one unit increase in the growth rate, female population falls by 72.6779 but not statistically significant at either 1% or 5%. It indicated

that the female population in the economy are not productive probably due to the cultural belief of the northern part. Where larger population of the female comes from. The employed female in the economy as seen in table 4, is also inversely related to the growth of the economy likewise female with self-employed but both are not statistically significant. The r square value (0.36422) revealed that 36.42% percent of the dependent variable is explained by the combination of the independent variables while the adjusted r square shows that if the other variable outside the model are considered, 20% of the dependent variables will be explained. The Durbin Watson statistic (1.8682) shows that there is present of serial correlation among the variables in the model.

SUMMARY, CONCLUSION AND RECOMMENDATION

From the baseline regression analysis for the time series data from 1980 to 2022, the regression analysis shows that female population is increasing in the Nigeria economy but their socio-economic contribution is not comparable to the developed economy. Irrespective of the female population, it has an inverse relationship with the growth rate of the economy which is used to proxy the socio-economic development of the Nigeria system. With very high increase in the population of female in Nigeria especially in the northern part of the country and increase in the female participation by the government, the baseline result shows that the contribution of the female in the economy is far below expectation. It is therefore concluded that for female population in Nigeria to contribute to the socio-economic development of the country, cultural changes and beliefs of the people needs to be amended. Females need to be encouraged to finish basic education and also encouraged to acquire basic skills.

It is hereby recommended that Cultural systems that affect the female population should be amended. Skill acquisition should be extended to the female population for technological infrastructure development. In addition, basic education should be compulsory for females in all part of the country to reduce the level of illiteracy and lastly more employment opportunity should be given to the female to reduce the ratio of male to female in government establishment.

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LABOUR PRODUCTIVITY AND ECONOMIC GROWTH IN NIGERIA

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ABSTRACT

This study investigates labour productivity and economic growth in Nigeria between 1993-2021. The broad objective of this study is to investigate the influence of labour productivity on economic growth in Nigeria; while the specific objectives of this study is to determine the short-run and long-run impact of labour productivity on economic growth in Nigeria. The study employed secondary means of data collection to obtain data for real GDP, labour productivity, foreign direct investment, inflation rate, and exchange rate. The long-run cointegration test was carried out using ARDL Bounds test, and the result demonstrates the existence of long-run cointegrating relationship between dependent variable and independent variables, as F-statistics was found to be greater than the upper bound I(1) value. The ARDL estimation result reveals that in the short-run, labour productivity, inflation rate, and exchange rate have positive and statistically significant impact on economic growth at 1% significant level, while Foreign Direct Investment has negative and significant effect on economic growth at 1% significant level. In the long-run, labour productivity and inflation rate positively affect economic growth at 1% significant level, exchange rate has positive effect on economic growth at 5% level of significant, while foreign direct investment has negative impact on economic growth at 1% significant level. Based on these results, this study concludes that labour productivity has strong and positive impact on economic growth in Nigeria. Therefore, the study recommends the need for government to develop and implement integrated jobs strategies in order to increase labour productivity.

Keywords: Labour Productivity, Economic Growth, Foreign Direct Investment, Inflation Rate, Exchange Rate

INTRODUCTION

The global economy cannot downplay the crucial inputs of labour into the production process which ultimately utilizes man, money, machine, materials and methods for the entire process. This is further buttressed by Soomro, Wang, Tunio and Aripkhanova (2021), as they posit that effective productivity is a key determinant of economic growth. The productivity of labour is not only dependent on labour, it is a function of quality training and education, technology environment, supports system, quality and quantity of work tools. The importance of labour productivity on economic growth has been demonstrated by numerous studies showing a positive relationship between the two variables (Oyamendan, 2022; Hardt, 2020; Wu, 2013; Campbell, 2009). As opined by Solow (1956), labour productivity is accorded prominence in standard growth accounting models. The wealth and strength of nations rest ultimately upon the development of people and the effective commitment of their energies and talents to production to sustain economic growth (Todaro, 2007). The United Nations Development Programme (2010) affirmed that no country can achieve sustained economic growth without substantial investment in human capital development and improved labour productivity. In the current era of globalization and increasing competitiveness, the survival of a given country depends on its labour productivity which in turn facilitates the economic growth and development (Papadogonas & Voulgaris, 2005). Labour productivity improvement is vital because it enhances rapid output growth (Faruq & Telaroli, 2011).

Labour productivity is a key factor of boosting economic growth. Evidence from the theoretical point of view, Solow-Swam (1956) model posited that labour productivity growth (i.e., technology progress) along with capital accumulation largely accounts for the changes in economic growth in the long-run. Also, Rostow's (1959) stages of growth model postulated that the transition of economic activities as well as economic growth and development is majorly caused by labour productivity. Considering the major drivers of labour productivity

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which are technological change, physical change, and human capital; Rostow claimed that it is possible for the economy to move from traditional society, which marks a period of low economic growth to the age of mass consumption, which marks a period of highest economic growth and development.

Nigerian labour productivity has not been satisfactory over the years because of low GDP per person in the country (Umoru & Yaqub, 2013). The World Bank (2009) reported low labour productivity in Nigeria with an average growth rate of 1.2% between 2000 and 2008 which was below the rate of 1.9% recorded for Sub-Saharan African countries and 2% recorded for low-income countries. Similarly, the International Labour Organization (2015) maintained that labour productivity positively affects economic growth by bringing about the production of more goods and services with the same amount of resources. Labour productivity growth remains a veritable driver of output growth as it increases a country's capacity to create better opportunities for decent and productive employment.

In Nigeria, like many other developing countries with abundance of labour, the relationship among labour productivity and economic growth is a serious debate among the intellectuals because it is expected that a sustained productivity growth will inevitably increase the economic prosperity of a country and if the sustained productivity growth is backed by technological innovation and capital-intensive investment, the economic growth will metamorphose to economic development. It is on this background that this study examines the impact of labour productivity on economic growth in Nigeria within the period under review.

LITERATURE REVIEW

Labour Productivity

Labour productivity which is also known as workforce productivity is a vital economic indicator that can be used to determine the total output produced by one hour of labour within an economy. As submitted by Kornieieva, Varela, Luis and Teixeira (2022), labour productivity is an important indicator that characterizes the ability of the economic system to function with proper efficiency. According to Investopedia (2020), Labour Productivity measures the hourly output of a country's economy. In Nigeria, the growth of labour productivity has been highly volatile over the years. Elsewhere in literature, labour productivity is defined as the output level produced per unit of labour inputs employed in production (Kahyarara, 2019). According to Awotunde (2018), the trend of labour productivity in Nigeria from the period of 1971 to 2013 was unstable with the mean and standard deviation of labour productivity growth over the period calculated around 2.05% and 7.24% respectively. National Bureau of Statistics (2015) liken the poor growth of labour productivity in Nigeria to the consequences of certain setbacks that are challenging economic activities which include: poor access to finance, poor power and transport infrastructure, unfavourable policy support to businesses and investment climate, poor quality of educational institutions, and inadequate science and technological capabilities. Besides, other possible factors that could impede labour productivity growth in Nigeria are; continuous high unemployment which is progressing into underemployment, over-supply of labour, low wage subsistence jobs, and low skilled employment (National Bureau of Statistics, 2015). To sum the various views up, Labour Productivity can be viewed as the quantity or the monetary worth of output a labour input can turn in per unit of time in a production process. This time horizon can be hourly, daily, weekly, monthly or annually.

Economic Growth

Economic growth is related to a quantitative sustained increase in the country's per capita output or income accompanied by expansion in its labour force, consumption, capital and volume of trade. Economic growth has been largely defined as the increase in production of economic growth and services, compared from one period of time to another which can be measured either via Gross Domestic Product (GDP) or Gross National Product (GNP) (Potters, 2021).

Solow-Swan Growth Model

Theoretically, this work leans on the Solow-Swan Growth Model which was developed independently by Robert Solow and Trevor Swan (1956) to explain economic growth by considering capital accumulation, technological progress (productivity growth), and labour or population growth. Solow-Swan model is also known as the neoclassical aggregate production function which is an extension to the 1946 Harrod-Domar model. The model extends Harrod-Domar model by adding labour to the factors of production and capital-

output ratios that are not fixed. Solow model forecast that through technological progress, economies meet together for their steady state equilibrium in the long-run. While change in savings and population growth will only result to absolute value of real income in the long-run. Changes in the technology progress grow exponentially at constant exogenous rate. The technological change is believed to be labour-augmenting and mainly motivated by its natural-constant growth rate that is determined by forces outside the model.

Stundziene and Saboniene (2019) hypothesized whether tangible investment will augment labour productivity in European countries. The study adopted seven variables model and employed correlation test, granger causality test and VAR model to analyze the relationship among the variables. The study validated that tangible investment has positive effect on labour productivity in European countries. The study further found reciprocal causality nexus between apparent labour productivity to gross investment in existing buildings and structures per person employed as well as gross investment in tangible goods per person employed.

Korkmaz and Korkmaz (2017) employed panel data analysis techniques (which include panel unit root, panel cointegration test and granger causality test) to assess the nexus between labour productivity and economic growth among seven OECD countries between 2008 and 2014. From the cointegration result, the study discovered that there is a long-term equilibrium nexus between labour productivity and economic growth. Also the granger causality test revealed a unidirectional causality nexus running from economic growth to labour productivity. From the findings, the study concluded that labour productivity facilitates sustainable economic growth in the developed countries.

Habanabakize (2021) developed NARDL model which comprises three variables that include: job opportunity, labour productivity, and real wages. These models were analyzed using both cointegration method and NARDL statistical analysis method. The result gotten from the analysis revealed that positive relationship exists between labour productivity and job opportunity, while real wages only has negative effect on labour productivity in the long-run. Remi et al., (2020) analyzed the role of health in labour productivity enhancement in Nigeria. The study developed four variables VAR model which include: health indicators (consists of life expectancy, government health expenditure, and malaria cases), secondary school enrolment rates, life expectancy rates, and labour productivity index. The model was analyzed using different estimation techniques such as: Johansen co-integration, pairwise granger causality test, VAR-model, and VECM. The study argued that government spending on health as well as life expectancy rate do not have any statistical effect on labour productivity in Nigeria; while malaria cases has negative significant effect on labour productivity in Nigeria.

Kelani et al., (2019) obtained times series data spanning between 1981 and 2017 for variables such as: real GDP growth rate, life expectancy, labour productivity per capita, and investment. The study employed Auto-regressive distributed lag (ARDL) for statistical analysis. The study found that labour productivity does not cause economic growth in Nigeria. The study explained that low quality of education and obvious depth in quality of manpower justify the absent of labour productivity impact on economic growth in Nigeria. The study therefore suggested that government policies for economic growth should focus on manpower improvement via continuous training and retraining of labour force as well as development of quality education.

METHODOLOGY

To estimate the effect of labour productivity on Nigeria's economic growth, the study used the aggregate production function framework (APF). The preference for adopting APF in this work is that, in addition to “conventional input” of labour and capital used in the neoclassical production function, it permits the inclusion of “unconventional inputs” in the model to capture their contribution to economic growth. The standard aggregate production function is written as:

$$Y = Af(K,L) \dots\dots\dots (3.1)$$

Where Y denotes the aggregate production of the economy (real GDP per capita) and A, K, L are the level of technology, the stock of domestic physical capital and the stock of labour force respectively. When the level of technology, A is ignored, the standard aggregate production function becomes:

$$Y = f(K,L) \dots\dots\dots (3.2)$$

Following Ngutsav and Ijirshar (2018), the standard aggregate production function is modified to accommodate other macroeconomic variables like Labour Productivity (LP), Foreign Direct Investment (FDI), inflation Rate

(INF), and Exchange Rate (EXR), which are believed to affect Nigeria's economic growth are included in the model. Hence, the aggregate production function used for the analysis are specified as

$$Y = f(K, L, LP, FDI, INF, EXR) \dots\dots\dots (3.3)$$

The variables of interest in this study are Y, which represents Real Gross Domestic Product (RGDP), LP. Other variables, FDI, INF, and EXR are included to serve as controls. From the functional equation above, after taking the natural logarithms of both sides, the estimable equation is specified as follows:

Model Specification

Mathematically, Equation 3.3 is transformed thus,

$$RGDP_t = \alpha_0 + \alpha_1 K_t + \alpha_2 L_t + \alpha_3 LP_t + \alpha_4 FDI_t + \alpha_5 INF_t + \alpha_6 EXR_t + e_t \dots\dots\dots (3.4)$$

Where α_0 is the constant term, $\alpha_1 - \alpha_6$ is parameters to be estimated and e_t is the error term, and t is time.

The entire variables are transformed into natural logarithm to lessen the effect of heteroscedasticity in the time series data, as presented in Equation 3.5.

$$\ln RGDP_t = \alpha_0 + \alpha_1 \ln K_t + \alpha_2 \ln L_t + \alpha_3 \ln LP_t + \alpha_4 \ln FDI_t + \alpha_5 \ln INF_t + \alpha_6 \ln EXR_t + e_t \dots\dots (3.5)$$

ARDL Model:

$$\begin{aligned} \Delta \ln(RGDP)_t = & \beta_0 + \sum_{i=1}^{p0} \nu_i \Delta \ln(RGDP)_{t-1} + \sum_{i=0}^{p1} \tau_i \Delta \ln(K)_{t-1} + \\ & \sum_{i=0}^{p2} \theta_i \Delta \ln(L)_{t-1} + \sum_{i=0}^{p3} \sigma_i \Delta \ln(LP)_{t-1} + \sum_{i=0}^{p4} \gamma_i \Delta \ln(FDI)_{t-1} + \sum_{i=0}^{p5} \omega_i \Delta (INF)_{t-1} + \\ & \sum_{i=0}^{p6} \kappa_i \Delta \ln(EXR)_{t-1} + \eta_0 \ln(RGDP)_{t-1} + \eta_1 \ln(K)_{t-1} + \eta_2 \ln(L)_{t-2} + \eta_3 \ln(LP)_{t-1} + \\ & \eta_4 \ln(FDI)_{t-1} + \eta_5 (INF)_{t-1} + \eta_6 \ln(EXR)_{t-1} + e_t \dots\dots\dots(3.6) \end{aligned}$$

Where: β_0 is the intercept and e_t is the white noise. The remaining coefficients describe short-run and long-run relationships. The $\eta_j - j = 0, 1 \dots 6$ correspond to the long-run relationship while the short-run effects are captured by the coefficients for the first difference variables i.e., $\theta_p, \sigma_p, \gamma_p, \omega_p$ and $\kappa_p - p_1 - p_4$ represents the optimum lag length of each of the variables.

RESULTS AND DISCUSSION

Descriptive Statistics

The properties of the data used in this study are discussed. The description of these data include mean, median, standard deviation, skewness, kurtosis, and Jarque-Bera.

Table 4.1 Descriptive Statistics Results

	lnRGDP	lnLP	lnFDI	INF	lnEXR
Mean	30.35	17.58	1.73	17.30	121.67
Median	30.65	17.61	1.57	10.31	127.23
Maximum	32.61	17.82	5.79	75.40	306.92
Minimum	26.93	17.25	0.50	0.69	8.04
Std. Dev.	1.73	0.18	1.18	16.11	88.83
Skewness	-0.46	-0.38	1.94	1.96	0.59
Kurtosis	2.03	1.75	7.01	7.01	2.78
Jarque-Bera	2.21	2.65	38.91	39.36	1.79
Probability	0.33	0.27	0.001	0.001	0.41
Observations	30	30	30	30	30

Source: Authors' Computation

From Table 4.1, the average mean revealed that the trend of real GDP over the years has been positive on the average of 30.35%. This means that on an average, real GDP increased by 30.35% between the periods of 1993 and 2021. The average labour productivity, foreign direct investment, inflation, and exchange rate are 17.58%,

1.73%, 17.30% and 121.67% respectively. This also implies that labour productivity, foreign direct investment, inflation rate, and exchange rate increased on the average of 17.58%, 1.73%, 17.30% and 121.67% respectively within the studied period. It was also noted that the variables used in the study change within their minimum and maximum values; while the standard deviation showed that exchange rate is the most volatile and labour productivity is the least volatile among the variables employed in the study. For the Kurtosis, the variables foreign direct investment and inflation rate are leptokurtic in nature since their values are above 3, while other variables i.e., real GDP, labour productivity, and exchange rate are platikurtic in nature since their value are below 3. The Jarque-Bera statistics of lnRGDP, lnLP, and lnEXR have a probability value of 0.33, 0.27, and 0.41, which were not significant at 5% significance level. The null hypothesis was accepted that the variables are normally distributed. On the other hand, lnFDI and INF has a probability value of 0.001, which was statistically significant at 5% significance level. The null hypothesis was rejected, and it was concluded that the variables were not normally distributed.

Correlation Test

To determine the linear relationship that exists among the variables and check whether multicollinearity problem exists among the variables employed, correlation test was carried out and the result is presented in Table 4.2.

Table 4.2: Correlation Analysis Results

	lnGDP	lnLP	lnFDI	INF	lnEXR
lnRGDP	1				
lnLP	0.992 (0.000)*	1			
lnFDI	-305 (0.101)*	-253 (0.145)	1		
INF	-0.521 (0.003)*	-0.553 (0.002)*	0.334 (0.071)*	1	
lnEXR	0.889 (0.000)*	0.883 (0.000)*	-0.831 (0.084)*	-0.457 (0.011)*	1

Note: the parenthesis () are the probability values of the variables, while * implies significant level at a 5% significance level. **Source: Authors' Computation**

From Table 4.2, it was observed that there exists positive and significant linear relationship between lnRGDP and some independent variables namely lnLP, and lnEXR, while lnFDI and lnINF had a negative linear association with lnRGDP. The result also revealed that there is absence of multicollinearity problem among the variables employed as none in association to lnRGDP has a value of 1.

Unit Root Test

To check the existence of unit root among the variables employed in this study, the unit root test was carried out using Augmented Dickey Fuller (ADF) test. While the ADF unit root testing of intercept was employed. The result is presented in Table 4.3.

Table 4.3 Augmented Dickey-Fuller Test in Intercept Model at Levels and First Difference

With Intercept Only					With Intercept Only				
Variable	At Level	Critical value			At First Difference	Critical value			Order of integration
		1%	5%	10%		1%	5%	10%	
lnRGDP	-1.57	-4.36	-3.60	-3.23	-3.66	-4.36	-3.60	-3.23	I(1)

lnLP	1.28	-4.44	-3.63	-3.25	-3.62	-4.39	-3.61	-3.24	I(1)
lnFDI	-3.10	-4.36	-3.60	-3.23	-4.99	-4.34	-3.59	-3.23	I(1)
INF	-4.97	-4.33	-3.59	-3.23					I(0)
lnEXR	-2.31	-4.32	-3.58	-3.23	-3.86	-4.32	-3.58	-3.23	I(1)

Source: Authors' Computation

Table 4.3 results indicate that all the variables of interests are stationary af first difference except for the inflation rate that is stationary at levels. The series are integrated in different orders, that is, a combination of both level and first difference stationarity. Thus, co-integration test is necessary to establish a long-run relationship. Hence, the study adopts an Autoregressive Distributed Lag Model (ARDL).

ARDL Bounds Test

For the purpose of checking the long-run cointegrating relationship that exists among the variables, this study carried out ARDL bounds test. ARDL bounds test accommodates an outcomes to check for long-run co-integrating relationship existence among variables whose data are stationary at I(0) and I(1). However, the ARDL bounds test result is presented in Table 4.4.

Table 4.4. ARDL Bounds Test Result

Test Statistic	Value	Sig.	I(0)	I(1)
F-statistic	95.64	10%	2.45	3.52
K	4	5%	2.86	4.01
		1%	3.74	5.06

Source: Authors' Computation

From the above result, it could be noted the F-Statistic is greater than the upper bound I(1) value. By implication, the result suggests that there exists a long-run cointegrating relationship between dependent variable (i.e., real GDP) and the independent variables (namely: labour productivity, foreign direct investment, inflation rate and exchange rate).

ARDL Estimation

The ARDL estimation was adopted to examine the long-run and short-run effect of labour productivity on economic growth in Nigeria. As a result, this study tested the short-run and long-run effect of labour productivity on economic growth in Nigeria using ARDL model. The optimal lag was automatic selected with the maximum lags set at 4 for both dependent variable and regressors, while Schwarz Information Criteria (SIC) was used as the model selection criteria. The result is presented in Table 4.5.

Table 4.5 ARDL Estimation Results

Dependent Variable: $\Delta(\ln GDP)$

Selected Model: ARDL (3, 4, 3, 4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<i>C</i>	67.44224	5.321929	12.67252	0.0011
$\Delta \ln LP_{t-1}$	-1.004979	0.195977	-5.128039	0.0144
$\Delta \ln LP_{t-2}$	0.338294	0.140248	2.412117	0.0948
$\Delta \ln LP_{t-3}$	2.208884	0.149111	14.81370	0.0007
ΔFDI_{t-1}	0.028436	0.002829	10.05033	0.0021
ΔFDI_{t-2}	-0.111429	0.008001	-13.92615	0.0008
ΔFDI_{t-3}	-0.052858	0.004998	-10.57602	0.0018
ΔFDI_{t-4}	-0.031190	0.003309	-9.426075	0.0025
ΔINF_{t-1}	0.007403	0.000252	29.32494	0.0001
ΔINF_{t-2}	0.007767	0.000649	11.96660	0.0013
ΔINF_{t-3}	0.003123	0.000447	6.992352	0.0060
ΔEXR_{t-1}	-0.001207	8.94E-05	-13.49518	0.0009
ΔEXR_{t-2}	0.000173	0.000123	1.411056	0.2531
ΔEXR_{t-3}	0.000363	0.000118	3.084445	0.0539
ΔEXR_{t-4}	0.001973	0.000102	19.33051	0.0003
Long-run Estimation				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
<i>lnLP</i>	9.854367	0.150461	65.49449	0.0000
<i>FDI</i>	-0.321519	0.012867	-24.98713	0.0001
<i>INF</i>	0.014543	0.001151	12.63392	0.0011
<i>EXR</i>	0.000988	0.000217	4.561143	0.0198

Source: Authors' Computation

From the result presented in Table 4.5, it was revealed that in the short-run, labour productivity, inflation rate, and exchange rate impact on economic growth with positive relationship at a 5% significant level, while foreign direct investment negatively impact economic growth at a 5% significant level. By implication, 1% change in labour productivity, inflation rate, and exchange rate increase economic growth by 2.208%, 0.008%, and 0.002% respectively, while 1% changes in foreign direct investment reduces economic growth by 0.031%. This implies that foreign direct investment had a negative impact on Nigeria's economic growth. This is an indication that Nigeria should be cautious in implementing or attracting foreign direct investment flows into Nigeria. However, this sign could be as a result of the insufficient human capital development.

On the other hand, the long-run result revealed that both labour productivity and inflation rate positively affect economic growth at a 5% significant level, exchange rate has positive effect on economic growth at 5% level of significant, while foreign direct investment has negative impact on economic growth at a 5% significant level. This result implies that 1% change in labour productivity, inflation rate, and exchange rate cause economic growth to increase by 9.85%, 0.015%, and 0.001% respectively, while 1% changes in foreign direct investment reduce economy growth by 0.322%.

Discussion of Findings

The short and long-run impact of labour productivity on economic growth in Nigeria

The findings from this study led to the conclusion that labour productivity has positive influences on economic growth in Nigeria. This is in tandem with some previous studies among which are Habanabakize (2021), Korkmaz and Korkmaz (2017) and Solow-Swam (1956). Maku et al. (2018) and Sultan, et al. (2020). The result, both in the short and long-run revealed that labour productivity positively and significantly impacts economic

growth in Nigeria. The result is in conformity with the aggregate production function theory, which stipulates that economic growth is a function of labour productivity. This finding can be attributed to various employment intervention programmes (such as: Subsidy Reinvestment and Empowerment Program (SURE-P), Nigerian Youth Employment Action Plan (NIYEAP), Skills Development for Youth Employment (SDYE) and N-Power) initiated by Nigerian government over the years to engage the youth and fresh graduates in every sector of the economy to make them more productive. Besides, entrepreneur programs (such as: Start-up Nigeria (SN), Youth Entrepreneurship Support Program (YESP), Social Intervention Fund (SIF) were introduced by Nigeria government to induce labour productivity in the economy.

Also, the result revealed that both inflation and exchange rate have positive and statistically significant impact on the economic growth in Nigeria in the short-run and long-run. Firstly, the positive impact of inflation on economic growth revealed that Nigerian inflation has been driving consumer demand and consumption in the country which serves as vehicles to increase economic growth in both short-run and long-run. Secondly, seeing that Nigeria is the largest exporter of oil and gas in Africa and the sixth largest oil producing country in the world, the persistent depreciation of its currency enables the country to earn more from exportation which therefore boost Nigeria's economic growth. On the other hand, the short-run and long-run negative and significant impact of foreign direct investment on economic growth in Nigeria revealed low FDI inflow in the country which is associated with the failure of government to; provide adequate power supply and other facilities needed to attract FDI, formulate policies that will induce FDI inflows, and identify alternative investment asides from oil and telecommunications that will attract FDI.

The causal relationship between labour productivity and economic growth in Nigeria result revealed no causal relationship between labour productivity and economic growth in Nigeria. The result is not in conformity with the aggregate production function theory, which stipulates that economic growth is a function of labour productivity. The reason behind this finding is that the continuous increase in unemployment rate coupled with infrastructural challenges like bad roads, erratic electricity supply, etc., remain considerable threats to realising Nigeria's full economic and productivity potentials.

CONCLUSION AND POLICY RECOMMENDATIONS

From the result obtained from the ARDL Bounds test, it can be inferred that there is cointegrating nexus between labour productivity and economic growth in the long-run. Based on the result obtained from the ARDL estimation, this study concludes that labour productivity has a positive and meaningful impact on economic growth in Nigeria both in short-run and long-run. Besides, it can also be deduced that inflation rate and exchange rate positively and significantly affect economic growth in Nigeria both in long-run and short-run while it is concluded that negative and significant impact exists from foreign direct investment to economic growth in Nigeria.

Regarding the empirical findings obtained in this study, various strategic policies that could increase economic growth in Nigeria are recommended as follows:

- Government needs to develop and implement integrated jobs strategies and support via improving financial access, strengthening skills training, supporting a strong private sector, and building sustainable infrastructure to increase labour productivity and achieve sustainable economic growth.
- Also, Nigerian government should increase investment in human resource development that could improve labour productivity in all sectors in the recent changing world towards highly technological growth-oriented economy.
- Furthermore, macro and regulatory policies such as improving market linkages, addressing sectorial and regional needs, labour regulations and active labour market programs should be used as tools that will enable private sectors to create more jobs.
- In addition, there is need to reduce restrictions on FDI and adopt FDI inflow driving strategies such as: financial incentive; educational investment; infrastructural development; and political, economic, and legal stability.

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ABSTRACT

There has been divergent view on the impact of trade openness on the industrial development and unemployment rate, most literatures opined that, ideally trade openness supposedly enhance industrial development and employment rate while some opposed it. This study identified the relationship between the trade openness interaction with institutions, industrial development and unemployment in Nigeria. The secondary data were sourced from world development indicator. With the use of Auto Regression Distributed Lag (ARDL) statistical analysis after the pre-estimated test (stationary test), between 1996 and 2022, it was discovered that trade openness in Nigeria economy, actually worsen industrial development and increased unemployment rate. With trade openness and industrial development showing inverse relationship only industrial development is significant. Also, the interaction of trade openness and quality of the existing institutions in the economy, indicate an inverse with insignificant relationship. The recommendation was on the development of quality institutions and trade policy reform that will enhance enabling environment for foreign direct investment into the industrial sector of the economy that will really boost domestic production and employment opportunities that can accommodate the high unemployment rate in Nigeria.

Keywords: Trade Openness, Industrial development, institutional quality, unemployment

INTRODUCTION

Trade Openness is the sum of imports and exports normalised by gross domestic product (GDP). Economists generally ascribed various benefits in the literature, such as the efficient allocation of scarce resources and promotion of division of labour with specialization and comparative advantage, promotion of competition in national and international markets, and facilitating knowledge and technology across borders (Ohwofasa & Ekawure, 2023). Scholars opined that in the past higher degree of trade openness would enhance local industrial development which may in turn boost the employment generation in participating countries. According to Ohwofasa and Ekawure (2023) trade openness enhances tremendous increase in world output through efficient allocation of resources, capital accumulation and healthy competition between trading nations, and increase inflows of technological advancement, Trade has been considered as the core instrument of development strategies by Nigeria's government, because of the inherent belief that trade can create jobs, expand markets, increase income, as well as facilitating competition and disseminating knowledge (Lamy, 2015; Asaley et.al., 2017). Also, Briggs, Nteegaha, and Ohalea, (2022) affirm that boundary trade is very crucial in the performance of the economy because it facilitates the expansion of markets, reduces poverty with job creation, and destroys monopolies by few industries or countries with an abundance of economic factor input.

Notwithstanding the above works of literature, there seems to be a reverse linkage between trade openness and industrial development on the one hand and economic development and employment on the other hand, especially in developing nations. The real experiences of many countries, particularly developing countries, run contrary to these theoretical assertions as many countries in the world face daunting challenges of rising unemployment despite impressive records of economic growth over the years (Rashidi, Fazaeli, & Maleki, 2023; Andriansyah, Nurwanda, & Rifai, 2023). Such is the case in Nigeria with statistics of rising international trade but a sharp decline in the number of industries and alarming figures for unemployment rates in Nigeria making it a chronic socioeconomic malaise (Rashidi, Fazaeli, & Maleki, 2023; Andriansyah, Nurwanda, & Rifai, 2023). According to Rifai (2023), the unemployment rate has soared at an alarming rate as many young graduates from higher institutions are joining the labor market without the capacity to absorb them." This necessitates the question asked by Onifade, Ay, Asongu, and Bekun. (2020) that "can trade ameliorate

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Interactive Impact of Trade Openness and Institutions, Industrial Development and Unemployment in Nigeria Economy unemployment challenges in the Nigerian economy or can the dynamics of the international trade have contributed as a panacea to the unemployment crisis that is ravaging the Nigerian economy?" It is fallacious to answer such questions in isolation as Nigeria's case about trade engagements is a peculiar one, as the internal economic policies of the country in the past did not take advantage of its trade openness to other nations of the world. According to Nchom and Udeorah (2021), the statistical result reveals the Dutch disease phenomenon as the cause of the negative relationship between international trade and employment, where a nation focuses on a particular source of revenue at the expense of others. Also, the issue of policy summersault whereby the incoming government tends to upturn most or all trade policies of the previous government, hence making the Nigerian trade policies inconsistent.

Most studies often focus on the positive impact of trade openness on industrial development, unemployment, and economic growth. However, since there are experiences by most developing nations to the contrary, therefore the objective of this study is to examine the impact of trade openness and institutions, industrial development and unemployment in Nigeria, with observation of the interaction between trade openness and quality institutions spanning from 1996 to 2022. Section one of the research papers is about the background of the study, section two highlights the theoretical and empirical literature, and section three presents the data and methodology with the underpinning theories and statistical analysis. Section four emphasizes the result findings while section five presents the conclusion and recommendations.

LITERATURE REVIEW

Theoretical Review

Almost all the theories of international trade are rooted in the theory of absolute advantage postulated by Adam Smith and the theory of comparative advantage postulated by David Ricardo. For adequacy and capturing of modern trends in international trade, this study will emphasize recently postulated theory.

Heckscher–Ohlin model

The Heckscher–Ohlin model postulated that the pattern of international trade is determined by differences in factor endowments. It predicts that countries will export those goods that make intensive use of locally abundant factors and will import goods that make intensive use of locally scarce factors. The H–O was based on the following core assumptions:

- Labor and capital flow freely between sectors equalizing factor prices across sectors within a country.
- The amount of labor and capital in the two countries differ (difference in endowments)
- Technology is the same among countries (a long-term assumption)
- Tastes are the same in countries
- From the foregoing, relative endowments of the factors of production (land, labor, and capital) determine a country's comparative advantage. Countries have comparative advantages in those goods for which the required factors of production are relatively abundant locally. This is because the profitability of goods is determined by input costs. Goods that require locally abundant inputs are cheaper to produce than those goods that require locally scarce inputs. Therefore, for most developing nations of sub-Saharan Africa that are massively land and labor-endowed, it is expected there would be the existence of massive production and export of land and labor-intensive goods and services which will necessitate industrial development and employment generation; while they can import capital intensive goods and services.

Empirical review

Diverse empirical pieces of evidence in the works of literature on the positive impact of trade openness on economic growth cannot be overemphasized. In a recent study, Ohwofasa and Ekawure (2023) explored the relationship existing between trade openness and economic growth in Nigeria by disaggregating trade openness into solid mineral export earnings, manufacturing export earnings, agricultural export earnings, and oil export earnings; by employing the Autoregressive Distributed Lag (ARDL) model covering data period from 1986 to 2020. The study found that economic growth is significant and positively responsive to changes in agriculture and crude oil exports. At the same time, it's significant and negatively responsive to changes in solid mineral exports. Still, manufacturing exports were found to be statistically insignificant in exerting an impact on economic growth in the short run. However, in the long run, the study also found that agriculture and

manufacturing exports had a significant positive impact on growth, while the effect of solid minerals and oil exports is negative and statistically significant. The study suggested that the federal government may consider formulating a strategy of making all exports go through export processing zones thereby adding more value to the exportable and creating demand for the products to generate more revenue for the government, as regards improving manufacturing exports, the government may consider a strategy of exporting only raw materials and semi-manufactured products which must also pass through the export zone.

In another study, Fredrick, Olusegun, and Olamitunji (2019) make investment as a function of trade openness, import and export as a ratio of GDP respectively to assess the impact of trade openness on growth in Sub-Saharan Africa. By employing a panel-corrected standard error (PCSE) on data covering 35 African countries, the study established that growth is positively and significantly responsive to changes in trade openness and import contrary to its negative response to changes in export growth. Likewise, in the research study of Ojeyinka and Adegboye (2017), the authors scrutinized the extent to which the manufacturing and agriculture sectors are affected by changes in trade openness in Nigeria. Using the Generalized Method of Moment (GMM) to explore the contemporaneous dynamics existing among the variables, the study found a positive significant relationship between trade liberalization and agricultural output contrary to a significantly negative relationship with manufacturing output in Nigeria.

In a study conducted by Nwosa, Adegboyo and Fasina, (2020), identified relationship between trade openness and the unemployment rate in Nigeria from 1980 to 2018. The study utilized the auto-regressive distributed lag (ARDL) technique and the result of the study shows that trade openness had a negative and significant impact on the unemployment rate in Nigeria. This implied that trade openness provides employment opportunities, which in turn reduces the unemployment rate in Nigeria. The research work concluded that the government should put in place a trade policy that should enhance the provision of employment opportunities and that would contribute significantly to reducing the unemployment rate in Nigeria. Also, conscious economic policies that would increase government expenditure in the real sector which is expected to promote the aggregate volume of investment in the country and contribute to employment generation; should be structured by the government. Mba, Orji, Chukwumaeze and Anthony-Orji (2019) also examined the relationship between trade openness and industrial output growth in Nigeria using time series data, endogenous growth framework, and an export-led growth model. The result of the study showed that trade openness contributes positively to industrial output growth and supports general economic diversification. In the short-run, the dynamic impact of trade openness on industrial output growth is insignificant while its long-run impact is significant.

The study of Otapo and Ushie (2022) made use of the Solow growth model and included the unemployment rate as a moderating variable along with the segregation of the export component of trade openness into oil and non-oil exports. Using the Autoregressive Distributed Lag (ARDL) as the method of analysis it was discovered that non-oil export had a positive and significant effect on economic growth while oil export had a positive but insignificant relationship with economic growth. The unemployment rate was found to have an insignificant and negative effect on economic growth in Nigeria. However, foreign direct investment was found to be positive and insignificant. The study also discovered that there is no long-run co-integrating equilibrium relationship between trade openness, FDI, unemployment rate, and economic growth. It was suggested that there is a need for more funds to be allocated to the non-oil productive sector of the economy to boost productivity from the sector and as well as to reduce the unemployment rate. Also, in the study of Oppong-Baah, Twi-Brempong, Amoah, Prempeh and Addai. (2022) on the impact of trade openness on economic growth: the case of Ghana and Nigeria, using the pooled ordinary least squares (OLS), fixed effects, random effects, and a Hausman test with panel data to arrive at the results; it was found that trade openness and real exchange rate positively and significantly impact economic growth using the random effect. In contrast, inflation and investment have an insignificant impact on economic growth using Random effect estimated models.

Conversely, some studies suggested that trade openness may be a contributing factor to the endemic unemployment rate in Nigeria. In the study of Raifu (2017) on the role of trade openness and current account balance on the unemployment rate in Nigeria using data from 1981 – 2014 and by employing the Autoregressive Distribution Lag estimation technique; the study found that trade openness worsens the unemployment rate in Nigeria both in the short-run and long run. Also, it was observed that in the short run, the current account balance

increases the unemployment rate but reduces it in the long run. The author suggested that the government should establish and implement sound trade and macroeconomic policies to aid domestic firms' production to ensure the international competitiveness of these firms to guarantee employment generation. In the same vein, according to Asaleye, Okodua, Oloni and Ogunjobi. (2017) accessed the relationship that subsists between trade openness and employment with evidence from Nigeria using the Vector Error Correction model and Granger Non-Causality in their analyses; they found the short-run negative significance of trade openness on employment and also a negative long-run relationship between trade openness and output. The implication of this is that trade openness has been harmful to employment generation in Nigeria. They advised that the government should increase its competitiveness in the international market and make use of interest and exchange rates for trade competitiveness. Likewise, Nwaka, Uma and Tuna (2015) observed in a study using the vector error correction technique (VECM) in analyzing time series data from Nigeria between 1970 and 2010 found that trade openness is associated with rising unemployment in Nigeria. Ishola et al. (2013), investigated trade openness and economic growth in Nigeria (1981-2009) and used the Ordinary Least Square to measure the impact of trade openness on GDP in Nigeria. The study employed FDI, total trade, non-oil exports, exchange rate, openness (total trade as a ratio of GDP), and the balance of payment as variables for the study, their study found that trade openness and FDI and other intervening external sector variables do not determine economic growth in Nigeria.

In another study by Isere (2020), opined that the effect of economic growth, inflation, trade openness, exchange, unemployment, and interest rates on FDI in Nigeria over the period 1980 and 2019. With the use of Auto Regression Distributed Lag (ARDL) statistical analysis, the author found that GDP and unemployment had a negative but non-significant relationship with FDI individually. Hence, it was suggested that the government should increase Nigeria's domestic investment as this will help in reducing the increase in unemployment as FDI inflow increases. Also, FDI will increase economic growth in Nigeria if government policies are properly implemented in the area of employment generation and reduction of inflation rates. Also, Onifade, Asongu and Bekun, (2019) in revisiting the trade and unemployment nexus, used the Auto Regression Distributed Lag (ARDL) and found that the nation's terms of trade were insignificant to the unemployment rate while trade openness and domestic investment have significant opposing impacts on unemployment in Nigeria. According to another recent study by Nchom and Udeorah (2021) on international trade and employment in Nigeria, the author used dynamic ordinary least square (DOLS) regression analysis on data spanning 1999-2019 and found that international trade and employment rate have a negative relationship in Nigeria during the period of study. In the study by Abinabo and Abubakar (2023), using the Augmented Dickey Fuller (ADF) unit root test for stationarity, Johansen Cointegration test for long run relationship, and Error Correction Mechanism (ECM) model as the methods of estimation; it was found that trade openness has positive and statistically significant impact on economic growth in Nigeria; and that import has a negative significant impact on economic growth in Nigeria.

Other schools of thought opined that the quality institutional framework may have a role to play in determining the impact of trade openness on the economic growth of a country. Omoke and Opuala-Charles (2020) in the study on trade openness and economic growth nexus using data that covers the period from 1984 to 2017 and employing Auto Regression Distributed Lag (ARDL) in their analysis; found that the negative long-run effects of import trade on economic growth in Nigeria decrease as institutional quality (quality of governance) improves. Likewise in the work of Stensnes (2006), examined an interaction variable between openness and institutions, integrated in a growth regression for a sample of 94 countries. The study found that for countries with the least developed institutions of conflict management, greater openness is *ceteris paribus* found to reduce growth rates.

From the above, it can be implied that shreds of literature on the link between trade openness, industrial development, and unemployment in Nigeria have been mixed and inconclusive. But worthy of note is the empirical assertions of the importance of institutional quality as an impetus for the efficacy of trade openness in enhancing industrial development and employment generation. Hence, the basis of this study is to explore the reverse linkage between trade openness, industrial development, and unemployment in Nigeria.

METHODOLOGY

Data Sources and Measurement

The study used secondary data sourced from the World Development Indicators (WDI) of the World Bank. The data from the source are reliable in answering the research questions and testing the study's hypotheses. The data is spanning from 1996 to 2022. Auto Regression Distributed Lag (ARDL) statistical analysis after the pre-estimated test (stationary test) to look into the short- and long-term correlations between the dependent (endogenous) variables and independent (exogenous) variables. With the pre estimation test having the stationary test at level and one respectively, the author regressive distributed lag and bounds test for the short and long run appropriately.

Model Specification and Estimation Procedures

Model specification is a conceptual term that describes a mathematical statement of the relationship between variables. The following is the model specification for the analysis of the data collected.

$$UM = F(IND, GDPGR, FDI, QN, TOQN, TO) \dots\dots\dots 1$$

Introducing the coefficient of the parameters equation 1 is written as:

$$UM = \alpha_0 + \beta_1IND + \beta_2GDPGR + \beta_3FDI + \beta_4QN + \beta_5TOQN + \beta_6TO + \mu_t \dots\dots\dots 2$$

Considering the lag of the dependent variable and the white noise, equation 2 is written as:

$$UM = \alpha_0 + \alpha_1UM_{-1} + \beta_1IND + \beta_2GDPGR + \beta_3FDI + \beta_4QN + \beta_5TOQN + \beta_6TO + \mu_t \dots\dots 3$$

Taking into consideration the summation of the individual variables, equation 3 is written as:

$$\Delta UM_t = \alpha_0 + \Sigma \alpha_1 \Delta UM_{-1} + \Sigma \beta_1 \Delta IND + \Sigma \beta_2 \Delta GDPGR + \Sigma \beta_3 \Delta FDI + \Sigma \beta_4 \Delta QN + \Sigma \beta_5 \Delta TOQN + \Sigma \beta_6 \Delta TO + \mu_t \dots\dots\dots 4$$

Um is the unemployment percentage of the total labor force. IND is the Industrial performance, proxy with value added value by the industrial sector. GDPGR is the Gross domestic product Growth rate. FDI is the foreign inflow into the economy. QN is the quality of institutions (Voice and accountability, regulatory efficiency, and government effectiveness) as used by Kaufman, Kray, and Matruzzini. TO is the trade openness ((import + export) / GDP). Openness. TOQN is the interaction of trade openness and the quality of institutions.

DATA ANALYSIS AND INTERPRETATION

Table 4.1. Descriptive Statistic

VAR	UM	IND	GDPGR	FDI	QN	TOQN	TO
MEAN	57.65800	27.02338	4.870110	1.350086	-1.900676	-0.723113	0.376348
MEDIAN	56.90000	27.07302	5.307924	1.523782	-1.770675	-0.722767	0.392786
MAX	69.93000	37.44548	15.32916	2.900249	-1.334739	-0.301003	0.532780
MIN	52.00000	18.17313	-1.794253	0.137154	-2.699282	-1.389078	0.207225
STD. D	5.715192	4.340935	3.671617	0.838484	0.457647	0.267562	0.091383
SKEWN	1.322818	0.297332	0.466956	0.135937	-0.574555	-0.543005	-0.090297
KURT	3.495092	3.306017	4.098470	1.918258	1.973945	2.980799	2.216494
JARQB	7.546359	0.465908	2.165447	1.295918	2.472128	1.228942	0.673428
PROB	0.022979	0.792190	0.338672	0.523112	0.290525	0.540927	0.714113
OBS	25	25	25	25	25	25	25

Authors' computation, 2024

Table 4.1 shows the descriptive statistics, revealing the mean and median variables in between the maximum

Interactive Impact of Trade Openness and Institutions, Industrial Development and Unemployment in Nigeria Economy and minimum values. With regards to a normal distribution, unemployment, industrial development, and gross domestic growth rate are positively skewed while quality institutions, the interaction of trade openness, and quality institutions together with trade openness are very low with negative skewness. the coefficient of the kurtosis for foreign direct investment (FDI), quality institutions (QN), and interaction of trade openness and quality institutions (TOQN) and trade openness are Platykurtic (less than 3) while unemployment, industrial development, and gross domestic growth rate are Leptokurtic (greater than 3). Only the probability of Jarqua Bera for unemployment is below a 5% level of significance (in absolute terms).

Table 4.2. Correlation matrix

VAR	UM	IND	GDPGR	FDI	QN	TOQN	TO
UM	1.0000						
IND	-0.6981	1.0000					
GDPGR	-0.2977	-0.1105	1.0000				
FDI	-0.1866	-0.2236	0.5772	1.0000			
QN	0.4927	-0.3536	-0.2343	0.0863	1.0000		
TOQN	0.6155	-0.5149	-0.3722	-0.0881	0.6031	1.0000	
TO	-0.5332	0.4861	0.4024	0.3228	-0.1942	-0.7244	1.0000

Authors' computation, 2024

Table 4.2 indicates that there is no threat of multicollinearity among variables as depicted in the correlation matrix. There exists positive and negative correlation among the variables. The coefficient of correlation among the variables in the correlation box has moderate and low correlation with few having weak correlation but does not constitute any serious threat of multicollinearity among the variables.

Table 4.3. Unit Root Test

@ Level

@ 1st Different

Variables	ADF stat	PP stat	ADF stat	PP stat	OOI
UM	1.2636	-2.0625	-5.9602***	-4.5556***	1
IND	-3.1872**	-2.9566*	-3.1998**	-4.1306**	0
GDPGR	-2.0398	-2.0585	-3.8638**	-6.2898***	1
FDI	-1.5434	-2.0017	-6.8105***	-6.8105***	1
QN	-1.1328	-2.8745*	-6.1900***	-7.1718***	1
TO	-2.3425	-2.2458	-5.7669***	-8.3321***	1
TOQN	-2.0489	-1.7807	-4.5460***	-5.7078***	1

*** = 1%, ** 5%, * = 10%, OOI= order of integration, O = level, 1 = first different

Authors' computation, 2024,

Table 4.3 shows the time series unit root test with individual effect, the statistical analysis reveals that only the industrial value added is significant at 5% level of significant, but after taking the first different, all the variables became significant, as a result of the stationary test, panel autoregressive distributed lag was used to analyze the

short and bounds test for long run statistical analysis.

Table 4.4 Long run Co-integration test

F-Bounds Test

Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
F-Statistic	2.772052		finte sample(3)	finte sample(3)
		10%	2.254	3.388
		5%	2.685	3.96
		1%	3.713	5.326

Authors' computation, 2024

In Table 4.4, the co-integration test showed that the null hypothesis of no co-integration between the variables is rejected, which implies that there is co-integration between variables, irrespective of the significant level. Given the existence of co-integration with the value of F- statistic (2.7721), which is greater than the value of lower bound i(0) at 5% but lower than the upper bound i(1). It revealed that there exists a long-run relationship between the variables in the model at a 5% significant level.

Table 4.5 Short Run Analysis

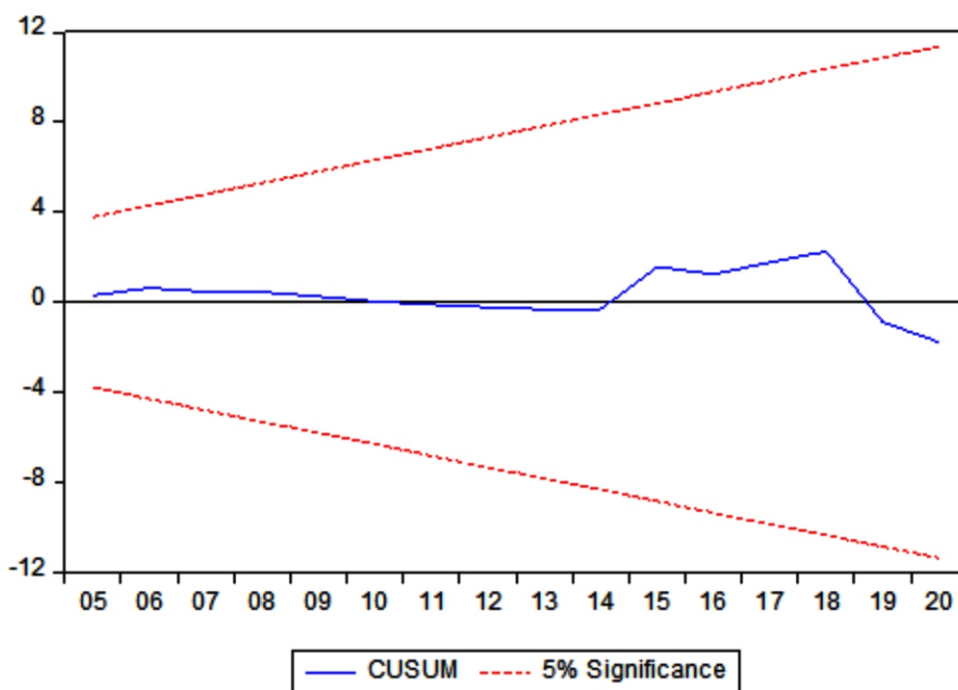
VARIABLE	COEFF	STD. ERR	T- STAT	PROBABILIT
UM(1)	0.262607	0.222228	1.181699	0.2557
IND	-0.874801	0.335268	-2.609261	0.0197
GDPGR	-0.244682	0.291069	-0.840634	0.4138
FDI	-0.967047	1.377671	-0.701943	0.4935
QN	8.192470	9.763991	0.839049	0.4146
TOQN	-14.52244	22.73345	-0.638814	0.5326
TO	-22.88292	46.41113	-0.493048	0.6291
ECT(1)	-0.054680	0.197394	-0.277010	0.7856
C	82.13307	24.30087	3.379841	0.0041
R Square	0.753914			
Adj R square	0.622668			
F- Statisc	5.744280			
Probability(Fstat)	0.001844			
DurbinWatson stat	2.16343			

Authors' computation, 2024.

Table 4.5 shows the short-run relationship among the variables. The lag of unemployment in the economy is positively related to the present unemployment but it is not statistically significant. The industrial development is inversely related to the unemployment rate, this implies that for every one-unit increase in the industrial development of Nigeria's economy, unemployment reduces by -0.874801, it is statistically significant at 5% ($P < 0.05$), it conforms with (Nchom & Udeorah, 2021; Briggs et al, 2022). The growth rate of the economy is also inversely related to unemployment, revealing that for every one-unit increase in the growth rate, unemployment reduces by -0.244682, but it is not statistically significant. It conforms with (Raifi, 2017). Foreign direct investment and trade openness were inversely related to unemployment while the quality of institutions is positively related indicating that the institutions are not having an impact on unemployment. Also, the interaction between trade openness and the quality of the institutions has an inverse relationship but is not statistically significant. The error correction term (-0.054680) shows the speed of adjustment that if there is any form of disequilibrium from the model, it takes 5.5% to return back to equilibrium.

The R square value (0.7539) revealed that the combination of the independent variables could explain 75.4% of the dependent variable (UM) from the model. The adjusted R square (0.62267) shows that if other variables outside the model that affect the dependent variables are factored into the model, 62.3% of the dependent variables will be explained. The Durbin-Watson statistic of 2.16 (less than 2.6) shows that there is no presence of serial correlation among the variables in the model. The probability of the F-statistic (0.0018) shows the robustness of the model at 1%.

Table 4.6. Cusum Stability Test



Authors' computation, 2024

In Table 4.6 the Cusum test is the plot of the stability test for the model. Having the blue line in between the red lines indicates that it is within the 5% critical bounds because of the two lines that bounded the trend curve. It implies that the parameters of the model do not experience structural instability during the period of study.

CONCLUSION AND RECOMMENDATION

This study examined the interacting impact of trade openness and institutions, industrial development and unemployment in Nigeria and the findings of the study showed that, to a considerable extent, trade openness and industrial development have a great impact on unemployment while industrial development has a statistical significance on unemployment. The foreign direct investment plays a vital role in the unemployment but it is also not significant. The existing institutions do not affect unemployment, indicating that irrespective of government expenditure on institutions, unemployment is still very high. Also, the interaction of trade openness

and the quality of institutions has an inverse effect but not significant at either 1% or 5%. Significant level Based on the findings, the research work therefore suggests that the development of quality institutions with policy adjustments that will encourage more investors into the industrial sector will stimulate output growth, which will invariably have a multiplier effect on the unemployment rate. These guidelines and supervision would prevent the diversion of economic resources to unproductive sectors. Also, economic policy on trade reform should be implemented to diversify the economy further and expand the extractive industry in Nigeria to reduce importation for the indigenous firm to strive and also facilitate corresponding export earnings in Nigeria, as this will ensure that trade openness benefits the nation's economy.

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**BANKING REFORMS, FINANCIAL STABILITY AND
ECONOMIC GROWTH IN NIGERIA**

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ABSTRACT

This work examined banking reforms, financial stability and economic growth in Nigeria. The objectives of the study are to assess the effect of recent banking reforms in on economic growth and also determine the contribution of financial stability on economic growth in Nigeria. Data sourced from World development indicator (WDI) from 1980 to 2023 were analysed using Author regressive distributed lag (ARDL) technique, after the pre estimation result. The findings revealed that bank capital (BCAP) is though weak but positively related to growth rate of gross domestic product(GDPGR) while domestic credit to private sector (DCPS) is inversely related to the growth rate of gross domestic product by 0.016 and -0.185 respectively. The study fails to reject the hypothesis that banking reforms has no effect on economic growth in Nigeria. The study recommends that government should formulate policies that will encourage banks to lend more to the productive sector (real sector) with high multiplier effect in the output of the economy, while regulatory framework should be strictly enforced by the Central Bank of Nigeria (CBN). Also, risks mitigating laws that could promote business establishment in all the sectors of the economy be enacted by the National Assembly to encourage more foreign inflow into other sector that requires long term financing.

Keywords: Banking reform, Financial stability, Economic growth, Bank capital.

INTRODUCTION

Nigeria, in the recent years can be adjudged to have recorded significant improvement in its banking system with digital transformation in the Nigerian banking sector that led to the introduction of mobile banking and Apps, online banking, and digital payments to mention but few (Oladele, 2022; Olowe, 2020). This is through series of reforms directed at fostering financial stability and sustainable economic growth (Adeleye, 2022). Those reforms have been instrumental to reshaping the landscape of the Nigerian banking industry, addressing systemic vulnerabilities, and enhancing the sector's resilience to external shocks. Ajayi and Ojo (2018) opined that banking reforms implemented by the Central Bank of Nigeria (CBN) were aimed at addressing various challenges facing the Nigerian banking sector, including weak corporate governance, insider abuses, non-performing loans, and regulatory arbitrage.

One of the pivotal reforms introduced in Nigeria's banking sector is the recapitalization requirement imposed by the CBN. In response to the global financial crisis of 2008 and to strengthen the country banking system, the CBN mandated banks to increase their minimum capital base to 25 billion. This measure aimed to bolster the financial soundness of banks, enhance their capacity to absorb risks and improve their ability to support economic activities through increased lending (Ogbeide & Okoro, 2019).

Moreover, the implementation of risk-based supervision frameworks has been another crucial aspect of banking reforms in Nigeria. By adopting risk – based supervision, the regulatory authorities can better assess and mitigate risk within the banking sector, thereby promoting stability and safeguarding depositors' funds (Adegbaaju, 2017). Furthermore, the introduction of innovative policy such as the cashless policy and the Bank Verification Number (BVN) system has played a significant role in enhancing transparency, reducing financial fraud, and promoting financial inclusion in Nigeria (Olokoyo, 2018).

Those reforms have not only strengthened the resilience of Nigeria's banking sector but have also contributed to the broader economic development agenda. By fostering a stable and efficient financial system, these reforms

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have facilitated greater access to credit for businesses, thereby stimulating investment, job creation, and overall economic growth (Nwachukwu & Asiegbu, 2020).

However, the Nigeria banking sector before now is characterised with numerous challenges which includes and not limited to inefficiencies, poor capital structure, weak corporate governance, insider abuses, accumulated non-performing loans, regulatory arbitrage, low levels of financial inclusion, and susceptibility to economic shocks to mention but few. These problems impede financial stability and hinder economic growth. Based on these problems, the Nigerian banking industry witnessed various forms of reforms from 1956 to present time. The essence of those reforms was to fortify the banking system in order to meet the realities and changes in line with the international best practices and protect depositors' funds. According to Ogunleye and Akinbode (2017) bank nationalisation will enable government to have better control over the operations and activities of banks thereby preventing financial crises and ensure safety of depositors' funds. From another perspective, Aluko and Akomolafe (2019) argued that centralization of bank control allows for better coordination and implementation of government monetary policy. However, corporate governance issue and non-performing loan were part of challenges that still persist till date (Adegbaaju & Joshua, 2017). Therefore, it is imperative to investigate the impact of banking reforms in Nigeria as a catalyst for enhancing financial stability and foster economic growth.

As a result of the foregoing, the main objective of this study is to examine the impact of banking reforms and financial stability on economic growth in Nigeria. The study hypothesized in the null form that banking reforms in Nigeria has no significant effect on economic growth in Nigeria and also that banking reforms has no significant effect on the economic growth and development in Nigeria. However, banking reforms in Nigeria are imperative to foster financial stability and drives economic growth.

According to Ewubare and Merenini, (2019) implementing reforms strengthen regulatory frameworks, reduce systemic risks and enhance investor confidence. These measures are crucial in mitigating financial crisis and sustaining long – term economic growth. A review of literature as at the time of conducting this research revealed that few study had been performed to examine the possible influence of banking reforms on economic growth in Nigeria. The experience in both crisis regimes revealed that macro-economic performance is vulnerable in the face of financial instability and there seems to be an untested connection between banking reforms, financial stability and economic growth in Nigeria. It is in this view that this crucial research work was embark. This paper intends to enhance efforts of the CBN in developing and promoting stability in the Nigeria financial system (NFS) so as to design the implementation of effective policies that would improve a sustainable economic growth. The rest of this paper is structure as thus; following the introduction, is the literature review, theoretical review, methodology, results and implication of findings, summary, conclusion and recommendations.

LITERATURE REVIEW

Conceptual Review

In shaping the financial landscape of the country, the Nigerian banking reforms have been very crucial, meant to enhance stability, efficiency and inclusiveness in the banking sector. Reforms in Nigeria evolved over the year in response to both internal and external challenges while guided by various policy frameworks and regulatory measures. Through initiatives such as recapitalizations, regulatory enhancements, and the introduction new financial instruments, the banking reforms in Nigeria have been designed to enhance financial stability and fostering economic growth.

A significant reform in Nigeria was banks consolidation exercise of 2004, which was meant to strengthen capital base of banks and enhance their resilience to shocks in whatever forms. By this reform banks were restructured and forced to reduce in number through merger and acquisitions. Leading to a more robust and competitive banking sector in the country.

Also, the introduction of cashless policy in 2012 was to reduce the dominance of cash transactions in the economy, enhance efficiency in the payment system, and curb financial crimes (Frank, & Binaebi, 2019). The banking sector reform agenda of CBN in 2009 focused on enhancing regulatory oversight, improving corporate governance and promoting financial inclusion in Nigeria (Orok, Ocheni, & Okoi, (2019)).

In addition, the establishment of the Asset Management Corporation of Nigeria (AMCON) in 2010 have been an important step at resolving toxic asset or non-performing loans and strengthening the banking sector's stability. The enhanced resilience of banks to financial shocks is made possible by the adoption of risk – based supervision of the CBN (Adeusi & Solarin, 2017). This approach emphasis that allocation of regulatory resources be based on the level of risk through the assessment of banks risks' profiles.

The focal point of reforms now in Nigeria, is the recent push for digital transformation in the banking sector, with the initiatives such as the licensing of payment Service Banks (PSB) to enable financial services reach under served communities in the country (Ogbo, & Onwe, 2020). Also, the adoption of fintech solutions and the promotion of open banking frameworks have contributed to fostering innovation and competition in the sector (Osagioduwa, Solomon, & Fumilayo, 2022).

Reforms have contributed to increased investor confidence, improved access to credit, and enhanced financial intermediation, thereby supporting economic growth despite multifaceted approach aimed at enhancing stability, efficiency, and inclusiveness which has been the characteristic of banking sector reforms in Nigeria.

Theoretical review

The main theory for banking reforms in Nigeria is rooted in the proposition that enhancing financial stability through regulatory changes can foster economic growth. This theory was propounded by scholars and policy makers over the years, with notable contributions from experts such as Calomiris and Haber that emphasise the importance of institutional reforms in banking system to promote economic development (Calomiris & Haber, 2014). The theory suggests that implementing banking reforms, such as strengthening regulatory frameworks, enhancing supervision, and promoting financial inclusion, can create a more stable financial system capable of supporting sustainable economic growth.

Supporters of the theory includes policy makers, international organisations like the World Bank and IMF, as well as academic researchers who have argue that a sound banking system is essential for channeling savings into productive investments facilitating credit access for businesses, and promoting overall economic development (Ojo, 2011). However, critics to the theory pointed out the potential challenges and unintended consequences associated with banking reforms such as the risk of over – regulation stifling innovation and market competition, or the possibility of reforms exacerbating inequality by favouring large financial institutions over the smaller ones (Uchendu, 2017).

However, the ongoing debates and critics highlighted the need for careful implementation and continuous evaluation of reform measures to ensure their effectiveness and alignment with broader development agenda.

Empirical Review

Babajide, Ishola, Adekunle, Achugamonu, and Bosede, (2021) adopted Granger causality test and vector error correction model to analyse the relationship impact of financial sector reforms on economic development in Nigeria from 1980 to 2017. Negative long-run relationship between financial sector reform variables and human development index (HDI), except for owners' equity was the result of the study finding while positive short-run dynamics between total savings to GDP and HDI was also observed in the study's result. The study concluded that some other influences in the economy could be responsible for the recent improvements in HDI and not the financial sector's reforms. A more inclusive reform agenda that will focus on economic development rather than economic growth was the study recommendation.

Onaolapo and Ajose (2021) study banking sector development and economic growth in Nigeria (1981 – 2016). The study adopted Author regression distributive lag method (ARDLM) to analysed secondary data sourced from the Central bank of Nigeria Statistical Bulletin and World Development Indicators from 1981 t0 2016. In the long – run, results of the study showed positive impact of money supply and liquid liability on Real Gross Domestic Product (RGDP) and Domestic credit negatively influence RGDP while in the short- run, both Domestic credit and Money supply had positive impact and liquid liability impact was not established. To stimulate economic growth, the Nigeria, government should formulate policies that will encourage banks to lend more to the productive sector (real sector).

Inim *et al.* (2019) investigates the impact of banking reforms in Nigeria on the stability of banking sector. The study adopted panel data regression technique to analyse secondary data that were source from CBN Annual Reports and Statistical Bulletins as well as the Annual and Performance Reports of sampled banks. The period covered by the study was from 2005 to 2017. The result of the study showed that banking reforms in Nigeria has positive influence on the stability of banking sector. Also as expected, non – performing loans was observed to be though insignificant but negatively impacted on the total deposits.

Markjackson, (2021) adopted time series data spanning from 2004 to 2018 that was collated and estimated using the ordinary least square technique, to examined the effect of banking sector reforms on private sector growth in Nigeria. The results of the study indicate a positive and significant effect of credit to real sector on private sector growth in Nigeria and a negative and insignificant effect of total deposit liabilities on private sector growth in Nigeria. The study concludes that banking sector reforms significantly contribute to the growth of private sector in Nigeria. Recommendations of the study are that regulatory authority of banks should enhance their lending capacity through relaxing of legal limitation to their lending operations and also banks should focus on the vast majority of unbanked economic in the country for deposit mobilization drive.

Rahman, Khan and Charfeddine, (2020) adopted Markov regime-switching model to investigate the impact of the financial sector reforms in Pakistan on economic growth from 1972 shows that financial liberalization relatively strongly affects real GDP growth in the high growth regime while transition probabilities establish an inordinate episode at the low growth regime. While labor force and government expenditure exerted negative effect on economic growth, trade openness and physical capital stock had a positive impact. For better functioning of financial sector development in Pakistan, several economic policies were proposed and discussed.

METHODOLOGY

Model specification:

Data for the study were sourced from World Bank Indicators. Time series data for the period of 1980 to 2023 is used. Autoregressive Distributed Lag (ARDL) model was used for analysis. The study is modeled in line with the work of Njang, Omini, Bekun, & Adedoyin, (2020), and Amaegberi & Krokeyi, (2023) as follows:

$$\mathbf{GDPGR = f(CF)} \quad (1)$$

$$\mathbf{GDPGR = f(BCAP, DCPS,)} \quad (2)$$

Adding other control variables equation 2 is written as

$$\mathbf{GDP = \beta_0 + \beta_2 BCAP + \beta_3 DCPS + \beta_4 FDI + \beta_5 BMS} \quad (3)$$

Taking the lag of the dependent variables and writing in econometric form equation 3 is transformed to

$$\mathbf{GDPGR = \beta_0 + \beta_1 GDP_{-1} + \beta_2 BCAP + \beta_3 DCPS + \beta_4 FDI + \beta_5 BMS + \mu_t} \quad (4)$$

Observing the Sum of the variables equation 4 is written as

$$\mathbf{GDPGR = \beta_0 + \beta_1 \sum GDP_{-1} + \beta_2 \sum BCAP + \beta_3 \sum DCPS + \beta_4 \sum FDI + \beta_5 \sum BMS + \mu_t} \quad (5)$$

Where: GDP = Gross Domestic Product Growth Rate (Annual %); BCAP = Bank Capital, Claim on Central Government, % of GDP; DCPS = M₂ Broad Money Supply also as a percentage of GDP (M₂/GDP); FDI = Foreign Direct Investment; BMS = Broad Money Supply; μ = error term; β_0 = Constant.

RESULTS AND DISCUSSIONS

Table 4.1: Descriptive Statistic

VARIABLES	GDPGR	DCPS	BCAP	FDI	BMS
MEAN	0.3845	9.5147	4.4162	1.1517	17.2794
MEDIAN	0.6989	8.3218	4.1438	0.9615	14.4585
MAX	12.2761	19.6035	16.2887	4.2820	28.6252
MIN	-15.6978	4.9480	-7.5126	-1.1508	9.0633
STD DEV	5.0526	3.5061	5.4035	1.0164	6.3249
SKEWNESS	-0.9123	0.8946	-0.1371	0.6013	0.3734
KURTOSIS	5.1453	3.4326	2.6991	3.6742	1.4588
JARQUE B	14.5413	6.2115	0.3039	3.6742	1.4588
PROB	0.0007	0.0443	0.8590	0.1750	0.0680
SUM	16.9183	418.6511	194.314	50.6763	760.295
SUM SQ DEV	1097.74	528.575	1255.52	44.4253	1720.21
OBSERVATN	44	44	44	44	44

Source: Authors' Computation, (2024).

Table 4.1 revealed the descriptive statistic, indicating that the mean and median variables in between the maximum and minimum values. With regards to a normal distribution, the high standard deviation of GDPGR, DCPS, BCAP and BMS (5.0526, 3.5061, 5.4035 & 6.3249) indicates that there are a lot of variances in the observed data around the mean. Only the FDI variables has moderate standard deviation.

Three of the variables (DCPS, FDI & BMS) were positively skewed indicating that a greater number of smaller values skewed to the right except GDPGR (-0.9123) and BCAP (-0.1371). BCAP and BMS are Platykurtic (less than 3) while GDPGR, DCPS and FDI are Leptokurtic (greater than 3). The Jacque Bera statistical values of GDPGR, DCPS, are significant at 1% and 5% level of significance respectively in absolute terms.

Table 4.2: CORRELATION MATRIX

VAR	GDPGR	DCPS	BCAP	FDI	BMS
GDPGR	1.000				
DCPS	-0.048	1.000			
BCAP	-0.048	-0.187	1.000		
FDI	0.016	0.669	0.005	1.000	
BMS	0.394	-0.183	-0.332	-0.285	1.000

Source: Authors' Computation (2024)

Table 4.2 shows the correlation matrix with positive correlation between credit to private sector (DCPS) and growth rate of gross domestic product (GDPGR), indicating that an increase in GDPGR is associated with increase in DCPS of the economy. A unit increase in the credit to the private sector attracts 13% increase in the gross domestic product growth rate.. Negative correlation between bank capitalization (BCAP) and GDPGR indicates that an increase in BCAP leads to decrease in GDPGR by 5%, as a result of the underdevelopment of the banking industry.

Also, a negative correlation between broad money supply (BMS) and GDPGR shows that the more money supplied into the economy the lesser the growth rate of the GDP. Foreign direct investment is positively related to the growth rate of the economy. The more inflow of investment the higher the growth rate. However, there is no threat of multicollinearity amongst variables used for the study as depicted in the correlation matrix. The coefficient of correlation amongst variables had moderate and low correlation with few having weak correlation which does not constitute any serious threat of multicollinearity amongst the variables.

Table 4.3: UNIT ROOT TEST

VAR	@ Level		@ first different		OOI
	F-STAT	PROB	F-STAT	PROB	
GDPGR	-4.930	0.000	-7.764	0.000	0
DCPS	-2.141	0.230	-6.755	0.000	1
BCAP	-3.136	0.029	-6.150	0.000	0
FDI	4.915	1.000	-4.657	0.000	1
BMS	-2.369	0.155	-12.729	0.000	1

Source: Authors' Computation (2024)

Table 4.3 shows that the variables in the model were stationary at mixed differences (level & 1st diff). GDPGR and BCAP were stationary at level and after taking the first different, other variables (DCPS, FDI, & BMS) became significant. The mixed stationary properties of the variables suggested the application of the long run bounds test and Autoregressive distribution lag (ARDL) methodologies for the short run test.

Table 4.4: LONG RUN BOUNDS TEST

Sample Size	F-statistic 3.196503043					
	10%		5%		1%	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
40	2.152	3.296	2.523	3.829	3.402	5.031
45	2.131	3.223	2.504	3.723	3.383	4.832
Asymptotic	1.92	2.89	2.17	3.21	2.73	3.9

* I (0) and I (1) are respectively the stationary and nonstationary bounds.

The bounds test for the long – run result of ARDL revealed that F – statistics (3.1965) is in between the lower bounds and upper bounds of 5%, which indicates that the variables in the model has long – run relationship at 5%.

Table 4.5: SHORT RUN ANALYSIS (ARDL)

VAR	COEFF	STD. ERR	T-STAT	PROB
GDPGR (-1)	0.347	0.121	2.873	0.007
DCPS	-0.098	0.357	-0.274	0.785
BCAP	-0.152	0.134	-1.130	0.266
FDI	1.421	0.633	2.243	0.031
BMS	0.065	0.188	0.348	0.730
ECT(-1)	-6.556	0.247	-2.253	0.031
C	-0.615	2.175	-0.283	0.779
R. SQUARE	0.296	MEAN DEP		1.102
ADJ R SQUARE	0.233	S. D DEP		6.792
S.E	5.949	DURBIN WATSON ST		1.766
.....	4.703			
PROB	0.0012			

Source: Authors' Computation (2024)

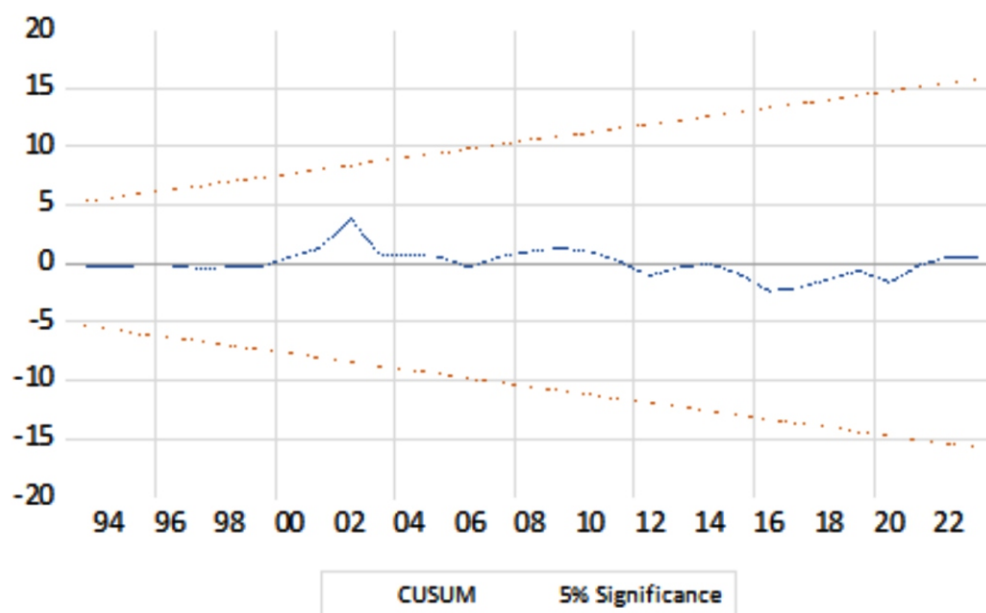
The short run auto regressive distributed lag analysis (ARDL) is presented in Table 4.5. It indicates that the lag of the dependent variable (GDPGR-1) is positively and statistically significant (0.010) at 5%. The DCPS is inversely related to the growth rate but not significant. Bank capitalization (BCAP) is also negatively related to

growth rate of the economy and not significant. Foreign direct investment (FDI) and Broad money supply are both positively related to growth rate with FDI significant at 5% while BMS is not statistically significant to growth rate. With the error correction term (ECT) coefficient (-6.556) with the probability (0.031) revealed that, if there is any form of disequilibrium in the system, it takes little time to return back to equilibrium.

On statistical ground, the R- squared and adjusted R- squared increase by 29.6% variation in gross domestic product, is explained by all the independent variables of the model and that if other variables outside the model that have influence on gross domestic product are considered, the included variables in the model will explain 41.8% variation. The F – statistics (4.703) with the probability (0.0012) show robustness of the model at 1% while Durbin Watson (1.766 < 2.600) statistics shows that the model do not have any form autocorrelation or serial correlation.

The result of the findings showed that bank capital is though weak but positively related to gross domestic product while domestic credit to private sector is negatively related to gross domestic product by 0.016 and -0.185 respectively. This result opposes the work of Babajide, *et al.*, (2021). It could perhaps be as a result of policy gap or policy inconsistency or weak regulatory frameworks.

Fig.4.1. CUSUM TEST



Source: Authors' Computation (2024)

Cusum test is the plot of stability test for the model. Having the blue lines in between the red lines indicates that it is within the 5% critical bounds because of the two lines that bounded the trend curve. This implies that the model do not experience structural instability during the period of study.

CONCLUSION

The study examined effects of banking reform, financial stability and economic growth in Nigeria. The objectives of the study are to assess the effect recent banking reforms in Nigeria on economic growth and determine the contribution of financial stability on economic growth and development in Nigeria. WDI data was collected from 1980 to 2023 using ARDL method of analysis. Results of this study suggest that relevant policy is required to stimulate economic growth in Nigeria, therefore the study fail to reject the hypothesis that banking reforms has no effect on economic growth in Nigeria. The study recommends that government should formulate policies that will encourage banks to lend more to the productive sector (real sector) while regulatory framework be strictly enforced by the CBN. Secondly, risks mitigating laws that could promote business establishment in all the sectors of the economy be enacted by the National Assembly.

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ABSTRACT

This study examined the impact of liquidity management on the financial performance of publicly traded Nigerian insurance businesses. This study examines the current ratio, premium-to-asset ratio, and capital adequacy ratio on the financial performance of Nigerian listed insurance companies. A descriptive research design was used in the study. Twenty (20) insurance companies were listed on the Nigerian Stock Exchange as of April 30, 2024, and have been in operation for over twenty (20) years, encompassing 2004 to 2023. The study's sample size consists of five (5) Nigerian assurance and insurance organisations regarded as high-performing insurance companies with published and verifiable financial records; this is considered a straightforward purposive sampling procedure. The Regression model approach was employed in the study to examine the collected data. The data analysis revealed that the capital adequacy ratio is the primary factor influencing the financial performance of listed insurance businesses in Nigeria. The study recommended that the management of quoted insurance companies in Nigeria make their shares available for subscription to the general public. This would raise the companies' capital and revenue and encourage investment in sustainable assets, improving their financial performance. Finally, the study also recommended that the management of the insurance businesses in Nigeria should re-strategize their liquidity management policies to improve the profitability of their firms, and this could be made possible by engaging qualified professionals in risk and liquidity management.

Keywords: Liquidity, Liquidity Management, Financial Performance, Insurance Companies

INTRODUCTION

Liquidity is essential in managing business organisations. A business's ability to operate effectively depends in large part on its liquidity (Panigrahi, 2023). An organisation must ensure that it has enough cash to cover its immediate demands. Having too much cash is bad for business, as idle deposits make no money for companies. An organisation under good management will not have too much liquidity. The ability to satisfy financial commitments with a sufficient amount of cash or near-cash assets is known as liquidity. Cash is essential in business activity, especially in lean economic times or when the markets are out of balance (Otieno & Nyagol, 2022).

Without money (liquidity), companies cannot pay their expenses or implement growth policies. They might also have trouble getting financing or taking advantage of commercial prospects. A business may be deemed bankrupt if it cannot pay its debts on time and keeps breaking its agreements with suppliers of goods, services, and credit. Organisations must actively manage their liquidity to expand and become profitable. Therefore, all firms must prioritise good liquidity management to prevent insolvency and eventual bankruptcy brought on by low profitability.

Liquidity risk is the risk that there will not be enough liquid assets to cover project payouts, forcing assets to be sold for less money and resulting in losses. Quick sales or the cost of paying interest on loans to cover dividends are the two ways liquidity is lost. Liquidity management, on the other hand, describes the measures and precautions needed to guarantee that the business has sufficient liquid assets to meet the demands of associated creditors or to adhere to regulatory obligations (Azam, 2023; Fadun & Oye, 2021). Ensuring that an enterprise's cash inflows and outflows are equal is the primary objective of liquidity management. This helps meet cash outflow obligations on time, adhering to statutory reserve limits, assumed liquidity circumstances, and refraining from acquiring funds at market premiums or via the needless sale of assets (Fadun, 2018; Fadun & Saka, 2018).

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According to Bibow (2022), financial performance measures how well company objectives are being met. It is a technique for evaluating the financial results of business plans and operations. It is used to assess the overall financial health of businesses over a specific time frame. It may also be used to compare different industries or sectors aggregately or to compare businesses that are comparable within the same industry. The measuring of a company's operational efficiency is linked to profitability. The profitability ratio assesses how successfully businesses use their assets to calculate net earnings and return on equity, centring on a company's capacity to distribute money to its owners. Organisations measure financial success in a variety of ways. Nonetheless, return on equity (ROE) and return on assets (ROA) remain the standard metrics for assessing financial success (Fadun & Silwimba, 2023a). Information about profitability is essential for decision-making, and stakeholders in the company, including managers, investors, and financial analysts, use it as a benchmark for paying dividends, a tool to assess management effectiveness and a mechanism for making decisions (Emami et al., 2021).

Almost all developed and developing countries financial services industries benefited greatly from the insurance market, particularly in economic growth, efficient resource allocation, transaction cost reduction, liquidity generation, investment stimulation, and loss prevention (Aduloju et al., 2024; Idowu & Fadun, 2022). Insurance firms and other financial institutions construct an efficient and effective monetary structure within the economy through risk transfer, intermediation, and premium mobilisation. Financial firms allocate resources and shift risks from one kind of money to another. A lack of faith in an insurer's financial assets can lead to a more significant submission of policies, one of the most severe forms of liquidity pressure. Risk is a natural part of everyday life and business. It is an environment that increases the likelihood of profits or losses and uncertain future occurrences that may impact financial institutions' success (Silwimba & Fadun, 2022; Jegede, 2020).

Liquidity is a critical problem for every corporation, but insurance companies are more so than others (Silwimba & Fadun, 2022; Kamau & Njeru, 2019). Consequently, a company's lack of liquidity, particularly in the insurance industry, can result in business loss and lower profits and profitability prospects. A firm with a strong liquidity position is better able to pay its obligations, some of which result in financing advances and loans that might enable insurance companies to generate income in the form of interest and loans (Fadun & Silwimba, 2023b; Fadun, 2021). The Nigerian insurance industry has several challenges, including low revenues, low asset quality, illiquidity and bankruptcy, and inadequate capital bases (Fadun et al., 2024; Fadun, 2023). Numerous empirical studies have been conducted to investigate the impact of enterprises' liquidity on financial performance, given the expanding benefits of liquidity for insurance businesses. However, most empirical research was done on industries abroad (Laminfoday, 2022). Some studies focused mainly on Nigerian industry, including those of Otekunrin et al. (2019) and Nabeel and Hussain (2017). To make matters worse, the insurance sector has little empirical support for the few recorded empirical studies on enterprises' liquidity and financial performance in Nigeria, which have all been conducted in the banking sector. This research, therefore, aimed to close that gap.

This study aimed to ascertain how company liquidity affects the financial performance of publicly traded Nigerian insurance businesses. The research objectives are to:

- Evaluate the impact of liquidity management on the financial performance of Nigerian listed insurance companies.
- Determine the impact of liquidity risk on the financial performance of listed insurance businesses in Nigeria.

LITERATURE REVIEW

Liquidity

A business needs liquidity to meet its obligations as they come due. While firms have historically focused on long-term capital planning and capital construction, a current trend has seen many businesses across various industries focus on working capital management. When working capital is poorly managed, resources may be unnecessarily tied up in non-viable assets. Liquidity risk is the risk that an entity will not have enough cash or liquid assets to meet its cash commitments (Abbas & Mourouj, 2023). As a result, the company's liquidity and investment capability will decline. This will have an impact on an enterprise's profitability as well. The presence of sufficient liquidity and proper handling of it may make a big difference in an organisation's success or failure. The current ratio, fast (acid test) ratio, and cash ratio are three liquidity ratios that may be used to assess liquidity. The margin of liquidity, or the ratio of current assets to current liabilities, is calculated by the current ratio

(Muriithi & Waweru, 2023) Quick is defined as current assets (net of inventory) divided by current liabilities and is a measure of a company's short-term liquidity. It indicates whether a business can use its most liquid assets to satisfy its short-term obligations. The most common way that analysts assess a company's liquidity is by looking at its cash ratio. Since cash and marketable securities are a company's most liquid assets, analysts frequently take this ratio into consideration. As a result, it can determine whether and when a business can repay its short-term loan. Creditors can determine how much debt, if any.

Liquidity Management

In a study conducted by Nimer et al. (2023), the phrase "liquidity management" was used broadly to refer to all actions intended to guarantee the availability of sufficient liquidity, including cash management and cash flow prediction. The routine responsibility of cash management is to make sure there is enough liquidity to meet everyday demands. A crucial component of financial management is cash flow management, or cash flow forecasting, which helps companies anticipate their cash needs to prevent unneeded liquidity crises. Liquidity management is a collection of tactics and procedures that guarantee companies may obtain funds when necessary to cover expenses, pay employees, and fund new, productive ventures (Bibow, 2022; Olagunju et al., 2022). These days, liquidity management is an essential component of any firm. Nowadays, even financially successful companies must risk failing if they cannot raise the funds to pay their short-term debts on time and their ongoing cash demands. With a liquidity management strategy, a company may satisfy its urgent cash needs and short-term financial obligations without suffering a significant loss. It suggests that a business is handling its resources, such as cash, to pay for all obligations, meet expenses, and preserve stability.

According to Emami et al. (2021), the insurance industry in Nigeria has recently been facing liquidity challenges. The researchers further argued that the liquidity challenges facing the insurance industry have severely threatened the industry's financial performance. Likewise, Azam (2023) affirms that the liquidity risk (challenges) equally threatens the entire economy of the nation at large. The researcher argued that the insurance industry and the manufacturing companies are the sectors most affected by the liquidity challenges. The financial performance of the manufacturing and insurance industries remains declining due to liquidity challenges.

Liquidity risk Management

Sufficient liquidity is a requirement for both planned and unexpected cash flows and collateral demands without adversely affecting the institution's financial status or day-to-day operations, liquidity risk is an intriguing aspect of any institution's survival. (Laminfoday, 2022). Muriithi et al. (2023) agrees with this opinion and assert that an institution's risk to its safety and soundness or financial health due to its perceived incapacity to fulfil its contractual commitments is known as liquidity risk.

Nimer et al. (2023) argued that liquidity-risk management's main responsibilities are to anticipate when money will be needed to pay bills, coordinate the institution's multiple funding sources efficiently and effectively, and guarantee that cash or collateral will be available when needed. Olagunju et al. (2022) argued that the financial performance of institutions is affected by liquidity management in terms of current ratio, and also, liquidity risk measured by premium to asset ratio, and capital adequacy ratio has a significant impact on the financial performance of banks.

Financial Performance

Performance is a specific outcome in several areas, including management and economics, marketing to indicate the competitiveness, efficacy, and efficiency of the organisation as well as its procedural and structural features (Fadun & Silwimba, 2023a; Olarewaju & Adeyemi, 2021). Financial performance, taken in a more general sense, refers to the extent of financial goal attainment. It is the process of putting a firm's operations and policies' financial outcomes into numerical terms. It assesses a company's overall financial health over a specific time frame. It may also be used to compare companies within the same sector or other industries or divisions in general. The capacity of an organisation to have enough funds for high-quality service delivery, to maximise service delivery potential, to be able to pay short-term obligations on time, and to maintain a favourable credit risk are all made possible by financial stability (Fadun & Oye, 2020). Hence, financial performance has become a significant issue that has drawn interest from academics, corporate management, the government, and the

general public. For the purposes of this study, return on assets is used as a proxy for profitability because it is more inclusive than other profitability variables and because scholars have widely used the proxy in calculating financial performance. The following ratios are commonly used to calculate profitability: gross margin, operating margin, return on equity, return on assets, and return on capital employed.

According to CARE-Rating (2019), financial ratios are utilised to evaluate an entity's financial performance holistically. They also aid in assessing how well the organisation performs compared to its counterparts in the sector. Financial ratios are a "means" to comprehend the foundations of an institution, not an "end" in and of themselves. CARE-Rating (2019) uses a set of standard ratios to assess insurance providers. These fall into one of three groups: Profits, Liquidity, and Solvency. Insurance businesses must be profitable in order to continue as a going concern. The primary emphasis of CARE's profits assessment framework is the insurer's capacity to effectively convert its competitive advantages and strategic approaches into expansion prospects and long-term profit margins.

Sani, Abdulsalam, and Yunusa (2024) assert that strong liquidity aids an insurance company's ability to fulfil policyholder commitments quickly. An insurer's ability to meet its financial commitments through operational cash flows or stable, diversified, and liquid investments and cash on hand determines its liquidity. An insurer with strong liquidity can fulfil unforeseen financial needs without selling investments prematurely, which could lead to significant realised losses because of short-term market circumstances and tax implications. Sufficient solvency cushion is the cornerstone for fulfilling policyholder responsibilities (Agboola et al., 2020).

Empirical Review

Azam (2023) studied the performance of selected quoted money banks in Nigeria and the liquidity management of 17 banks listed on the Nigerian Stock Exchange (NSE) between 2012 and 2017. The study extracted secondary data from the financial statements of 15 quoted banks for six years and analysed it using the Ordinary Least Square (OLS) method. Capital, current, and cash ratios were the proxies for liquidity management, while performance proxies were return on assets. The performance of banks and liquidity management were shown to be favourably correlated by the study. The study concluded that managing liquidity is crucial to company operations and, as a result, increases profitability. As control and ownership of a company split, it was suggested that effective liquidity management would aid in resolving the issue of agency costs.

Abbas et al. (2023) investigated the relationship between the financial health of Sierra Leone's commercial banks and their liquidity risk. Eight commercial banks were the focus of the descriptive study. Bank financial statements for the five years between 2013 and 2017 provided secondary data. The study's findings demonstrated a substantial and unfavourable correlation between Sierra Leone's commercial banks' financial performance and their ability to handle liquidity risk.

The study also showed an inverse link between liquid and total assets, which affected financial performance the most. From 2006 to 2015, Kamau et al. (2019) investigated the effects of liquidity management on Pakistani banks' profitability. In order to analyse the secondary data from ten banks, the study used regression techniques and adopted correlation and descriptive statistics research methodology. Liquidity management is proxied by the quick, current, cash, interest coverage, and capital adequacy ratios. Profitability may be approximated using returns on equity, returns on assets, and earnings per share. The research revealed that the banks' profitability was negatively correlated with liquidity management (measured by the cash and current ratios) and positively correlated with interest coverage, capital adequacy, and quick ratios.

An analysis of the financial performance of forty-three Kenyan commercial banks between 2005 and 2014 was conducted by Otieno et al. (2022). The liquidity coverage ratio to net stable financing was a gauge for liquidity risk. But return on equity was the key to financial performance. Random effects estimation with panel data approaches was employed in this investigation. The findings revealed that while the long-term current ratio has no appreciable impact on banks' financial performance over the long or short term, the net stable financing ratio negatively affects banks' profitability throughout both time horizons (Otieno et al., 2022). It is advised that bank management provide liquidity management with the necessary consideration.

Olagunju et al. (2022) investigated the impact of liquidity risk on the financial performance of six insurance companies listed at the Nairobi Securities Exchange between 2012 and 2015. Credit risk, market risk, and operational risk are among the hazards that were examined. The study's focus was on description. It has been proven that credit, market, and operational risks have a detrimental impact on financial performance. The study suggested actions to mitigate these risks and preserve a stable performance.

Otieno and Nyagol (2022) evaluated the financial performance of Kenyan microfinance banks regarding liquidity risk; and the results showed a substantial positive association between liquidity risk and the FGR and CAR metrics.

Panigrahi (2023) investigated the tenuous connection between the profitability and liquidity of Nigerian listed banks. The study used Pairwise Granger Causality to examine the existence and direction of a causal relationship between the banks' profitability and liquidity. The analysis concluded that there was no correlation between the sampled institutions' profitability and liquidity (Panigrahi, (2023). Central Bank of Nigeria should ensure that banks are closely supervised, monitored, and have enough liquidity to sustain and reinforce the financial system's stability (CBN, 2021)

Jegade (2020) studied the effects of significant banking indicators, such as liquidity risk indicators, on the financial performance of Iraqi listed banks. For 10 years, the study chose a sample of 47 people (2005-2014). The study showed a higher percentage of cash and cash assets than the other assets of the examined banks. This shows that non-profitable liquid money has accumulated, which has had a significant impact on the banks' different financial performance ratios.

Research on the effect of liquidity on the profitability of Jordanian banks was conducted by Muriithi et al. (2023). The study aimed to determine if Jordanian banks' profitability through return on assets was significantly impacted by liquidity as measured by the quick ratio. The financial reports of fifteen Jordanian banks listed between 2005 and 2011 on the Amman Stock Exchange (ASE) were used in the study. The total assets and income are compared in the return on assets. In this study, the quick ratio served as the independent variable. The study's hypotheses were tested using a simple regression. According to Muriithi et al. (2023), the independent variable (quick ratio) significantly affects the dependent variable (return on assets).

Emami et al. (2021) investigated how Iran's commercial banks performed with liquidity risk. The estimated research model employs two sets of macroeconomic and bank-specific variables. Panel data was used in this study to analyse the performance of fifteen Iranian banks during eight years, from 2003 to 2010. In order to calculate the inflation ratio, the data were taken from the financial reports of the sampled banks. Data on macroeconomic indicators, such as the GDP growth and the consumer price index, were obtained from the central bank's website. Limner's F-test was employed to choose between fixed and common effects. The Hausman specification test was also used to choose a model for the fixed and random effects. The study discovered that liquidity risk severely and negatively impacts both returns on equity and assets to performance metrics.

Theoretical Review

This study is based on the risk-return theory and liquidity preference theory.

Theory of Liquidity Preference

According to Keynes' description of liquidity preference theory, people appreciate cash as a store of value and for transactions with already-existing enterprises (Gajendrakar, 2024). Consequently, they will forfeit their chance to earn interest on funds they wish to spend now and keep on hand as a safety measure. In contrast, they are more inclined to keep less cash for these uses to ensure a profit when interest rates rise. People want money because they have expenditure plans, they are making predictions about future interest rate swings, or, lastly, they are unsure of what will happen in the future. Thus, it makes sense to hang onto certain assets in the form of potential future purchasing power. These are transactional, speculative, and preventative reasons for retaining cash. Rather than passively satisfying the demand for credits, companies should adopt active cash strategies according to the liquidity preference technique (Bibow, 2022).

Impacts Of Liquidity Risk Management On The Financial Performance Of Insurance Companies In Nigeria

Since the aim of this study is to ascertain how company liquidity affects the financial performance of publicly traded Nigerian insurance businesses, the theory of Liquidity Preference will be suitable. This theory will help to explain how insurance company liquidity affects financial performance.

Theory of Risk Return

The risk return idea was first popularised by Markowitz, a pioneering researcher (Pandey, 2005). The study's conclusions are supported by the risk-return theory, which holds that insurance companies are profit-driven enterprises that take risks and operate to maximise earnings relative to the risks they incur. Insurance companies will be more profitable with higher risk, and vice versa. This idea holds when insurance companies' risk appetite is smaller than their risk tolerance.

This study sought to evaluate the effect of the current ratio, premium-to-asset ratio, and capital adequacy ratio on the financial performance of Nigerian listed insurance companies. The theory of Risk Return will help to explain how the independent variables (current ratio, premium-to-asset ratio, and capital adequacy ratio) as risk factors affect the returns (financial performance) of Nigerian listed insurance companies.

Hypotheses Formulation

Based on the literature review, the following hypotheses are formulated for this study:

H₀₁: Current ratio does not positively impact insurance companies' return on assets.

H₀₂: There is no positive relationship between premium to asset, capital adequacy ratio and the return on assets of an insurance company.

METHODOLOGY

A descriptive research design was used for this investigation. Twenty (20) insurance businesses listed on the Nigerian Stock Exchange as of April 30, 2024, encompassing 2004 to 2023, comprised the study's population. The study's sample size consists of five (5) Nigerian insurance and assurance companies: WAPIC Insurance Plc, African Alliance Insurance Company, Cornerstone Insurance Company, Universal Insurance Company, and Leadway Assurance Company. The study's sample size was chosen using a purposive sampling procedure, and the data was analysed using regression model. The regression model enables researchers to enable cause, effect and correlation between variables (Olawajaju, et al. 2021).

Model Specification

The study adjusted the Olawajaju et al. (2021) model to assess the impact of businesses' liquidity on profitability among Nigeria's five listed insurance companies. The alterations were as follows:

$$Y = a + B_1X_1it + B_2X_2it + B_3X_3it + B_4X_4it + E$$

Where:

Y = Return on Assets;

a = Gradient or slope of the regression;

B₁₋₄ = Regression coefficients;

X₁ = Current Ratio (proxy for liquidity management);

X₂ = Premium to Asset Ratio (proxy for liquidity risk);

X₃ = Capital Adequacy Ratio (proxy for liquidity risk);

X₄ = Firm Size; E = Error Term

Table 1: Summary of the Variables of the Study and their Measurements

Variable Indication	Description	Variable Measurement	Source
Dependent Variable: ROA	Return on Assets	Profit After Tax/ Total Assets	Laminfoday (2022)
Independent Variables: CRR	Current Ratio	Total Current Assets/ Total Current Liabilities	Bibow (2022)

PAR	Premium to Asset Ratio	Net Premium/ Total Assets	Olagunju, et.al., (2022)
Control Variable: FSZ	Capital Adequacy Ratio	Total Capital (Equity + Preference)/ Total Assets	Muriithi, et.al., (2023)
	Firm Size	Natural Logarithm of Total Assets	Abbas, et.al., (2023)

Source: Researchers Extraction from Different Studies (2024)

Results

A summary statistic of the information acquired on the study's dependent and explanatory variables is given in this section.

Table 2: Descriptive Statistics

Variables	Obs	Mean	Std. Dev	Min	Max
ROA	100	1.780	1.311	-0.870	3.740
CRR	100	0.891	0.258	0.514	2.240
PAR	100	3.812	12.23	20.210	60.100
CAR	100	12.245	8.542	8.141	24.120
FSZ	100	18.273	1.126	12.320	19.121

Source: Researchers' Computation Using SPSS, 2024

Table 2 shows the descriptive statistics of 100 observations. As to the findings, the sampled insurance businesses' financial performance (ROA) has an average value of 1.78, with the lowest and greatest values being -0.87 and 3.74, respectively. The standard deviation of 1.311 indicates that there is little variance in the profitability of the tested enterprises. This indicates that the financial performance of the sampled insurance companies falls within the same range. With a standard deviation of 0.258 and an average value of 0.891, the present ratio suggests that it deviates from the mean. 2.24 is the largest value, and 0.514 is the least.

With a mean value of 3.812 and a standard deviation of 12.23, the premium to asset ratio shows signs of departure from its mean value. 2.21 is the lowest value and 60.10 is the largest value, respectively. The capital adequacy ratio's mean value is 12.25, and its standard deviation is 8.542, indicating that it deviates from the mean value. 8.14 is the lowest value and 24.12 is the largest value. Firm size has a mean value of 18.27 and a standard deviation of 1.12, indicating that there is a departure from the mean. 12.32 is the lowest value while 19.12 is the largest number.

Test of Multicollinearity and Variance Inflation Factor (VIF)

Diagnostic tests were carried out to make sure the results are reliable. To find multicollinearity, this study uses variance inflation factor (VIF) and correlation coefficient testing. In a regression model, the VIF quantifies the effect of collinearity between the variables.

Table 3: Tolerance and Variance Inflation Factor (VIF)

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	CRR	.147	8.196
	PAR	.113	8.874
	CAR	.112	7.321
	FSZ	.115	8.174

Source: Researchers' Computation Using SPSS, 2024

The multicollinearity between the variables is displayed in Table 3. With the use of tolerance and its reciprocal, known as the variance inflation factor (VIF), multicollinearity may also be found. Multicollinearity is

Impacts Of Liquidity Risk Management On The Financial Performance Of Insurance Companies In Nigeria troublesome if the tolerance value is less than 0.1 and the VIF value is 10 or higher at the same time (Krejcie & Morgan, 2010, as quoted by Panigrahi, 2023). Table 3 makes this quite evident: the tolerance value is not less than 0.1, and the VIF value is less than 10 at the same time. Because of this, multicollinearity does not exist, and the study may continue.

Table 4: Correlation Matrix

Variables	ROA	CRR	PAR	CAR	FSZ
ROA .	1.0000				
CRR .	-0.4121	1.0000			
PAR .	0.2141	-0.8164	1.0000		
CAR .	0.3938	0.3137	-0.3603	1.0000	
FSZ .	0.3281	0.2889	-0.2812	0.4976	1.0000

Source: Researchers' Computation Using SPSS, 2024

Table 4 demonstrates the poor and negative correlation between the sampled insurance businesses' financial performance and their current ratio. With correlation coefficient values of -0.41, 0.21, 0.39, and 0.31, respectively, the premium-to-assets ratio is weak and positive, the capital adequacy ratio is moderate and positive, and the company size ratio is weak and positive (Table 4).

Table 5: Random Effect

Variables	Coefficients	Probability- Value
Overall R ²	0.5262	
F-Statistic	42.68	0.000
Hausman Chi2	0.76	0.0732
Hetttest Chi2	0.71	0.2141
Mean VIF	6.31	
CRR	-0.218	0.000
PAR	-0.145	0.04
CAR	0.128	0.002
FSZ	0.147	0.014
CONSTANT	-3.104	0.124

Source: Researchers' Computation Using SPSS, 2024

As shown in Table 5, the overall R² coefficient of determination, as demonstrated by the data, is 0.526, which indicates that explanatory variables account for 53% of the differences in financial performance, with additional factors not included in the research accounting for 43% of the changes. Additionally, the likelihood of an F-value of 0.0000 suggested that the variables had been chosen adequately and that the model was fit and significant at the 1% significance level. The random effects regression model was superior to the fixed effects model by the Hausman Specification test (Hausman-Chi2 value of 0.76 and p-value of 0.073). The heteroscedasticity test indicated that there is no heteroscedasticity issue, this is supported by findings from table 4, which shows that the mean Variance Inflation Factor (VIF) value is 7.31, which is less than 10, further demonstrates the absence of multicollinearity.

Test of Hypotheses

The research hypotheses are validated in this section.

Decision Rule: The estimated p-value is 0.05. The null hypothesis will be accepted if the computed p-value is less than the estimated p-value (0.05). Conversely, the null hypothesis will be rejected if the computed p-value exceeds the estimated p-value (0.05), and the alternative hypothesis will be accepted.

Hypothesis One Testing

H₀₁: Current ratio does not positively impact insurance companies' return on assets.
The test result for hypothesis 1 is shown in Table 6.

Table 6: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.721a	.536	.525	85154.5414	2.51

a. Predictors: (Constant). current ratio (Liquidity management)
 b. Dependent Variable: return on assets (financial performance)
 Source: Researchers' Computation Using SPSS, 2024

Table 7: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	541329	41023109		-2.210	.001
	Liquidity management	-.1386	3.210	-.1379	-3.21	.000

a. Dependent Variable: return on assets (financial performance)

Source: Researchers' Computation Using SPSS, 2024

R Square explains how variables relate to one another. According to the model summary, return on assets (financial performance) and current ratio (liquidity management) have a negative connection (-0.14) that accounts for almost 54%. The correlation coefficient, or R, indicates how much the independent variable might account for the dependent variable. The model summary indicates that the R square is about 54%, which suggests that the independent variables have a 54% predictive or determinative power over the dependent variables. This indicates that up to 54% of variations in the financial performance of insurance businesses may be attributed to liquidity management. This suggests that a decrease in liquidity management is responsible for around -0.14 of the negative unit changes in the financial performance of insurance businesses. The financial success of insurance firms is significantly impacted by liquidity management.

Decision: Since the computed p-value (0.009) is less than the estimated p-value (0.05), the null hypothesis (which states that 'liquidity management does not positively impact insurance companies' financial performance') is rejected, and the alternative hypothesis is accepted. Hence, the results suggest that liquidity management positively impacts insurance companies' financial performance.

Hypothesis Two Testing

H₀₂: There is no positive relationship between premium to asset, capital adequacy ratio and the return on assets of an insurance company.

Table 8: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.521a	.470	.496	62541	2.01

a. Predictors: (Constant). Premium to Asset, Capital Adequacy Ratio (liquidity risk)
 b. Dependent Variable: Return on Assets (financial performance)

Source: Researchers' Computation Using SPSS, 2024

Table 9: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6414	41003109		1.210	.011
	Premium to Asset	1.141	2.210	.411	1.21	.001
	Capital Adequacy ratio	1.314	1.324	.624	1.14	.002

a. Dependent Variable: Return on Assets (financial performance)

Source: Researchers' Computation Using SPSS, 2024

The premium to asset, capital adequacy ratio (liquidity), risk, and return on assets (financial performance) are positively correlated and together account for around 52% of the total. Explain how much the independent variable might explain the dependent variable using R, the correlation determinant. The model summary's R square of around 51% indicates that independent variables have a 51% prediction or determination power over dependent variables. This just indicates that variations in the financial performance of insurance businesses can be determined by liquidity risk to the tune of around 47%. This study revealed that a unit change in premium to asset, capital adequacy ratio accounts for about 1.14 and 1.314 positive unit changes on Return on Assets respectively. This hereby implies that liquidity risk significantly affects insurance companies' financial performance positively.

Decision: The alternative hypothesis is accepted and the null hypothesis, which claims that there is no positive association between liquidity risk and the financial performance of insurance companies, is rejected since the computed p-values (0.001 and 0.002) are smaller than the estimated p-value (0.05). This finding implies a substantial positive correlation between liquidity risk and insurance businesses' financial success.

Discussion of Findings

The coefficient value of -0.1386 (Tables 5 and 7), which is statistically significant at the 1% level of significance (P-value of 0.000), shows that the current ratio has a substantial and negative influence on the return on assets of listed insurance businesses in Nigeria, according to the results of the regression model. This suggested that as the current ratio rises, financial results decline. This result contradicts the findings of Otegunrin et al. (2019) but is in line with those of Jegede (2020). The coefficient value of -0.0353 (table 5), which is statistically significant at the 5% level of significance (P-value of 0.040), further demonstrated the considerable and negative impact of the premium-to-assets ratio on the return on assets of listed insurance businesses in Nigeria. This suggests that financial performances decline as the premium to assets ratio rises. This finding differs from Laminfoday's (2022) findings. However, it is consistent with the results.

Additionally, the outcome showed that the capital adequacy ratio significantly and favourably affects the return on assets of listed insurance companies in Nigeria, as demonstrated by the coefficient value of 0.0586 (table 5), which is statistically significant at the 1% significance level (P-value of 0.001). This inferred that as the capital adequacy ratio rises, financial performance equally increases. While this contradicts the findings of Otegunrin et al. (2019), it agrees with those of Nabeel and Hussain (2017). Finally, the coefficient value of 0.3171, which is statistically insignificant at the 5% level of significance (P-value of 0.054), further demonstrated the positive but small impact that business size has on the return on assets of listed insurance firms in Nigeria. This suggested that when a company grows, its financial results do too. This outcome contradicts the conclusions of Panigrahi (2023).

Findings from this study is in line with the theory of liquidity preference and theory of risk return, which asserts that company liquidity can affects the financial performance of organisations. This theory explained that improper insurance company's liquidity management can negatively impair the financial performance. Similarly, theory of risk returns equally supported findings from this study by explaining the correlation between current ratio; premium-to-asset ratio; and capital adequacy ratio and the financial performance of organisations. The theory of risk-return helps to explain how the independent variables (current ratio, premium-to-asset ratio, and capital adequacy ratio) as risk factors affect the returns (financial performance) of Nigerian listed insurance companies. The findings from this study align with the study conducted by Panigrahi (2023), a researcher on the liquidity management of Indian cement companies. The researcher employed quantitative research techniques. Findings from the study revealed that efficient liquidity management techniques can significantly enhance the performance of organisations in Indian cement companies. Similarly, these findings are similar to the study conducted by Sani et al. (2024), which revealed that firms' liquidity management significantly impacts the financial performance of listed insurance companies in Nigeria. Conversely, the finding of this study is at variance with the findings of Otegunrin et al. (2019), who concluded that the performance of deposit money banks is significantly affected by liquidity management in Nigeria.

CONCLUSION

This study emphasised that the capital adequacy ratio is the primary factor influencing the financial performance of listed insurance companies in Nigeria. This indicates that the profitability of listed insurance

companies in Nigeria is directly proportional to the liquidity risk management techniques they employed. This present study highlights the noteworthy and adverse impact of the current and premium-to-asset ratios on financial performance. It highlights the decline in profitability resulting from the escalation of both ratios among the mentioned insurance businesses in Nigeria. In conclusion, this result reveal that there is a positive significant relationship between liquidity risk and the financial performance of insurance companies; and liquidity management positively impacts insurance companies' financial performance.

This study also suggests that insurance company management must reassess their liquidity management strategies to increase their companies' profitability. Hiring experts in risk and liquidity management might help achieve this goal. This study recommends that the management of quoted insurance companies in Nigeria offer their shares for subscription to the general public. This would increase the companies' capital and revenue, leading to investments in viable assets and improving their long-term financial performance.

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ABSTRACT

Agriculture plays a crucial role in driving economic growth and reducing poverty. However, the sector's performance in many countries remains suboptimal, partly due to the challenges faced by women, who are key contributors to both agriculture and the rural economy. This study utilized a structured questionnaire to collect data from 108 respondents, all members of agricultural co-operative societies in Badagry, Ojo, and Ilogbo-Eremi. The data were analyzed using the Statistical Package for Social Sciences (SPSS). The findings revealed that several initiatives aimed at empowering women exist in these areas, with the most common being co-operative societies, micro-credit programs, women's organizations, and political parties. These initiatives are largely organized by governmental and non-governmental organizations. However, women's participation in these empowerment programs was found to be low, primarily due to limited awareness, family restrictions, lack of willpower, and disinterest. Despite this, the majority of respondents agreed that participating in these initiatives significantly enhanced their agricultural activities at the group level. Barriers to greater involvement in agricultural processes include discriminatory attitudes from men, weak economic standing, illiteracy, and domestic responsibilities. The study emphasizes the significant contribution of women to global agriculture and recommends the urgent development of support systems for women farmers within a comprehensive, gender-sensitive framework.

Keywords: Women, Empowerment, Agricultural Productivity

INTRODUCTION

There is a growing consensus among international and regional organizations, policymakers, and the general public on the critical role rural development and transformation play in advancing the African continent. Recent reports highlight the centrality of agriculture as a major driver of employment, GDP, and wealth creation in several African countries, including Nigeria (AfDB, 2020; AUDA-NEPAD, 2021; World Bank, 2023). Agriculture remains a pivotal sector in rural development. Globally, women make up nearly half of the agricultural workforce, representing two-thirds of livestock farmers and a significant share of fish farming and agroforestry (FAO, 2022). Despite their significant contributions across the food system—ranging from farming and harvesting to marketing and food preparation—women face systemic barriers that hinder their productivity. These include unequal access to productive resources and limited participation in decision-making processes compared to their male counterparts (Doss & Meinzen-Dick, 2021). Huis et al. (2017) define empowerment as the ability to make informed decisions in environments where this capacity was previously constrained. Empowerment can be understood through three interconnected dimensions: (i) resources (access to material, social, and human capital), (ii) agency (the capacity to make choices and participate in decision-making), and (iii) achievements (the outcomes that contribute to well-being). It is essential to recognize that women's empowerment is a complex and context-specific social process, influenced by individual personalities, cultural norms, and life experiences, making it difficult to define universally (Alkire et al., 2013). Women in agriculture face numerous barriers, particularly when they lack access to land, which disqualifies them from loans, participation in farmers' organizations, extension services, and training (ICRW, 2019). In Nigeria, women's contributions to agriculture remain underrecognized, despite their significant roles (Omoagan & Abiola, 2001; FAO, 2022). Against this backdrop, this paper explores the impact of women's empowerment in agriculture within Nigeria.

LITERATURE REVIEW

Women's empowerment acknowledges the poor condition of women, their subordination, intimidation, unequal access to power, unable to own or control productive resources, lack of education or other required training

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Women's Empowerment and their Level of Participation in the Agricultural Sector in Lagos State Nigeria
needed to improve their capabilities, and unpaid employment, theorizes that economic empowerment must cut across several dimensions and key indicators.

Conceptual Review

This study was conceptualized in accordance with Malhotra et al., 2002, taking into account primarily three significant characteristics of women's empowerment. These factors acknowledge the direct correlation between the degree of gender equality and growth at the home level and are dynamic, interconnected, and mutually reinforcing. The following are these dimensions:

The socio-economic dimension: includes a person's contributions to the household economy, access to resources, and asset ownership. It also refers to their social standing and other related aspects of their economic well-being. Women who actively engage in both farm and non-farm economic activities have higher earning potential, improved negotiation and influence skills, more control over available resources, a bigger say in household financial decisions, and are better able to meet their basic needs. This all-encompassing strategy promotes independence and ultimately strives to reduce women's economic subordination and dependence.

Family-related dimension: This includes involvement in decisions affecting six key areas of the home. They would be able to better their self-determination, bargaining power, control over resources, self-esteem, autonomy, status, and power dynamics within households as a result of their increasing involvement in household decision-making. That implies that the increased involvement of women in home decision-making will result in both their own and their children's well-being.

The psychological factor comprises perceptions of gender awareness in relation to women's fundamental rights and coping mechanisms for various household shocks. Within the homes, it will improve coping mechanisms, freedom of choice, self-confidence, and bargaining strength. The engagement of women in development activities is predicted to be influenced by a variety of inputs (such as education and skill training) offered by different intervening organisations. Through improved resources, coping skills, freedom of choice, and power dynamics, this process will ultimately result in gender equality. Gender equality is thought to significantly improve women's well-being and lessen their vulnerability to poverty.

Theoretical Review: *Feminist Agrifood System Theory*

This theory is adopted in this paper because it examines agricultural development, and increase in women working specifically how women are overcoming challenges in rural communities (Sachs et al., 2016) in sustainable agriculture. The FAST emphasises that women are finding and making room for alternative or sustainable farming, in contrast to conventional farming, which is less accepting of women farmers who challenge the agrarian ideal of a farmer (Sachs et al., 2016). The framework presents the FAST's six guiding principles: In order to: (a) achieve gender equality on farms; (b) proclaim the identity of the farmer; and (c) obtain access to resources, it is important to pursue innovative ways of gaining access to land, labour, and money. new food and farming systems by integrating economic, environmental, and social values; by negotiating their responsibilities in agricultural organisations and institutions; and by creating new networking inside organizations for female farmers. Sachs and others (2016)

Empirical Review

Waikhom et al (2015) in their study titled "Factors Influencing Women's Empowerment a Manipur study on fishing activities", used frequency, percentage and Wilcoxon Signed Rank Test methodology and they found out showing farm women's access to assets and resources, spending capacity, cosmopolitanism, and social participation have all improved and grown as a result of their participation in fishery activities, and this improvement is very significant at the 1% level.. The indices used in measuring the influence of Women's Empowerment and the variables taken into account are education, area under aquaculture, experience in fisheries, information management behaviour, management orientation, and egalitarianism, the decision-making capacity in the family, spending ability, cosmopolitans social involvement, access to assets, and resources are also taken into consideration. Also Shahnaj and Ingrid-Ute (2004) in their study titled Using a combination of quantitative and qualitative methods, Empowerment of Rural Women in Bangladesh: A Household Level Analysis discovered that due to the low level of empowerment, poor women acutely feel their helplessness and insecurity, their vulnerability, and a lack of dignity within the household. This study used cumulative empowerment index (CEI) and the variable used are exposure, spatial mobility, traditional socio-cultural norms.

"Analysis of Women Empowerment in Nigeria" by Ayevbuomwan, Popoola, and Adeoti A Multidimensional Approach”, the study used Descriptive statistics and found that about 43% of rural women were disempowered at the empowerment cut-off k=2. Multidimensional women empowerment index was used to measure Production/Income, Resource, Education and Time Use.

Ovute, Dibia, and Obasi (2015) in their study titled Empowering Nigerian women for national development: State of the art, challenges and prospects used Descriptive statistics method and found that, to effectively contribute to the development of the country, it is crucial to raise knowledge of the potential benefits of women's empowerment and to support women in realising their full potential.

METHODOLOGY

The research reflected and analyzed the Impact of women's empowerment in Agriculture in Lagos State, Nigeria. The analysis was carried out through the use of carefully formulated questionnaire to reflect the Impact of women's empowerment in Agricultural productivity in Lagos State. Hence, SPSS was used to analyze the relationship between women's empowerment and Agricultural Productivity in Lagos State. The study relied on primary and secondary data. The primary data was collected through structured questionnaires and personal interviews administered to women in Agricultural activities in Lagos State. The questionnaires and personal interviews only required the respondents to provide their own perceptions. The secondary data was obtained from various publications of related views.

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS

The following is a presentation of the survey's findings:

Section A: Bio-Data of Respondents

Table 4.1: Community Distribution of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Ilogbo Eremi	32	29.6	29.6	29.6
	Ojo	38	35.2	35.2	64.8
	Badagry	37	34.3	34.3	99.1
	Others	1	0.9	0.9	100
	Total	108	100	100	

Source: Author's extraction from SPSS Output

Table 4.1 presented the respondents' distribution according to the location of the cooperative societies they belonged to. 38(35.2%) of respondents are members of co-operative societies in Ojo; 37(34.3%) are from Badagry; 32(29.6%) are from Ilogbo-Eremi and 1(0.9%) are from other areas of Lagos. The respondent from the other area belong to cooperative societies in Torikoh.

Table 4.2: Marital Status of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	42	38.9	38.9	38.9
	Married	52	48.1	48.1	87
	Widowed	8	7.4	7.4	94.4
	Divorced/Separate	6	5.6	5.6	100
	Total	108	100	100	

Source: Author's extraction from SPSS Output

The result in Table 4.2 contains the survey respondents' allocation according to marital status. Majority of the respondents, which constituted 52(48.1%) are married; 42(38.9%) are single; 8(7.4%) are widowed and the other 6(5.6%) are either divorced or separated.

Table 4.3: Age Distribution of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25 years	22	20.4	20.4	20.4
	26-40 years	35	32.4	32.4	52.8
	41-50 years	22	20.4	20.4	73.1
	51-65 years	27	25	25	98.1
	66 years and above	2	1.9	1.9	100
	Total	108	100	100	

Source: Author's extraction from SPSS Output

The result in the distribution of respondents by age is seen in Table 4.3 22(20.4%) of respondents are between 18 to 25 years; 35(32.4%) are between 26 to 40 years; 22(20.4%) are between 41 to 50 years; 27(25%) are between 51 to 65 years and the other 2(1.9%) are above 66 years. It can be said that majority of the respondents, which constituted about 106(98.1%) belong to the working class or economically active population.

Table 4.4: Educational Status of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No formal education	5	4.6	4.6	4.6
	First school leaving certificate	15	13.9	13.9	18.5
	GCE/WASCCE/TCH	26	24.1	24.1	42.6
	OND/NCE	24	22.2	22.2	64.8
	HND/Degree	25	23.1	23.1	88
	Higher Degree	10	9.3	9.3	97.2
	Others	3	2.8	2.8	100
	Total	108	100	100	

Source: Author's extraction from SPSS Output

The result in Table 4.4 contains the educational distribution of respondents. 5(4.6%) have no formal education; 15(13.9%) have first school leaving certificate; 26(24.1%) have senior secondary school certificate; 24(22.2%) have ordinary national diploma or national certificate of education; 25(23.1%) hold higher national diploma or first degree; 10(9.3%) have higher degrees and the other 3(2.8%) possess other educational certificates.

Table 4.5: Monthly Income of Respondents

		Freque	Percent	Valid Percent	Cumulative Percent
Valid	Below N10,000	20	18.5	20.8	20.8
	N11,000-N30,000	19	17.6	19.8	40.6
	N31,000-N50,000	27	25	28.1	68.8
	N51,000-N70,000	25	23.1	26	94.8
	N71,000-N90,000	3	2.8	3.1	97.9
	Above N90,000	2	1.9	2.1	100
Total		96	88.9	100	
Missing	System	12	11.1		
Total		108	100		

Source: Author's extraction from SPSS Output

Table 4.5 showed the monthly income of respondents. There are 96 valid responses for this question. 20(18.5%) of respondents earn less than N10,000 monthly; 19(17.6%) earn between N11,000 and N30,000 monthly; 27(25%) earn between N31,000 and N50,000 monthly; 25(23.1%) earn between N51,000 and N70,000 monthly and 2(1.9%) earn above N90,000 monthly.

Section B: Women Empowerment in Agricultural Sector in Nigeria**Table 4.6: Initiatives available for women empowerment (Question 1)**

		Freque	Percent	Valid Percent	Cumulative Percent
Valid	Yes	70	64.8	66.7	66.7
	No	35	32.4	33.3	100
	Total	105	97.2	100	
Missing	System	3	2.8		
Total		108	100		

Source: Author's extraction from SPSS Output

The result in Table 4.6 contains the respondents' opinions on whether there are initiatives that are available for women empowerment in their respective communities. There are 105 valid responses for this question. Majority of respondents, which constituted 70 (66.7%), stated that initiatives are available for empowering women in their communities and the other 35(33.3%) responded otherwise.

Table 4.7: Types of Empowerment Initiatives available for Women (Question 2)

S/N	Empowerment Initiatives	Frequency (N =	Percent (%)
A.	Microcredit program	32	29.6
B	Free education	18	16.7
C	Women organization	31	28.7
D	Cooperative societies	55	50.9
E	Right to use land and other cash crops	6	5.6
F	Provision of agricultural production facilities	15	13.9
G	Adult programme	9	8.3
H	Child day care services	7	6.5
I	Political parties	22	20.4
J	Establishment of and capacity building centers	17	15.7
K	Awareness programme	16	14.8
L	Others	-	-

Source: Author's extraction from SPSS Output

Women's Empowerment and their Level of Participation in the Agricultural Sector in Lagos State Nigeria

Based on the responses, co-operative societies is the most common form of empowerment initiatives available for women, followed by micro-credit programme, women organization; political parties; free education; establishment of skill and capacity building centers, awareness programmes; adult literacy the right to use land and other income crops, a scheme, and child care services.

Table 4.8: Who organized these Empowerment Initiatives (Question 3)

S/N	Organizers Empowerment Initiatives	Frequency (N = 108)	Percent (%)
A.	Governmental bodies	36	33.3
B	Non governmental women group	32	29.6
C	Individuals	8	7.8
D	Others	-	-

Source: Author's extraction from SPSS Output

Based on the responses, 36(33.3%) respondents indicated that governmental bodies organizes women empowerment initiatives; 32(29.6%) indicated that non-governmental women group organizes women empowerment initiatives and 8(7.8%) went for individuals.

Table 4.9: Causes of Women's Low Involvement in Empowerment Initiatives (Question 5)

S/N	Causes	Frequency (N=108)	Percent (%)
A.	Ignorance of the existence of these initiatives	32	29.6
B	Restrictions from husband and other relations	27	25
C	Lack of interest among women	23	21.3
D	Lack of willpower to take advantage of these initiatives.	24	22.2
E	Others	2	1.9

Source: Author's extraction from SPSS Output

Table 4.15 presented respondents' opinions on the causes of women's low involvement in empowerment initiatives. 32(29.6%) attributed women's low involvement to ignorance of the existence of these initiatives; 27(25%) attributed it to restrictions from husband and other relation, 24(22.2%) attributed it to lack of willpower to take advantage of the initiatives, 23(21.3%) attributed it to lack of it to lack of interest among women. 2(1.9%) provided other causes namely lack of funding and lack of connection.

Table 4.10: Economic Ways of Women Empowerment (Question 8)

S/N	Economic ways	Frequency (N=108)	Percent (%)
A.	Access to microcredit facilities	32	29.6
B	Skill/technical training	40	37
C	Cooperative societies	31	28.7
D	Access to land and cash crops	14	13
E	Provision of agricultural production facilities	17	15.7
F	Others	1	0.9

Source: Author's extraction from SPSS Output

Table 4.9 presented information on possible ways through which respondents have benefited from women empowerment initiatives economically. 40(37%) benefited through skill/technical training; 32(29.6%) through access to micro-credit facilities; 31(28.7%) through cooperative societies; 17(15.7%) through provision of agricultural production facilities; 14(13%) through access to land and cash crops and 1(0.9%) through other reasons.

Table 4.11: Factors responsible for women's low participation in agricultural process in Lagos State (Question 17)

S/N	Group	Frequency(N=108)	Percent (%)
A.	Discriminatory attitude of men	43	39.8
B	Patriarchy	7	6.5
C	Lack of sustained process of empowerment	20	18.5
D	Lack of coalition group among women	21	19.4
E	Lack of time due to domestic and reproductive roles	22	20.4
F	Lack of efficient and trustworthy women	14	13
G	Religious beliefs	16	14.8
H	Poor economic base	27	25
I	Illiteracy	27	25
J	Lack of assertiveness among women	12	11.1
K	Others	1	0.9

Source: Author's extraction from SPSS Output

Table 4.10 sought opinions of respondents on the factors responsible for the low participation of women in agricultural process in Lagos. According to the respondents, the major factor responsible is discriminatory attitude of men, followed by poor economic base, illiteracy, lacking time because of domestic and reproductive duties roles, lack of coalition group among lack of women sustained empowerment process, religious beliefs, shortage of capable and reliable women and a lack of assertiveness among women. According to one respondent, laziness is another factor responsible for this incident.

Discussion of Findings

According to the report, there are available initiatives meant for empowering women in Badagry, Ilogbo-Eremi and Ojo. The commonest form of the empowerment initiatives are co-operative societies, micro-credit programmes, women organization and political parties. The empowerment programmes are mainly organized by governmental bodies and non-governmental women group. However, it was discovered that women involvement in the empowerment programmes is low, as a result of lack of good knowledge about the programmes, restrictions from family and relatives, lack of willpower and lack of interest. Despite, the low participation of women in empowerment initiatives, majority of those who partook in the programmes benefitted. It was found that women were mainly empowered through training and loan facilities.

The major economic benefits of participation in empowerment programmes include skill/technical training, access to micro-credit facilities and co-operative societies amongst others. Furthermore, the major educational benefits of participation include access to media/awareness programmes, agricultural-based programmes, lectures by extension workers and free education amongst others. The political benefits include voting in elections, belonging to a women's organisation, and having access to political parties. It was discovered that majority of respondents believed that women did not make use of the benefits equally. The major kind of

women that benefited from the empowerment initiatives includes women related to politicians, female civil servants and women leaders. Majority of the respondents agreed that participation in empowerment initiatives improved their agricultural activities to a great extent based at group level. The findings revealed that women participated in the developmental process of Lagos State. The factors responsible for low participation in agricultural process include discriminatory attitude of men, poor economic base, illiteracy and lack of time due to domestic roles amongst others. Majority of the respondents indicated that increasing opportunities in women empowerment impacts on agricultural productivity to a great extent. The results revealed that (a) women do not play significant role in agricultural productivity in Nigeria; (b) empowerment of women have significant effect on agricultural productivity in Nigeria, and (c) increasing opportunities for women does not have impact on agricultural productivity in Nigeria.

CONCLUSION

The study made use of structured questionnaire to collect data from 108 respondents, who are members of agricultural co-operative societies in Badagry, Ojo and Ilogbo-Eremi. The Statistical Package for Social Sciences was utilized to analyze the data. The findings revealed there are available initiatives meant for empowering women in Badagry, Ilogbo-Eremi and Ojo. However, majority of respondents who agreed that women empowerment initiatives are available are from Ojo and Badagry. The commonest form of the empowerment initiatives are co-operative societies, micro-credit programmes, women organization and political parties. The empowerment programmes are mainly organized by governmental bodies and non-governmental women group. However, it was discovered that women involvement in the empowerment programmes is low, as a result of lack of good knowledge about the programmes, restrictions from family and relatives, lack of willpower and lack of interest. Majority of respondents who believed that women involvement is low in the available empowerment initiatives are from Badagry and Ojo. Despite, the low participation of women in empowerment initiatives, majority of those who partook in the programmes benefitted. It was found that women were mainly empowered through training and loan facilities.

The major economic benefits of participation in empowerment programmes include skill/technical training, access to micro-credit facilities and co-operative societies amongst others. Furthermore, the major educational benefits of participation include access to media/awareness programmes, agricultural-based programmes, lectures by extension workers and free education amongst others. The political benefits include voting in election, membership of women organization and access to membership of political parties. It was discovered that majority of respondents believed that women did not make use of the benefits equally. The major kind of women that benefited from the empowerment initiatives includes women related to politicians, female civil servants and women leaders. Majority of the respondents agreed that participation in empowerment initiatives improved their agricultural activities to a great extent based at group level. The findings revealed that women participated in the developmental process of Lagos State. The factors responsible for low participation in agricultural process include discriminatory attitude of men, poor economic base, illiteracy and lack of time due to domestic roles amongst others. Majority of the respondents indicated that increasing opportunities in women empowerment impacts on agricultural productivity to a great extent. Women involvement in empowerment initiatives is low in Lagos State, and does not have any significance on agricultural output in Lagos State in particular and Nigeria in general. Participation in empowerment initiatives improved the agricultural activities of most respondents that are involved, and consequently on the agricultural productivity in Lagos State. The impact of increase in empowerment opportunities for women has nor robust impact on agricultural productivity in Nigeria.

Recommendations

In an attempt to enhance agricultural productivity in Nigeria through provision of empowerment opportunities to women, the following recommendations are put forward:

Firstly, Support systems for women farmers within a holistic gender-sensitive framework are urgently needed to form a policy development, project design and implementation agenda. Women should be directly involved in the development and implementation of the new technology.

Secondly, women should be given the opportunity to actively participate in the agriculture sector's decision-making. In order to build systems that would support social protection, enforcement, and advancement of women's rights and accomplishments. Actions to improve women's voice in the home must be combined with public anti-discrimination and anti-segregation policies targeted towards women.

Thirdly, women should be recognised as key players in the food production process, and obstacles to their productivity should be eliminated through the passage of laws protecting their rights to land, access to credit, and payment for unpaid labour.

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ABSTRACT

In the context of global development, the active involvement of women in food production plays a crucial role in enhancing food security. This participation serves as an indicator of women's empowerment and its potential impact on socio-economic development. The present study focuses on examining the relationship between women's empowerment and food security in Lagos State, Nigeria. The specific objective is to examine the extent to which access to agricultural financing supports food production. The study is underpinned by classical modernization and gender and development theories. It employed structured questionnaires, interviews, and focus group discussions to collect information from 282 farmers' associations using a simple random sampling method in Iyafin and Odogunyan farm settlements in Badagry and Ikorodu Local Government Areas, respectively. The data were analyzed using descriptive and structural equation modeling techniques. The results indicate that fish production significantly benefited from access to infrastructure, agricultural inputs, farm training, and favorable food prices. However, while access to financing had a positive impact, it was not statistically significant in influencing food production. Similarly, the dimensions of women's empowerment significantly enhanced fish production. This study adds to knowledge by addressing access to agricultural financing. Recommendations include improving women farmers' access to financing, easing collateral requirements, lowering credit costs, adjusting loan repayment terms, and exploring alternative financing sources for women farmers. Provision of basic infrastructure such as good road networks, reliable transport services with modern agriculture and farming technology, and price legislation control boards are also recommended.

Keywords: Women's Empowerment, Agricultural Financing, Food Price, Food Production, Food Security.

INTRODUCTION

The participation of women in agricultural production has received considerable attention in the development literature. Agriculture is the key driver of long-term growth and food security. In Nigeria for instance, the National Bureau of Statistics (2018) states that 78.2 per cent of employed women in the country are in the informal sector and a large number of women participate in agriculture. An ILO's 2017 assessment suggests that in the African region, agriculture offered the highest employment prospect for women (33%), services (27%), and industries (16.9%). In Africa, women are considered to have occupied 80% of the agricultural labour force (Palacios, Lopes, Christainsen & Kilic, 2015). Evidence in the Nigerian context indicates that women produce up to 80% of the food consumed in their homes in rural areas where food cultivation is the primary economic activity (FAO, 2015). Existing studies have argued that significant intra-household differences exist between women's access, ownership of and control over production resources compared to men (Quisumbing & Pandolfelli, 2010; Kieran, Sproule, Quisumbing, & Doss, 2017; Meinzen-Dick, Behrman, Pandolfelli, Peterman, & Quisumbing, 2019). Women are being denied access to land and other financial assets (Huyer, 2016; Brixora, Kangoye, & Tregenna, 2020), thereby leaving them less relevant.

Fapohunda (2013) found that, women generally in addition to earning less than men, demonstrate a higher propensity to be low paid. 22.6% of male respondents in the study earned below #24,000 per month while 36.3% of women earn lower. Fapohunda (2018b) highlights key factors in the glass ceiling that contribute to women earning less than men and having lower levels of human capital. These include lower human capital creation and education levels, early marriages, a lower labour force participation rate, employment in non-standard workplaces and jobs that don't satisfy the standards for decent labour, fewer hours worked in the labour market, and lower compensation.

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In addition, studies have shown that women are more vulnerable to the loss of some assets like land, house, farmland, financial backup, decision making and other relevant rights due to separation, divorced, or widowhood (Fletschrer 2008; Amber, Behrman, & Quisumbing, 2010; Doss, 2018). According to FAO (2019), if rural women have access to agricultural resources as men, agricultural yields could increase by 20-30% and the total number of people that are starving around the world would be reduced to 12-17%. Thus, when women as producers of food are empowered, they become dominant towards achieving food security (Okoli & Umeh, 2001). Nigeria's food security is slowed down by some factors and these include inadequate supply of agricultural inputs, land ownership inputs, rural urban migration, and lack of credit agricultural financial institutions among others (Abdullahi, 2010).

Nigeria is blessed with abundant human and agricultural resources, however, majority of its citizens live in hunger and abject poverty. For instance, Nigeria is ranked 143 out of a total of 163 countries in the 2022 Global Hunger Index (Ntagu, & Ewuim, 2022). The 2020 United Nations Development Programme Human Development Index put Nigeria on 169 out of a total of 189 countries with hunger and poverty (UNDP, 2020). Classifying Nigeria as one of the poorest countries testifies to its failure to secure adequate food for its teeming population. Efforts by the government of Nigeria towards improving food security and access to food to its populace have not been successful (Ebo, 2016). Institutions like the Agricultural Development Project (ADP), River Basin Development Authority (RBDA), and National Food Storage Programme (NFSP) established to boost agricultural development have produced mixed outcomes from food sovereignty perspective (Faloyin, 2015). Empowerment is also critical for smallholder farmers to gain the right to control over food production and define their own food and agriculture policy (Patel, 2012). According to the food security theory, agricultural productivity will rise if women have equal access to productive resources as males, enhancing food security. (Clement, Jan-Emmanuel, and George, 2019).

LITERATURE REVIEW

Women Empowerment and Food Security

Kennedy (2019) defines food security as the constant availability of sufficient food supply to support a steady increase in food consumption. Kennedy construed supply of food to meets the dietary needs and food preferences for an active and healthy life by all people at all time. This definition is comprehensive but it did not recognize food security as the success of local livelihoods to guarantee success to sufficient food at the household level.

However, there is a strong link between food security and women's empowerment. Evidence reveals that women have been systematically oppressed through various laws and norms in their respective societies. Globally, women are still vulnerable to food insecurity due to lack of access and control over their household's assets such as land. While women produce 70% of food grown for consumption, the asymmetries in ownership of, access to and control of livelihood assets negatively affect their role in food production (Opiyo & Agong, 2020). It gives an overview on why and how to consider women's aspects in both short-term humanitarian assistance and long-term development cooperation that address food security.

Ramkisson (2018) posits that food security interventions are mainly led by females (52.8%) who practice subsistence farming as their main source of income. Namara (2018) maintains that gender equity should prioritize women empowerment through programmes that are designed to address the needs of women. This implies that such programmes should be focused on equal access to productive resources and decision-making processes. Menon (2018) emphasises that women and men have unique development priorities, needs and constraints, therefore they are affected differently by development interventions. In order to ensure that all people, regardless of gender, benefit from and are empowered by development policies and practices to promote food security and nutrition, a gender approach to food security can facilitate adjustments in gender power relations. Every man, woman, and child has a right to sufficient nutrition. Women and girls are overrepresented in cases of food insecurity, which is partially due to the fact that they are frequently denied basic human rights including the right to property ownership, the ability to find decent employment, access to education, and good health.

The work of rural women is extremely important for ensuring that people have access to food in general. In emerging nations, women make up an average of 43% of the agricultural labor force. Therefore, protecting women's human rights is an important tactic in ensuring food security for everyone. Women work in a range of

agricultural activities, including raising crops, animals, and fish. They produce both subsistence and commercial quantities of food and cash crops. Women engage in a variety of activities at the local level to assist the growth of agriculture and the management of natural resources, including crop domestication, soil and water conservation, and forestry (Gonsalves, 2005).

Studies on food security (Duffy et al., 2017; Rao et al., 2017; Sinclair et al., 2017), showed that one of the key contributing factors to food insecurity is gender inequality in communities and the society at large. These studies identify women as the most vulnerable group to food insecurity. Qureshi et al. (2015) further report that 22 national poverty assessments found that South African women are vulnerable to food insecurity. Furthermore, Rummery (2020) argues that gender inequalities are caused by states, private sectors and individuals, by considering the social policy to see how policies affect different group of men and women, and examines what impact this has on women's equality. It also looks at the interplay between paid work and unpaid care work and examined how this affects women in the welfare state.

Women encounter several barriers while trying to obtain the resources, assets, and services needed for rural livelihoods. These include having access to improved seed varieties, livestock, machinery, extension services, agricultural education, and loans. For instance, just 5% of agricultural extension services are provided to women globally (UNDP 2012). Rural women frequently devote a significant portion of their time to additional household responsibilities, which leaves them with less time for food production or other sources of revenue. Women's abilities to make an income and, consequently, their capacity to purchase food are further hampered by the fact that they have less market access than males. With fewer assets and heavier burdens, women are more vulnerable to shocks and less well positioned to respond to shock e.g. the effects of climate change or other rapid changes in the environment. Social and economic inequalities between men and women result in less food being produced, less income being earned, and higher levels of poverty and food insecurity. Agriculture might produce up to 30% more if women had equal access to resources as men. This might increase the total agricultural output in poor nations by 2.5%, resulting in a 12–17% decrease in the global rate of hunger (FAO 2012). From food production on the family plot to food preparation to distribution within the household, women are essential to achieving each of the three pillars of food security: availability (enough food is consistently available), access (enough resources are available to obtain appropriate foods for a nutritious diet), and use (appropriate use based on knowledge of basic nutrition and care). However, that role of women in agriculture is generally undervalued and constrained by limitations on women's access to resources, services, and labour market opportunities. Studies have shown that in most regions of the world, women perform the bulk of unpaid work in both agricultural production and the “care” economy. This includes child care, fetching water and fuel wood, purchasing and preparing food, cleaning, and caring for the sick and elderly (Folbre, 2006; Kabeer, 2012).

METHODOLOGY

This study used cross-sectional research design. The study adopted mixed methods which include both qualitative and quantitative approach. Thus, a structured questionnaire, interviews and focus group discussion will be conducted to elicit information from targeted respondents. This study is meant to investigate what is going on among rural women farmers in the study area, regarding their economic empowerment through agriculture. This study is set to provide an understanding on the empowerment status of women farmers in relation to their food production capacity. To this end, the dependent variable is identified as food production, while the independent variable is empowerment.

Badagry and Ikorodu Local Government Areas (LGAs) in Lagos state, Nigeria, are the chosen areas of the study. These LGAs are chosen due to availability of land, access of farmers to irrigation which is an indispensable factor necessary for substantial increase in food production, for sustainable agricultural sector growth and achieving self-reliance among rural women.

Sampling Techniques and Procedures

The sampling method that was adopted is the simple random sampling. This sampling allows for flexibility for careful selection of samples

Data Sources and Types

Data were collected from both secondary and primary sources. The secondary source was utilized to obtain the

Women Empowerment in Agriculture and Food Security: Evidence From Selected Women Farmers in Lagos State
 composition of women farmers in Badagry and Ikorodu LGAs from the records of their relevant associations. The administered questionnaire was designed in line with the research questions and objectives of the study and focus group discussion to increase additional information necessary to support the study.

Data Collection Instrument and Administration

The data collection instruments were primary means while the administration through structured questionnaires, interviews and FGDs. The questionnaires were administered on targeted audience such as it has the advantage of respondents tending to be more truthful with responses. Besides, related information was collected via group discussion in which the selected women farmers participated and expressed their views as regards fish farming in the selected farm settlement.

Data Analytical Techniques

The study involves cross-section analysis in which the cross-sectional units are made up of the farming women who are members of Iyafin farm settlement in Badagry LGA and Odogunyan Farm Settlement in Ikorodu LGA in Lagos State. The study will employ both descriptive and inferential analyses.

Model Specification

In accordance with the conceptual framework, the following linear regression models is specified having food production (a proxy for food security) as the dependent variable and agricultural financing, infrastructure and agricultural input, access to training and food price as the independent variables.

[The functional form is given as:

$$FDP_i = f(AAF_i, IAI_i, WAT_i, FPR_i) \tag{3.1}$$

The regression model is given as:

$$FDP_i = \beta_0 + \beta_1 AAF_i + \beta_2 IAI_i + \beta_3 WAT_i + \beta_4 FPR_i + \varepsilon_i \tag{3.2}$$

Where: FDP = Food production

- AAF = Access to agricultural financing**
- IAI = Infrastructure and availability of agricultural inputs**
- WAT = Women's access to training**
- FPR = Food Price**
- ε_i = error term**
- β_0 = intercept coefficients**
- $\beta_1, \beta_2, \beta_3, \beta_4$ = Partial regression coefficients**
- i = individual respondents, that is, $i = 1, 2, 3, \dots 302$.**

The models to capture each of the three research objectives are stated as follows:

Objective One:

To examine the extent to which access to agricultural financing supports food production in Lagos State. Food production (FPD) is the dependent variable, while access to agricultural financing (AAF) is the independent variable. The model is expressed in functional form as:

$$FPD = f(AAF) \tag{3.3}$$

The variables FPD and AAF are constructs and structural. Based on Classical Modernization and Gender Development Theories, AAF is determined by the following factors:

- Availability of collateral facilities (AAF1)
- Proximity to credit market (AAF2)
- Cost of credit (AAF3)
- Repayment plan (AAF4)
- Operation of bank account (AAF5)

Thus, the model for AAF can be expressed as:

$$AAF = f(AAF1, AAF2, AAF3, AAF4, AAF5) \tag{3.4}$$

Further, food production (FPD) is determined by:
 Women's rights (FPD1)

Women's position (FPD2)
 Women's empowerment (FPD3)
 Access to production resources (FPD4)

Thus, the model for FPD is:

$$FPD=f(FPD1,FPD2,FPD3,FPD4) \tag{3.5}$$

Objective Two:

To investigate whether the availability of infrastructure and agricultural inputs significantly impacts food production in Lagos State

Food production (FPD) is the dependent variable, while the availability of infrastructure and agricultural inputs (IAI) are the independent variables. The model is specified in functional form as:

$$FPD=f(IAI) \tag{3.6}$$

The availability of infrastructure and agricultural inputs (IAI) depends on:

- Road network (IAI1)
- Modern practice (IAI2)
- Seed availability (IAI3)
- Agricultural tools (IAI4)

Thus, the model for IAI is:

$$IAI=f(IAI1,IAI2,IAI3,IAI4) \tag{3.7}$$

Objective Three:

To assess the extent to which women's access to farm training improves food production in Lagos State.

Here, food production (FPD) is the dependent variable, while women's access to farm training (WAT) is the independent variable. The model is expressed in functional form as:

$$FPD=f(WAT) \tag{3.8}$$

Women's access to farm training (WAT) is measured by:

- Women's age (WAT1)
- Education level (WAT2)
- Marital status (WAT3)
- Distance from training centers (WAT4)

Thus, the model for WAT is:

$$WAT=f(WAT1,WAT2,WAT3,WAT4) \tag{3.9}$$

Objective Four:

To ascertain the impact of food prices on food production in Lagos State

Food production (FPD) is the dependent variable, while food price (FPR) is the independent variable. The model is represented in functional form as:

$$FPD=f(FPR) \tag{3.10}$$

Food price (FPR) is measured by:

- Market demand (FPR1)
- Agricultural productivity (FPR2)
- Cost of production (FPR3)
- Exchange rate (FPR4)

Thus, the model for FPR is:

$$FPR=f(FPR1,FPR2,FPR3,FPR4) \tag{3.11}$$

$$FPR=f(FPR1,FPR2,FPR3,FPR4) \tag{3.11}$$

The linear regression equation (3.2) can be represented using structural equation modeling (SEM). Therefore, to achieve objectives 1 to 4, the model is virtually presented in Figure 3.3.

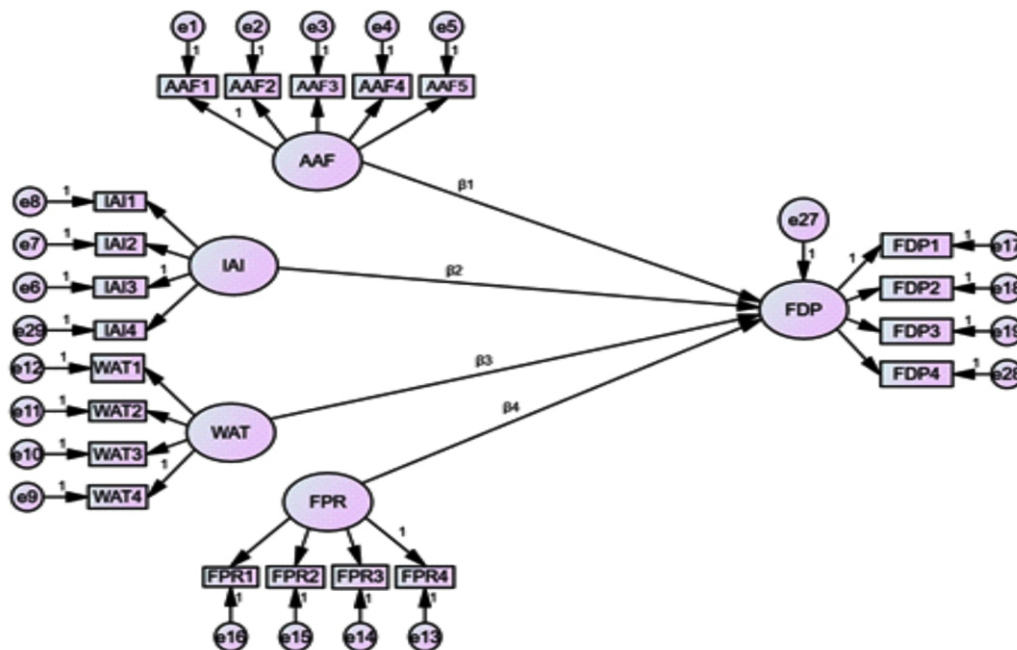


Figure 3.3: A typical full structural model for the study.

Source: Researcher's Formulation

Figure 3.3 presents the typical SEM for showing the measurement parts and the structural part (path analysis). The measurement part deals the relationship between a set of items/statements and the associated latent variable. However, the path analysis examines the impact of the exogenous variables (*AAF*, *IAI*, *WAT* and *FPR*) on each of the endogenous variables (*FDP*). The variables in the ellipses are the constructs or latent variables (also the unobserved variables). The variables in the rectangle represent statements or items (also the observed variables) that are associated with the respective constructs. In order to analyse the four objectives, questionnaire will be administered based on Structural Equation Modelling techniques.

DATA ANALYSIS AND RESULTS

Descriptive Analysis of the Respondents' Demographics

This section presents the distributions of the details of the respondents, viz. farm settlement, age, marital status, educational qualification, other occupation and religion.

As shown in Table 4.1, out of the 282 surveyed women farmers, 118 (41.8%) are members of Iyafin Farm Settlement located in Badagry while 164 (58.2%) are members of Odogunyan Farm Settlement situated in Ikorodu, Lagos State. Apparently, Ikorodu Farm Settlement appears to have large female members involved in fish farming.

The age distribution of the female farmers depicts that 77 (27.3%) members fall within the 21-30 years of age range; 106 (37.6%) are in the 31–40 years' age range; 41 (14.5%) are within the age range of 41–50 years while 58 (20.6%) of the respondent are at least 51 years of age and above. The foregoing, majority of the surveyed women farmer are in the category of 31–40 years of active population age.

Table 4.1-: Respondents' Demographics Frequency Distribution

1. Fam Settlement		
Categories	Frequency	%
Badagry	118	41.8
Ikorodu	164	58.2
Total	282	100

2. Age		
Categories	Frequency	%
21-30 Years	77	27.3
31-40 Years	106	37.6
41-50 Years	41	14.5
51 Years & Above	58	20.6
Total	282	100.0
3. Marital Status		
Categories	Frequency	%
Single	20	7.1
Married	252	89.4
Divorced	4	1.4
Widow	6	2.1
Total	282	100
4. Highest Educational Qualification		
Categories	Frequency	%
SSCE	104	36.9
OND/NCE	106	37.6
BSc./HND	57	20.2
M.Sc./MBA	15	5.3
Total	282	100
5. Other Occupation		
Categories	Frequency	%
Civil Servant	83	29.4
Business Venture	166	58.9
Others	33	11.7
Total	282	100
6. Religion		
Categories	Frequency	%
Traditional Religion	6	2.1
Islam	147	52.1
Christianity	129	45.7
Total	282	100

Source: Field Survey

Furthermore, the marital status distribution reveal that the surveyed women farmers are predominantly married members across the two selected farm settlements comprising about 252 (89.4%) of the entire surveyed respondents.

As revealed in the distribution of educational qualification, women farmers are predominantly SSCE and OND/NCE certificate holders across the two selected farm settlements comprising about 104 (36.9%) and 106

Women Empowerment in Agriculture and Food Security: Evidence From Selected Women Farmers in Lagos State (37,6%), respectively, of the entire surveyed respondents. Meanwhile, about 57 (20.2%) and 15 (5.3%) of the respondents are, respectively, BSc/HND and MSc/MBA certificate holders. Moreover, the surveyed women farmers were observed to be engaged in other occupations, perhaps, as their core professions. Apparently, about 29.4 percent of the farmers were found to be civil servants while about 58.9 percent of the farmers are predominantly into business venture. Meanwhile, about 33 (11.7%) of the farmers are engaged in other kind of occupations such as working in private sector.

Descriptive Analysis of the Variables

Following the responses gathered from the survey, this section provides the summary statistics of the responses of the surveyed women farmers as regards dimensions of women empowerment in agriculture and food security viz. access to agricultural financing (AAF), infrastructure and agricultural inputs (IAI), women's access to farm training (WAT), food price (FDS) and food production (FDP). The summary of statistical mean, standard deviation (SD), skewness (S_k), frequency and percentage distribution of the responses.

Tables 4.2 to 4.5 depict the summary statistics of the responses to the questionnaire on the variables relating to women empowerment in agriculture and food security. Following the study's structured questionnaire, each of the statements (observed variables) measuring the dimensions of women empowerment in agriculture (such as access to agricultural financing, infrastructure and agricultural inputs, women's access to farm training and food price) is measured on a 5–point Likert scale. The mean of the response scales is 3.0 response units. Since the items or statements are expressed in negative forms, items or statements of any scaled response with a mean below 3.0 are considered to be desirable while items of any scaled response very close to 5.0 are considered to be undesirable. Besides, an item is most desirable having its mean response close to 1.00. The coefficient of skewness (S_k) of any item or statement is negative if the mean response is greater than 3.0, and thus, implies that most of the responses cluster around the 'agree' response scales. On the other hand, the coefficient is positive if the corresponding mean response is less than 3.0, thus implies that most of the cluster around 'disagree' response scales.

Access to Agricultural Financing (AAF) on Food Production

Table 4.2: Summary statistics for Access to Agricultural Financing (AAF) on Food Production

S/N	Item	Mean	SD	S_k
AAF_1	Availability of collateral has positive effect on farmers' access to credit.	4.11	1.014	-1.33
AAF_2	Limited land ownership by female farmers hinders their access to formal credit.	3.91	0.942	-0.894
AAF_3	Proximity to Credit market will increase output and productivity	3.93	0.908	-1.245
AAF_4	Providing women farmers with credit will increase Agricultural productivity.	3.97	0.998	-0.852
AAF_5	Reducing the cost of credit for women farmers could increase food production.	3.91	1.015	-1.027
AAF_6	Lower cost of credit enhances female access to credit.	4.11	0.792	-0.984
AAF_7	Access to credit by female farmers allows increased food production	4.22	0.654	-1.028
AAF_8	Certainty/Regularity of making loan repayment improves women's access to credits and improve food production.	3.98	0.669	-0.334
AAF_9	Other sources of finance e.g. Ajo/Esusu, local money lenders, personal savings, family support helps improves agricultural outputs	4.00	0.656	0.004

Source: Field Survey

The table above reveals that each of the statements has a mean response unit between 3.0 and 5.0, thus, considered to be appropriate. More importantly, Item 10 (AAF_10: $mean = 4.25$, $SD = 0.666$, $S_k = -0.912$) has the highest mean response units. This suggests that the most desirable statement or item of measurement (observed variable) for 'access to agricultural financing' is that "operation of bank account by women provides access to low cost of credit". Thus, majority of the responses hover between 'agree' and 'strongly agree' response scales for 'operation of bank account by women provides access to low cost of credit' having negative coefficient of skewness. Besides, access to credit by female farmers allows increased food production and also availability of collateral has positive effect on farmers' access to credit.

Discussion of Findings

This study's survey reveals that most of the sampled women fish-farmers fall within the age category of 31-40 years. The foregoing descriptive outcome corroborates the empirical outcome obtained in Abdulhamid, Lliyasu, Mohammed and Sani (2016). The aforementioned studies found that the rural women participating in agriculture are predominantly within the productive age range. Besides, the women fish-farmers' association are predominantly married women farmers. The empirical findings also reveal that substantial proportion of the surveyed women farmers in Lagos State possess SSCE and OND/NCE. The foregoing descriptive result implies the surveyed women's farmers are at least averagely educated and thus, likely to have potential long-term prospects for fish-farming in Lagos State. However, Aneela *et al.* (2015) discovered that substantial proportions of the women in agriculture in Pakistan are illiterate.

Meanwhile, following the assessment of the dimensions of women empowerment in agricultural sector and food security, the objectives of the study are appraised as:

Following the measurement analysis of the observed measures of access to agricultural financing, the empirical outcomes reveal that measures such as access to credit, loan repayment period, other sources of finance (such as money lenders, family support) and the bank operations by women farmers (*i.e.* access to financial services) are not true measures of access to agricultural financing by women farmers in Lagos State. The foregoing may be attributable to inconsistencies in the responses of the surveyed women farmers across the selected farmer associations. However, other observed measures (such as; availability of collateral, limited land ownership, proximity to credit market and cost of credit reduction) were found to incorporate true measures of access to agricultural financing in Lagos. Based on the incorporated measures using structural analysis, access to agricultural financing appears to exert inconsequential impact on food (fish) production in Lagos State. Thus, fish production is not significantly supported by access to agricultural financing in Lagos State.

CONCLUSION

This study investigated the of impact women's empowerment in agriculture on food production in Lagos State. The dimensions of women's empowerment considered herein include: access to agricultural financing. Following the empirical analysis, lower cost of credit, access to credit, loan repayment and other sources of finance, as measures for access to agricultural financing, were observed to be weak measures of empowerment of women in space of agricultural production. However, availability of collateral, land ownership, proximity to financial institution, cost of credit reduction are essential to access to agricultural financing among women farmers in Lagos State.

In general, women's empowerment in agriculture, specifically in the spectrum of fish farming, has the tendency to improve food security in Lagos State via: infrastructure and agricultural inputs, women's access to farm training and food price. In a study conducted by Fapohunda (2012b) found that It is impossible to overstate the importance of women in Nigeria's informal financial industry. In order to establish an enabling policy environment, the government must form partnerships with the newly formed association of women. This includes making credit available to women at reasonable rates and enlisting the support of the business sector in government initiatives to provide credit to women. "The constraints on women's access to resources must be removed, and opportunity should be created for their enterprise" (Fapohunda, 2012).

Recommendations

More importantly, access to credit facility is tremendously essential for development of the agricultural sector. Thus, relevant government agency in the agricultural sector, in the conjunction financial institutions, should ensure that women farmers engaged in the agricultural production have effective access to agricultural

Women Empowerment in Agriculture and Food Security: Evidence From Selected Women Farmers in Lagos State financing in Lagos State. Essentially, special consideration should be given to collateral requirement, reduced cost of credit and loan repayment mechanism for the accessibility of financing for fish production. Besides, alternative sources of financing should be made available for the women's farmers in order compare the cost and benefits of the different sources. The options available would enable the women farmers to make their optimum choice.

Overall, the role of government is tremendously indispensable in the spectrum of the agricultural sector. The government needs to revamp the policies, enactments and agencies relating to agriculture. More importantly, women's empowerment in agriculture needs to be given substantial considerations. Just like the oil sector, the agricultural sector also needs to be given the prerequisite for enhanced food security.

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ABSTRACT

Researchers need to pay attention to the reduction in insurance company performance caused by incorrect handling of information related to claims. The purpose of this research is to investigate how claim settlement affects the insurance industry's goal of maximizing profits. The goals of this article are to determine if claim processing has an impact on an insurance company's ability to maximize profits and claim information systems are often well-designed to allow insurance firms to correctly identify current policies. The expo facto research design approach was used as the study methodology. The study covers a period of 10 years, from 2014 – 2023. The assumptions developed for this study were put to the test using an ordinary regression model. This study showed that managing claims has a big impact on an insurance company's ability to maximize profits, and that well-designed claim information systems help insurers correctly identify current policies. So as to lessen the number of claims for all earned premium, this paper makes the following recommendation for claims managers in the Nigerian insurance sector. Detailed attention should be paid to the procedures of claim and proper claim's information systems should be well-designed so as to aid proper documentation of prevailing policies by insurance companies.

Keywords: Profit Maximization, Claim Settlement, Underwriting Cost, Insurance Industry.

INTRODUCTION

The necessity for businesses to expand their operations continues to be a top priority for scholars worldwide. Insurance companies in Nigeria frequently fail to handle claims properly, which leads to a loss of confidence and ongoing policy purchases (Fadun, 2023). It seems that the focus in the claims function is on efficient and successful managerial procedures in order to save expenses in claim handling process and deliver on a value-added variety promise to customers. This is a result of how crucial the claims management procedure is to the business and how it impacts all areas of the company, including infrastructure development, risk exposure, service delivery, and competitive positioning. Some insureds believe that the insurer doesn't care about resolving claims; it only cares about collecting premiums. Fadun, Isimoya, and Ugwuoke (2024) point out a number of inefficiencies, such as antiquated technology, a rise in fraudulent claims, and an increase in the complexity of the claim procedures that negatively affect how customers experience claims.

Policies are the guarantees that people purchase from insurance companies. This guarantees that the insured will get payment or be put back in the same financial position as before the loss. Thus, an insurance policy is contract between the policyholder and insurer that, in exchange for the premium being paid up front, the insurer will pay for any future claims. Claims settlement is insurance's main objective. In exchange for the payment of premiums, insurers acknowledge their commitment to pay policyholders in the event that a certain event occurs within a predetermined length of time (Manufacturers Association of Nigeria, 2022). The clause stating that the insurance company will reimburse the prospective insured for a specific amount of money in the event of unforeseeable events that may affect those insured and/or any of the property, or the legal liability to a third party in the event of the insured's death or bodily harm, is one of the essential elements in the definition of an insurance contract. When a claim arises, it will, on the one hand, be advantageous to the insured as it will fulfil his expectation that he would receive benefits upon the occurrence of the loss or, in the case of non-life policies, indemnity receiving; on the other hand, it may not always be advantageous to the insurance company as it will reduce their reserves. If the claim is not realized during the policy term, the insurance company may also be entitled to a claim settlement, in which case they would not be responsible for paying benefits or indemnifying the insured. Subsequently, they would be entitled to retain the premium that the policyholder paid at the start of the agreement and increase their reserve in the form of earnings (Wileyand, 2020).

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Afshen and Mohamed (2022) assert that the primary functions of insurance firms for the society are claim payouts. Policyholders will understandably lose trust in the specific insurer or the industry as a whole if payments are withheld or delayed without providing sufficient reason. This can decrease the rate of customers and, thus, affect the profitability level of the insurer. Al-Tamimi (2022) asserted that the insurance sector is troublesome and the pursuit of profitability is extremely tough due to the recurrence of claims from previous years. According to Fan (2022), one tactic insurance companies employ to maintain a competitive advantage is to continuously improve their present operational processes. Businesses may revamp outdated procedures to stay current with the times, with the goal of increasing efficiency, quality, and response times.

The insurance industry has been very sluggish to implement these process changes, especially when it comes to Business Process Management (BPM) aimed at insurance in critical areas like underwriting and claims. The insurance industry, one of the labour-intensive industries overall, is distinguished by an increasing workload that makes it challenging for insurance agents to carry out their duties successfully on a daily basis (Fadun & Silwimba, 2023a). Niinimaki (2022) asserts that there is a dearth of insurance information in our culture. The extent, intent, and limitations of insurance transactions are not generally understood by the general public, especially when it comes to the management of claims—a subject that might lead to disputes under an insurance contract. One important distinction is the services an insurance company offers for settling claims. An insurer shouldn't be unduly generous in order to remove itself from the market. Following the issuance of the policy, the risk of the danger insured against is covered. If an insurance company wants to keep up a positive public image, it must promptly settle legitimate claims in order for the insured to make a claim on the insurer for indemnity of loss when the loss insured against actually occurs, the contingency against which protection is given, or it does not materialize.

Statement of the Problem

The rationale for this study's undertaking is the growing challenges in the claims management processes, specifically: inappropriate claims acknowledgement and obligation; poorly designed information systems to identify existing claims; a communication gap between customers and insurers; time-consuming claims investigation and documentation; insufficient expertise in determination of loss condition and amount. Insurance companies in Nigeria often fail to recognize the importance of proper claim management, this results into loss of customer and decline in profitability.

Objectives of the Study

Determine the level to which proper management of claims impacted the insurance company's goal of maximizing profits.

Examine whether insurance firms properly identify existing policies in claim information systems.

Hypotheses

Arisen from the literature review, the following hypotheses were formulated:

H01: An insurance company's efforts to maximize profits are unaffected by the processing of claims.

H02: Insurance firms frequently fail to properly identify existing policies in claim information systems.

LITERATURE REVIEW

Claims and Insurance

Anwarul (2021) states that a request for an insurance firm to fulfill its obligations under the terms of the written contract with the insured constitutes a claim on an insurance policy. A claim, as defined by Hahm (2021), is a request made to the insurer by the insured party for imbursement of benefits under a policy. According to Khambata and Bagdi (2021), an insurance claim may also be defined as a demand made by an individual or organization suing an insurer to recover damages for a loss that the insurance policy would have covered. A claim is defined by Al-Tamimi and Al-Mazrooei (2020) as an announcement that a money is owed in compliance with the terms of an insurance policy. Hussein and Faris (2020) define a claim as a pivotal moment in the interaction between an insurance company and its customer. Similarly, this kind of relationship can only be successful if the insurers address five key issues: increasing their control over the claims process; comprehending their clientele; choosing the most advantageous claims model for their business; forming collaborative partnerships with other service providers; and obtaining a competitive advantage.

Santomero (2020) asserts that by utilizing modern claims systems that are coupled with potent business intelligence, document, and content management systems, insurers may greatly improve the efficacy and efficiency of claims processing. Wetmore (2020) argued that insurance businesses are mindful of the need to convert from poor management of claims to successful claims management, because this appear to be crucial to profit and the long-term health of the business through customer happiness, policy renewal, and customer retention. Sare (2019) argues that an insurer that handles claims will also seek to limit the number of bogus claims.

According to Sare (2019), 10% of all insurance claims are fraudulent. In addition, claim conditions should be closely monitored to identify opportunities for third-party, salvage, or subrogation recovery. The profits of an insurance firms will be greatly impacted by missed recovery opportunities. Furthermore, in order to reduce the need for unanticipated increases in loss reserve, insurers should develop their expertise in loss reserving and claims forecasting. The claims manager must also find a way to minimize loss adjustment expenses while still limiting claims delays. According to a prior statement made by Michael (2008), a modern claim management system that is capable of handling all claim kinds should have two basic components: a case management component and the capacity to compute and carry out intricate recurring payments.

In order to improve claims management and respond swiftly to changing conditions, insurers need to make more substantial infrastructure changes that match claims processing with organizational goals for customer service, operational cost, and risk management (Krishn and Sunita, 2018).

Afsheen and Mohamed (2022), Wang (2018), Fadun and Silwimba (2023b), and other recent research have demonstrated that an insurance company's capacity to handle the claims process is a critical component of both its long-term viability and profitability. Additionally, it has been noted that proactive claim acknowledgment and payment should be followed by an accurate assessment of the claims reserve.

According to Association of Insurance and Risk Managers in Industry and Commerce (2009), honoring valid claims is an indication that the insurance contract's fundamental tenets have been fulfilled. In fact, providing exceptional claims handling service is what sets them apart from their competitors. Superior claims management services provide an insurance firm a competitive edge, which is why clients value them so highly. Additionally, Al-Tamimi (2022) argued that a highly effective claims procedure might greatly increase client loyalty and attract new business, resulting in a favourable customer experience.

Circumstances arising from loss incidents often serve as a warning to the insurance community about the need for preventative actions. All things considered, claims are seen as the most significant channels and a determining element in how consumers perceive their insurer in general (Fan, 2022; Fadun, & Oye, 2021). Niinimaki (2022) argues that claims processing is the insurers' attempt to enhance customer acquisition, satisfaction, and loyalty in addition to business intelligence for new product development and company profitability. Claims management systems need to be driven, accurate, efficient, and effective in order to control costs, manage risks, and meet requirements for sufficient collection underwriting. Insurance is the equitable transfer of the risk of loss from one party to another for monetary considerations. It's a risk management technique primarily used to guard against the possibility of an unanticipated loss. It includes pooling money from multiple covered entities (often referred to as exposures) to cover possible losses. Many people's collaboration is necessary for insurance to be a successful modern solution for risk-related problems. An effective protection against risk is insurance.

Any method intended to reduce the possibility that a risk will materialize, limit the harm it does, and recompense those who are damaged is considered a form of insurance (Fadun & Oye, 2020; Anwarul, 2021). A number of important insurance principles work together to make insurance a successful modern concept for handling risk-related problems (Hahm, 2021). Any business venture will inevitably contain risk, therefore it's important to understand both the event and what risk entails.

Process for Managing Claims

According to Adebisi (2016), supply chain management, responsiveness, business intelligence, workflow management and adaptability are the key factors impacting a company's costs associated with processing

claims. According to Adewole (2021) and Fadun (2023), the following fundamental components must be in place in order to provide excellence in the processing of insurance claims: communication, culture and philosophy, claims management, people, infrastructure, operations, date management, monitoring and review. The five steps for optimizing the insurance claims process, according to Agbamuche (2022) and Fadun (2021), are data organization, planning for the analysis and customer engagement. Akingbohungebe (2012) states that tasks associated with processing claims include confirming that all required data has been obtained and contacting the claimant or other relevant party if any documentation is missing. Therefore, the argument went that claim administrators ought to maximize their time management skills while focusing only on the most crucial claim duties.

Al-Faki (2017) and Fadun (2018) state that in order to attain functioning efficiently and effectively in the claims process, insurers need to implement a modern claims system, utilize state-of-the-art fraud detection technology, and innovate around their self-service claim processing activities. Alile (2012) states that the goals of those in charge of claims management are as follows: enhanced control over the procedure to oversee and ensure service levels; smooth integration throughout the entire claims process; increased adaptability to adjust to changes in the market; and the ability to provide this to partners and customers through a variety of distribution channels. According to Boon (2018), some benefits associated with efficient claims management procedures include enhanced customer service, lower indemnity costs, better claims handling and administration, a decrease in allocated loss adjustment expenses, improved operational management, enhanced enterprise risk management, increased business agility, and core brand differentiation. Ekundayo (2012) argued that proactiveness in identifying and paying legitimate claims; accurate assessment of the reserve associated with each claim; minimization of unnecessary costs; avoidance of protracted legitimate dispute; regular reporting; expedited claims and careful handling of claimants handling are all predictable components of a good claim management process.

In order to attain operational excellence in claims management, insurers should carefully consider the following key areas, according to Ewan, Esang, and Bassey (2020): fraud detection, supplier management, legal cost management, technology enablement, and advanced analytics. The claims process, according to Eze and Okoye (2018), begins at the underwriting function, which is guided by structured data on prior loss events. The following technology-related processing stages have been identified as essential to enhancing claims in order to address the many problems in the administration of insurance claims, per an experience discovery by Haiss and Sümegi (2019); More advanced data management, analysis, and reporting across the organization, together with an interconnected and flexible architecture, enable business intelligence; A few of the elements that must be taken into account are: more cooperation; cost-effective migration from legacy systems; industry and technology standards; deeper integration of business processes; visibility provided by monitoring, alerting, and reporting; and enhanced visibility. Resolving claims, spotting fraud, cutting costs, and averting litigation are the four main components of the claim management process (Marijuana, Sandra, & lime, 2020). Mojekwu, Agwuegbo, and Olowokudejo (2012) state that claims payment and associated processing expenses account for 80% of all premiums. The largest single expenditure for insurance is paying claims. Consequently, Nzotta (2019) defines claim management as all managerial decisions and activities pertaining to the processing and disbursement of claims in accordance with the terms of the insurance contract. Rose (2020) posits that an insurance company's financial performance is commonly assessed based on its net premium revenue, underwriting profitability, annual turnover, return on investment, and return on equity. These may be separated into two groups: measures of profit performance and measures of investment performance. Sule and Momoh (2020) assert that while profit is vital to investors and management as a source of dividends and development, it also offers insurance in contradiction of insolvency to policyholders.

METHODOLOGY

The research method and design chosen for this study is the expo facto research design, which entails choosing insurance companies in Nigeria with enough verifiable information, specifically in the state of Lagos. Both primary and secondary data were used for this study. The primary data relating to how insurance firms frequently identify existing policies in claim information systems was retrieved with the aid of structured questionnaire, while documentation method of secondary data was used to solicit data relating to insurance profit maximization and claim settlement.

The Lead Way Assurance PLC employees are the study's primary target demographics. They were split into

three (3) groups, low-level, middle-level, and top-level employees in the Nigerian insurance business, making a total number of 150 respondents. The study covers a period of 10 years, from 2014 – 2023. The financial statements of Lead Way Assurance PLC were retrieved from the official websites of the firms. Data relating to numbers and amount of claims paid, profit generated within same period.

Reliability of the Instrument

This refers to whether the instrument measures in a reliable and consistent manner each time it is used with the same subject under the same circumstances. Because Cronbach's alpha coefficients are recognized as an appropriate indicator of dependability, we utilized them to calculate internal consistency. All of the variables with Cronbach's alpha coefficients over 0.7, as can be shown in table 2 below, hence the study can continue with further analysis.

Table 1: Reliability test

Variable	Cronhach alpha (α)	Scale
Claim processing	0.825	1 – 5
Profit maximization	0.817	1 – 5
Claim’s information systems	0.829	1 – 5

Field Work, 2024

Validity Tests

Validity is a crucial identity in the use of research constructs. Whether the instrument(s) correctly measure what they are intended to assess is the fundamental question on academics' minds. There are two different types of validity: construct validity and validity based on criteria. In our pilot research, the following validity tests were carried out to confirm this: First, face validity, material, or if the topic is well covered in the content.

Content Validity

A 5-point Likert scale was used to design the instrument (questionnaire) in order to evaluate the suitability and significance of the measuring questions (1 being not relevant, 2 being somewhat relevant, 3 being quite relevant, 4 being relevant, and 5 being extremely relevant). Ten (10) specialists, including those in marketing, business, consulting, and psychometrics, received the instruments once they were developed. With the assistance of specialists, we assessed the instruments and made adjustments in response to their suggestions. Any feedback is incorporated into the final questionnaire. This is useful because it allows the researcher to look at the relationships between the items, internal consistency, and factor structure. Findings for the questionnaire that have a Content Validity Index (CVI) of at least 0.7 are deemed acceptable. Table 2 displays these findings.

Table 2: CVI for Questionnaire

Variable	Experts										Mean CVI
	1	2	3	4	5	6	7	8	9	10	
Claim processing	1	0.7	0.9	1	0.9	0.5	0.9	0.9	1	1	0.78
Profit maximization	0.8	0.93	0.93	0.7	0.87	0.5	0.8	0.8	0.9	0.9	0.81
Claim’s information systems	1	1	0	1	1	0.6	1	0.9	0.7	0.9	0.82

Field Work, 2024

Convergent validity (to demonstrate item homogeneity within the same construct) and discriminant validity were used in this case (to indicate heterogeneity between different constructs). Exploratory Factor Analysis was used to perform these two categories (EFA).

To verify the convergent validity of this, we conducted an EFA and utilized communalities. All items loaded over 0.5, suggesting that they were strongly connected to the overall variables and proving the existence of convergent validity.

We used EFA to display the rotated component matrix to test discriminant validity (see tables in the appendix). Similar items loaded heavily to a single factor, while unrelated items were removed. Additionally, factors with eigen values larger than 1 were kept according to the principal component approach

DATA ANALYSIS

The response gathered through the questionnaire used as research instruments and was analyzed with the use of tables and percentages.

Table 3: Questionnaire Administration

CLASSIFICATION	NUMBER	PERCENTAGE
Completed	120	80%
Not Returned	30	20%
Total	150	100%

Field Survey (2024).

Out of the 150 questionnaires that were given, 120 were filled out and returned, and 30 could not be located, as Table 3 above demonstrates.

KMO and Bartlett's Sphericity Test

The study's viability was evaluated using the Kaiser-Meyer-Olkin sampling adequacy index and Bartlett's sphericity test; both methods showed the presence of a suitable intercorrelation when taking into consideration the standards advised by experts. The maximum extraction strategy was chosen because it most closely reproduces the population values when the data has a normal, multivariate distribution and its derived components' statistical significance can be established. The results show that the KMO values are more than 0.7 for every variable. This indicates that the questions in our questionnaire have a positive correlation with other items inside their respective clusters, indicating that the questions assess the underlying dimension. It is reasonable to continue the analysis as a result.

Table 4: KMO and Bartlett's Results

Variable	KMO	Bartlett's test			No of factors
		X ²	df	sig.	
Claim Processing	0.914	601.823	14	0.001	3
Profit Maximization	0.926	887.241	12	0.003	3
Claim's information system	0.831	5241.35	12	0.002	3

Research Field Work, 2024

Test of Hypotheses

Hypothesis One

H₀₁: Insurance company's efforts to maximize profits are unaffected by the processing of claims.

Table 5: Model Summary for Hypothesis One

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.821a	.767	.321	621	2.61

a. Predictors: (Constant), Claim processing

b. Dependent Variable: Profit Maximization

Source: Researchers Computation using SPSS Version 25

Table 6: Coefficients for Hypothesis One

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	532	241		3.21	.004
	Claim processing	5.341	2.314	.761	4.32	.001

a. Dependent Variable: Profit Maximization

R Square explains how variables relate to one another. The model summary indicates that profit maximization and claim processing have a positive connection, accounting for around 82% ($R = .821$) of the total. Explain how much the independent variable might explain the dependent variable using R, the correlation determinant. According to the model summary, the R square is around 0.767, meaning that up to 77% of the dependent variables may be predicted or determined by the independent variables. That is to say, up to roughly 77% of changes in profit maximization may be identified by claim processing. According to this study, there is a positive unit change in profit maximization for every unit change in claim processing, or around 5.3. According to this study, maximizing profits is significantly impacted by claim handling. As a result of this research's finding that claim processing significantly affects profit maximization and that the null hypothesis is rejected, the p value of 0.001 is less than 0.05.

Hypothesis Two

H_{02} : Insurance firms frequently fail to properly identify existing policies in claim information systems.

Table 7: Model Summary for Hypothesis Two

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.786a	.635	.546	.15463	1.51

a. Predictors: (Constant)claim information systems.

b. Dependent Variableproperly identify existing policies.

The association (R-Square) between the independent and dependent variables is around 64%, as the model summary result indicates. This suggests that the independent variable (Claim's information systems) may predict or determine the dependent variable appropriate identification of current policies up to 64%.

Table 8: Coefficients for Hypothesis Two

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.554	1.312		1.422	.000
	claim information systems	4.960	.110	2.186	1.657	.004

a. Dependent Variable: proper identification existing policies

The intercept, which has a value of 1.554, represents the expected value of accurately identifying current policies in the event that the independent variable the claimant's information systems—is set to zero. The information systems of the claim have a coefficient value of $\beta_1 = 4.95$, t-test = 1.657, and $P = 0.004$, which indicates a positive correlation between the claim's information systems and accurate identification of current policies. Accordingly, an increase of one unit in the claim's information systems corresponds to about 1.950 units in the accurate identification of current policies. Therefore, appropriate and well-designed claim information systems lead to insurance firms correctly identifying policies that are currently in effect.

Discussion of Findings

This study showed that an insurance company's ability to maximize profits is significantly impacted by the way claims are processed. Additionally, well-designed claim information systems enable insurance firms to accurately identify their current policies.

This study revealed that claim handling has significant effect on maximizing profits. As a result of this research's finding that claim processing significantly affects profit maximization. This submission is supported by Fadun (2023) who analyzed the impacts of insurance claims settlement on economic growth. The researcher affirms that insurance claims settlement does not only affect the financial performance of insurance firms but equally affect the economic growth of the nation at large.

Secondly, this study showed that insurance company's ability to maximize profits is significantly impacted by the way claims are processed. Additionally, well-designed claim information systems enable insurance firms to accurately identify their current policies. This finding is supported by Fadun et.al. (2023a), Niinimaki (2022), Marijuana et al., (2020), and Fan (2022) who unanimously agreed that insurance company's ability to maximize profits is significantly impacted by the way claims are processed.

CONCLUSION

According to the results and the theories put out, claims have a significant impact on the performance of insurance firms and profit maximization. It is becoming clear that, for any insurance, the claim ratio will always be a factor in determining profitability and claim ratio is one of their top concerns for any given financial year. Furthermore, it is being determined that the claim history of every client they insure or acquire, depending on the circumstances, will determine whether insurance company's underwriting and marketing departments perform better. Additionally, it is being determined that the claim and underwriting unit need to be staffed by insurance industry experts who possess adequate understanding of the potential benefits that successful claim and underwriting procedures might offer to the bottom line of the business. This is true for any insurance provider trying to find strategies to keep or increase their level of profitability.

Recommendations

A thorough claim processing might be one of the essential instruments for insurance businesses to maximize profits, according to the research we've done. Additionally, it will help them perform better in terms of happiness and achieving company goals. In line with findings from this study, the following recommendations were raised:

1. In order to decrease the number of claims for every earned premium, claims administrators in the Nigerian insurance sector must manage their claims procedures properly.
2. Nigerian insurance firms should pay close attention to their underwriting procedure and critically assess the origins and expansion of both new and existing businesses.

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