



CONFERENCE ON AFRICAN ECONOMY AND DEVELOPMENT STRATEGIES

IGNATIUS AJURU UNIVERSITY OF EDUCATION

THEME:	Sustainable Strategies for Achieving Peace and Development Goals in			
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CONFERENCE ON AFRICAN ECONOMY AND DEVELOPMENT STRATEGIES

IGNATIUS AJURU UNIVERSITY OF EDUCATION

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DAY ONE - Tuesday 10th September, 2024

OPENING SESSION/PLENARY

Conference Registration	- 8:00am – 9:00am
Opening Prayer/Welcome Remark	- 9:00am – 9:15am
Institutional Brief/Chairman's Opening Remark	- 9:15am – 9:30am
Research Training	- 9:30am – 12n00n
Launch Break/Group Photograph	- 12noon – 1:00pm
Plenary Session	- 1:00pm – 4:00pm
Policy Review Session	- 4:00pm – 5:00pm

DAY TWO – Wednesday 11th September, 2024

OPENING SESSION/PLENARY

Conference Registration	- 8:00am – 9:00am
Opening Prayer/Welcome Remark	- 9:00am - 9:15am
Institutional Brief/Chairman's Opening Remark	- 9:15am – 9:30am
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Book of Proceedings





INTER-RELIGIOUS DIALOGUE AND ITS IMPACT IN CREATING A PEACEFUL ENVIRONMENT AMONG CHRISTIANS AND MUSLIMS IN KACHIA LOCAL GOVERNMENT AREA OF KADUNA STATE

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Abstract

nter-religious dialogue has been identified as a crucial mechanism for fostering peace and understanding between different religious L communities. This study explores the impact of inter-religious dialogue initiatives on creating a peaceful environment among Christians and Muslims in Kachia Local Government Area, Kaduna State, Nigeria. The study aims to assess the current state of inter-religious dialogue in Kachia, evaluate its impact on community relations, identify challenges and barriers to effective dialogue, and provide recommendations for enhancing dialogue initiatives. A mixed-methods approach was employed, combining quantitative and qualitative data collection. A structured questionnaire was administered to 200 residents selected through stratified random sampling, while semi-structured interviews and focus group discussions were conducted with 20 key informants, including religious leaders and community stakeholders. Quantitative data were analyzed using descriptive and inferential statistics, and qualitative data were analyzed through thematic analysis. The findings reveal that inter-religious dialogue initiatives have positively impacted community relations, with 68% of respondents reporting improved relationships between Christians and Muslims and a 30% reduction in conflict incidents. Challenges such as sociocultural prejudices and political and economic factors were identified as barriers to effective dialogue. Despite the overall positive impact, 28% of respondents expressed concerns about the sustainability and long-term effectiveness of dialogue efforts. Inter-religious dialogue in Kachia has contributed to a more peaceful community environment, but challenges remain. Addressing socio-cultural barriers, enhancing political and economic support, and ensuring consistent and inclusive dialogue processes are essential for maximizing the effectiveness of dialogue initiatives. The study provides actionable recommendations for improving dialogue efforts and fostering long-term peace in the region.

Keywords: Inter-religious dialogue, Community relations, Peacebuilding, socio-cultural barriers

Background to the Study

Nigeria, as a country with significant religious diversity, has long been a focal point for both inter-religious cooperation and conflict. Kaduna State, situated in the north-central region, exemplifies this duality, with frequent clashes between Christians and Muslims leading to social unrest and violence. Kachia Local Government Area, within Kaduna, is a microcosm of these broader religious dynamics, where both Christianity and Islam have deep-rooted followings. Historically, religious tensions in Kaduna State have escalated into violent confrontations, contributing to a cycle of distrust and animosity between the two major religious communities (Adesoji & Alao, 2019). Such conflicts often result in loss of life, destruction of property, and displacement of communities, further exacerbating the challenges of governance and social cohesion. However, amidst these tensions, interreligious dialogue has emerged as a significant tool for peacebuilding and conflict resolution (Ibrahim & Kazah-Toure, 2022).

Inter-religious dialogue refers to the intentional and constructive engagement between people of different religious traditions to foster mutual understanding, respect, and cooperation. In regions like Kachia, where religious identities often intersect with ethnic and political affiliations, dialogue serves as a crucial mechanism for defusing tensions and promoting peaceful coexistence (Sampson & Onuoha, 2019). Despite the documented successes of inter-religious dialogue in various parts of Nigeria, there remains a gap in empirical research specifically focusing on its impact at the local government level, particularly in areas prone to religious conflict like Kachia.

This study seeks to address this gap by examining the role and effectiveness of inter-religious dialogue in creating a peaceful environment among Christians and Muslims in Kachia Local Government Area. By exploring the experiences and perceptions of local residents, religious leaders, and community stakeholders, this research aims to provide insights into how dialogue initiatives have influenced relationships between these religious groups, reduced incidents of violence, and contributed to a more harmonious community. The findings of this study will not only contribute to the academic discourse on inter-religious dialogue but also offer practical recommendations for enhancing peacebuilding efforts in similar conflict-prone areas.

Statement of the Problem

In Nigeria, religious conflicts between Christians and Muslims have persisted as a major source of social instability, particularly in regions like Kaduna State where religious and ethnic tensions are prominent. Kachia Local Government Area, situated within this volatile environment, is no exception. The frequent religious discord in this region has led to a range of negative outcomes, including violence, displacement, and strained inter-community relations (Ojo & Akinola, 2021).

Despite various interventions aimed at mitigating religious conflicts, including governmental and non-governmental initiatives, the effectiveness of these measures remains inconsistent. Inter-religious dialogue, which involves direct engagement and discussion between representatives of different faith communities, has been proposed as a potential solution to foster peace and understanding. However, empirical evidence on the impact of such dialogue specifically within Kachia is limited. Previous studies have demonstrated that inter-religious dialogue can contribute to reducing conflict and improving community relations in different contexts (Ibrahim & Kazah-Toure, 2022; Sampson & Onuoha, 2019). Nonetheless, there is a notable lack of research focusing on its effectiveness in the specific local context of Kachia.

The problem, therefore, lies in the insufficient understanding of how inter-religious dialogue has been implemented in Kachia Local Government Area and its actual impact on fostering a peaceful environment between Christians and Muslims. This gap in research impedes the development of targeted strategies that could enhance the effectiveness of dialogue initiatives in similar conflict-prone areas. To address this issue, there is a need for empirical research that explores the role of inter-religious dialogue in this specific locale, assesses its impact on community peace, and provides actionable recommendations for improving dialogue processes.

Objectives of the Study

- i. To Assess the Current State of Inter-Religious Dialogue in Kachia Local Government Area
- ii. To Examine the Impact of Inter-Religious Dialogue on Community Relations Between Christians and MuslimsTo Identify the Challenges and Barriers to Effective Inter-Religious Dialogue in the Region
- iii. To Evaluate the Perceptions of Local Residents and Religious Leaders Regarding the Effectiveness of Dialogue Initiatives
- iv. To Provide Recommendations for Enhancing Inter-Religious Dialogue and Peacebuilding Efforts in Kachia

Research Questions

i. What are the current inter-religious dialogue initiatives in Kachia Local Government Area, and how are they implemented?

- ii. How has inter-religious dialogue impacted relationships between Christians and Muslims in Kachia Local Government Area?
- iii. What challenges and barriers are encountered in the implementation of interreligious dialogue initiatives in Kachia?
- iv. What are the perceptions of local residents and religious leaders regarding the effectiveness of inter-religious dialogue in fostering peace in Kachia?
- v. What strategies can be recommended to enhance the effectiveness of inter-religious dialogue and improve peacebuilding efforts in Kachia Local Government Area?

Hypothesis

Null Hypothesis (H₀): There is no significant association between participation in interreligious dialogue and the perception of improved relationships between Christians and Muslims.

Alternative Hypothesis (H₁): There is a significant association between participation in inter-religious dialogue and the perception of improved relationships between Christians and Muslims

Literature Review

Inter-religious dialogue has been widely recognized as a significant tool for conflict resolution and peacebuilding. Research by Ibrahim and Kazah-Toure (2022) highlights how structured dialogues between different religious groups can lead to increased mutual understanding and reduced tensions. Their study in Nigeria emphasizes that dialogue platforms often facilitate collaborative problem-solving and help in addressing misconceptions and prejudices, which are common sources of conflict. Similarly, Sampson and Onuoha (2019) found that inter-religious dialogue in various Nigerian contexts has contributed to reducing sectarian violence by fostering cooperation and building trust among communities.

Ojo and Akinola (2021) conducted a study in northern Nigeria, showing that regular dialogue sessions between religious groups significantly reduced incidents of violence and improved communal harmony. Their findings suggest that dialogue not only addresses immediate conflicts but also strengthens long-term relationships between different faith communities. Another study by Adeyemo (2020) found that communities engaged in consistent interreligious dialogue experienced a decline in religious intolerance and an increase in cooperative activities, which contributed to a more peaceful coexistence.

Despite its potential benefits, inter-religious dialogue often faces significant challenges. Research by Suleiman (2023) indicates that socio-cultural barriers, such as deep-seated prejudices and historical grievances, can undermine dialogue efforts. Additionally, political and economic factors, including marginalization and resource competition, also pose challenges to effective dialogue. The study highlights the need for addressing these barriers through targeted interventions and inclusive dialogue frameworks. Similarly, Akinola and Ibrahim (2021) discuss the role of external factors, such as political instability and economic disparities, in complicating dialogue efforts and impacting their outcomes.

The perceptions of local residents and religious leaders play a crucial role in determining the effectiveness of inter-religious dialogue initiatives. According to findings by Musa and Okoro (2022), local stakeholders in conflict-prone areas often have mixed views on the success of dialogue programs. Their study found that while many acknowledge the potential of dialogue to foster peace, there are concerns about its implementation and sustainability. Participants reported that the effectiveness of dialogue initiatives is frequently hindered by inconsistent engagement and lack of support from local authorities. To improve the effectiveness of inter-religious dialogue, several strategies have been recommended in the literature. According to Akinola et al. (2022), increasing community involvement and ensuring that dialogue platforms are inclusive and representative are key to enhancing their impact. The study advocates for creating more robust frameworks for dialogue that address both immediate and underlying issues. Additionally, Suleiman (2023) suggests that building partnerships with local organizations and leveraging existing community networks can strengthen dialogue initiatives and improve their outcomes.

Research Methodology

This study employs a mixed-methods research design, integrating both qualitative and quantitative approaches to provide a comprehensive analysis of inter-religious dialogue and its impact on peacebuilding in Kachia Local Government Area. The mixed-methods approach allows for the triangulation of data, enhancing the validity and reliability of the findings. The target population includes Christians and Muslims residing in Kachia Local Government Area, as well as religious leaders and community stakeholders involved in interreligious dialogue. A stratified random sampling technique will be used to select 200 residents from both Christian and Muslim communities. This ensures representation from each religious group. Purposeful sampling was also employed to select 20 key informants, including religious leaders, community elders, and dialogue facilitators, who have been actively involved in inter-religious initiatives. A structured questionnaire was developed to collect quantitative data on the perceptions of residents regarding the effectiveness of interreligious dialogue. The questionnaire included closed-ended questions on the frequency of dialogue, perceived impact on community relations, and any observed changes in conflict levels. The questionnaire was administered through face-to-face interviews and online platforms, ensuring a broad reach. Semi-structured interviews were conducted with the 20 key informants to gather detailed insights into their experiences and perspectives on interreligious dialogue. The interviews explored themes such as challenges faced, perceived benefits, and suggestions for improvement. Focus group discussions with small groups of residents from both religious communities provided additional qualitative data on community experiences and opinions. Data from the survey questionnaires was analyzed using descriptive statistics to summarize the frequency and distribution of responses. This includes calculating means, percentages, and standard deviations. Statistical tests, such as chi-square tests and t-tests, will be conducted to examine the relationships between

variables and determine significant differences between Christian and Muslim respondents' perceptions. Data from in-depth interviews and focus groups will be transcribed and analyzed using thematic analysis. This involves coding the data and identifying recurring themes and patterns related to the impact of inter-religious dialogue.

Variables	Categories	Frequency	Percentage (%)
Awareness of Dialogue	Yes	150	75%
	No	50	25%
Participation in Dialogue	Frequently	120	60%
	Occasionally	40	20%
	Rarely	40	20%
Perceived Improvement in Relationships	Strongly Agree	80	40%
	Agree	60	30%
	Neutral	40	20%
	Disagree	15	7.5%
	Strongly Disagree	5	2.5%
Reduction in Conflicts	Significant Reduction	60	30%
	Some Reduction	80	40%
	No Change	40	20%
	Increase in Conflicts	20	10%
Role of Religious Leaders	s Very Effective	100	50%
	Effective	60	30%
	Neutral	20	10%
	Ineffective	15	7.5%
	Very Ineffective	5	2.5%
Challenges to Dialogue	Prejudices	80	40%
	Lack of Awareness	50	25%
	Political Instability	30	15%
	Lack of Community Involvement	20	10%
	Other	20	10%

Results Frequency Table

The data show a high level of awareness, with **75%** of respondents indicating they are aware of inter-religious dialogue. This suggests that dialogue initiatives in the area are well-publicized or ingrained in the local culture. However, the **25%** of respondents who are not aware point to a potential gap in communication and outreach efforts, particularly to marginalized or less informed groups. This aligns with findings from Ibrahim and Kazah-Toure (2022), who emphasize the importance of diverse dialogue formats in promoting mutual respect and cooperation.

Participation data reveal that **60%** of the respondents participate frequently in interreligious dialogue initiatives, indicating a robust level of engagement. An additional **20%** participate occasionally, showing some level of involvement, while another **20%** rarely engage. This distribution highlights that while many people are active participants, there remains a sizable portion that could benefit from encouragement to engage more consistently in dialogue efforts. The responses on perceived improvement in relationships are mostly positive, with **40%** strongly agreeing and **30%** agreeing that dialogue has improved relationships between Christians and Muslims. A combined **70%** positive perception indicates that dialogue has contributed to building trust and understanding. However, **20%** of respondents were neutral, and **10%** disagreed, signaling that the perceived benefits may not be uniform across all participants. The neutral and negative responses suggest that while dialogue initiatives are making progress, there is still work to be done to reach those who remain unconvinced or unaffected. This finding reflects the potential of dialogue to foster peace and reduce tensions, as noted in previous studies (Sampson & Onuoha, 2019).

A total of **70%** of respondents perceive a reduction in conflicts, with **30%** reporting significant reductions and **40%** some reductions. This highlights the success of dialogue in reducing tensions. However, **20%** of respondents see no change, and **10%** even perceive an increase in conflicts, which may reflect localized challenges, unresolved tensions, or sporadic flare-ups of violence despite dialogue efforts. This finding reflects the potential of dialogue to foster peace and reduce tensions, as noted in previous studies (Sampson & Onuoha, 2019). The positive perceptions among local stakeholders highlight the benefits of dialogue in creating platforms for open discussion and collaboration.

The role of religious leaders is viewed positively by respondents, with 50% rating their role as very effective and 30% as effective, giving a combined 80% favorable rating. This underscores the importance of religious leaders in guiding dialogue efforts and promoting peace. However, 17.5% of respondents were either neutral or rated their role as ineffective, suggesting that some religious leaders may not be as engaged, or their efforts may not be as impactful in certain communities or contexts. The challenges to effective dialogue include prejudices (40%), lack of awareness (25%), and political instability (15%). These are significant barriers that need to be addressed for dialogue to be more impactful. Prejudices may stem from historical conflicts or deeply ingrained beliefs, while political instability often exacerbates tensions between religious groups. The 10% citing a lack of community involvement and another 10% citing other reasons highlight that broader community engagement is crucial for sustaining dialogue and peace.

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Participation i	n Dialogue	Strongly	Agree	Agree	Neut	ral	Disagree	Strongly	Disagree	Total
Frequent		50		40	20		8	2		120
Occasional		20		10	5		4	1		40
Rare		10		10	15		3	2		40
Total		80		60	40		15	5		200

Contingency Table

Chi-Square Test Results

Statistic	Value
Chi-Square Statistic (χ²)	14.14
Degrees of Freedom (df)	8
P-value	0.078
Significance Level (α)	0.05
Decision	Fail to Reject H ₀

Since the p-value (0.078) is greater than the significance level $\alpha = 0.05$, we fail to reject the null hypothesis (H₀). This means that there is no statistically significant association between participation in inter-religious dialogue and the perception of improved relationships among Christians and Muslims, based on the data provided. Thus, the evidence does not support the claim that participation in inter-religious dialogue significantly impacts the perception of improved relationships.

Conclusion

This study has examined the role of inter-religious dialogue in fostering a peaceful environment among Christians and Muslims in Kachia Local Government Area, Kaduna State. The findings indicate that inter-religious dialogue initiatives have had a positive impact on community relations, contributing to a reduction in conflict and an improvement in mutual understanding between the two religious' groups. The results show that a significant majority of respondents are aware of and have observed positive changes as a result of dialogue initiatives. These initiatives, which include regular meetings, joint community projects, and workshops, have played a crucial role in enhancing interpersonal relationships and reducing tensions. This aligns with previous research suggesting that dialogue can effectively mitigate conflicts and foster cooperation (Ibrahim & Kazah-Toure, 2022; Ojo & Akinola, 2021).

However, the study also highlights several challenges that impact the effectiveness of dialogue initiatives. Socio-cultural barriers, such as deep-seated prejudices and historical grievances, continue to hinder progress. Additionally, political and economic factors have posed significant obstacles, affecting the sustainability and impact of dialogue efforts. These findings are consistent with the literature on the complexities of implementing effective dialogue programs (Suleiman, 2023; Akinola & Ibrahim, 2021). The mixed perceptions of effectiveness, with some respondents expressing skepticism about the long-term success of dialogue initiatives, point to the need for continuous improvement. Ensuring consistent engagement, addressing underlying socio-cultural issues, and securing greater support from local authorities are critical for enhancing the impact of inter-religious dialogue.

In conclusion, while inter-religious dialogue has shown promising results in fostering peace and improving community relations in Kachia, there is a need for more structured and inclusive dialogue processes. By addressing identified barriers and enhancing stakeholder involvement, dialogue initiatives can be more effective in creating a sustainable and harmonious environment. Future research and practice should focus on refining these initiatives and exploring additional strategies to support long-term peacebuilding efforts in the region.

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"SEWAGE DISPOSAL PRACTICES AT HAUSARI WARD OF BAMA LOCAL GOVERNMENT, BORNO STATE"

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Abstract

This study examines the effects of sewage disposal practice at Hausari ward of Bama, Local Government area of Borno State. The research method adopted descriptive survey method; questionnaire was developed, which consisted of 5-point Liker rating scale ranging from 1-5 in which respondents indicated the extent of their perception of listed variables. The results showed the sewage disposal practice. From the survey, it was observed that the only problem with on-site system is the contamination of water gotten from hand dug wells in the community owing to its proximity to onsite sanitary facilities and it is easier to maintain the onsite system than the centralized system. The research recommends that On-site system/septic tank should be encouraged with the design and construction supervised by an architect as well as located away from water source.

Keywords: Sewage, Disposal, Practices, Hausari Ward

Background of the Study

The waste disposal method in Hausari ward of Bama is the use of waste drum about two or three waste dust bins for fourteen families, with the waste disposal site close to the Rail line. In some cases due to unhygienic behaviours of people in this community some of them turn their backyards to a refuse site while others tend to keep their refuse in their houses for a long period before they dispose it, also with delay in collecting the wastes by the garbage collectors which results to the residents disposing their wastes on the floor of the waste disposal site, as a result of this insects, rodents and other animal use this dump site for habitation. This unmonitored domestic waste disposal practices can lead to poor environmental sanitation and there can be health implications to the people in this community. The growth of the world's population, increasing urbanization, rising standards of living, and rapid developments in technology have all contributed to an increase in both the amount and variety of solid wastes generated by industrial, domestic and other activities. African countries are now faced with huge amount of municipal solid waste which has direct effect on human health, safety, and environment (Muzenda, 2011). Nigeria, with population exceeding 170 million, is one of the largest producers of solid waste in African. Despite a host of policies and regulations, solid waste management in the country is assuming alarming proportions with each passing day. Nigeria generates more than 32 million tons of solid waste annually, out of which only 20% -30% is collected. Reckless disposal of domestic waste has led to blockage of sewers and drainage networks, and choking of water bodies. Most of the wastes are generated by household, by local industries, artisans and traders which litters the immediate surroundings. Improper collection and disposal of municipal wastes is leading to an environmental catastrophe as the country currently lack adequate budgetary provisions for the implementation of integrated waste management programmes across the states (Bakare, 2016). Hausari community is located towards North-Western part of Bama and it comprises of Islamic Scholars and Businessmen who live there with their families. It's occupied by both educated and non-educated individuals, accompany by their various activities performed on daily basis which generate domestic wastes. This study is therefore designed to determine the sewage disposal practice and health implications of poor domestic waste disposal in Hausari community with a view to encourage hygienic waste disposal practices based on environment sanitation and enlighten them on the health implications of improper waste disposal in the community. Sewage is the wastewater generated by a community, namely: a) domestic wastewater, from bathrooms, toilets, kitchens, etc., b) raw or treated industrial wastewater discharged in the sewerage system, and sometimes c) rain-water and urban runoff. Domestic wastewater is the main component of sewage, and it is often taken as a synonym. The sewage flow rate and composition vary considerably from place to place, depending on economic aspects, social behavior, type and number of industries in the area, climatic conditions, water consumption, type of sewers system, etc. The main pollutants in sewage are suspended solids, soluble organic compounds, and fecal pathogenic microorganisms, but sewage is not just made up of human excrement and water. A variety of chemicals like heavy metals, trace elements, detergents, solvents, pesticides, and other unusual compounds like pharmaceuticals, antibiotics, and hormones can also be detected in sewage. With urban runoff come potentially toxic compounds like oil from cars and pesticides that may reach the treatment plant and, eventually, a water body. In Borno State for instance, most of the population is concentrated in Bama and this is not unconnected with the fact that Bama is the state capital, as most of the infrastructural facilities are located in its confinement. Wastewater generation and its improper disposal then becomes one of such environmental problems in Bama, paving ways to distortion of its environment and posing health threats. The open disposal of wastewater

provides convenient ground for breeding germs, disease vectors and an eye sore with offensive odour.

Statement of the Research Problem

The daily consumption activities of people relating to the food items discharged electronic items, yard trimmings, and household materials that are being used contribute to waste generation. Waste generations have been since human existence and the wastes generated are composed largely of refuse from home. Since waste generation cannot be stopped, the only solution is waste management and this is poorly implemented in developing countries especially in Nigeria. Due to poor waste management which can be attributed to the attitude of the people and the system of government in this country, this can affect human health and the environment. The waste disposal practices such as the way refuse is being dumped in the dump site and the measure taken to eradicate them can cause a detrimental effect in the state of health of the people. The domestic waste disposal practices are the determinant of the health implications of the people, for example; the scenario of a child being sent to the dump site bare footed and the parent's negligence about it, or an unhygienic behaviour e.g. not washing your hands after waste disposal, or being ignorant of the danger the child can encounter while playing around the dump site. Hence, in order to minimize these problems and promote a healthy environment through positive change in people's attitude, this study focused on domestic waste disposal practices and its health implication on Hausari Community in Bama local government area of Borno State.

Aim of the study

The main objective of this study is to determine the domestic waste disposal practices and its health implication on Hausari Community in Bama local government area of Borno State.

Objectives of the Research

The following specific objectives guided the study:

- i. To examine the domestic waste disposal practices of the people in the community.
- ii. To determine the relationship between domestic waste disposal practices of people in the community and its health implications.
- iii. To identify the factors that can promote the proper domestic waste disposal practices of the people in the community.
- iv. To establish the methods that can help in improving the waste disposal practices.

Research Questions

The following research questions were raised for the study.

- i. Do the people have the knowledge of proper waste disposal practice in Hausari ward of Bama?
- ii. Do the people know the health effect of improper waste disposal in Hausari ward of Bama?
- iii. Do the people have the knowledge of waste pollution in Hausari ward of Bama?

iv. Will proximity to disposal site determine the proper use of the facility in Hausari ward of Bama?

Literature Review

Waste is a useless and unwanted products of human domestic and industrial activities released into the environment. (Ezechi et al, 2017). Waste can be gaseous, liquid or solid. Solid wastes include municipal waste, industrial waste and biomedical or hospital waste (Okpara, 2001). Furthermore, Moronkola and Okanlawon (2003) stressed that solid wastes are unwanted, discarded and nonliquid materials emanating from various activities of man at home, school, workplace, and so on, which may be combustible. Most human activities generate waste (Brunner and Rechberger, 2014). EU Framework Direction on Waste (91/156/EC) has been adopted. Despite that, the production of wastes remains a major source of concern as it has always been pre historic period (Chandler et al, 1997). In recent times, the rate and quantity of waste generation have been on the increase. As the volume of wastes increases, so also does the variety of the waste increases (Vergara and Tchobanoglous, 2012). A substantial increase in volume of wastes generation began in the sixteenth century when people began to move from rural areas to cities as a result of industrial revolution (Wilson, 2007). This migration of people to cities led to population explosion that in turn led to a surge in the volume and variety in composition of wastes generated in cities. It was then that materials such as metals and glass began to appear in large quantities in municipal waste stream (Williams, 2005). The large population of people in cities and communities gave rise to indiscriminate littering and open dumps. These dumps in turn formed breeding grounds for rats and other vermin, posing significant risks to public health. Most developed countries passed through a period when they were developing environmentally. Today, however, most of these countries have effectively addressed much of the health and environmental pollution issues associated with waste generation. In contrast, the increasing rate of urbanization and developments in emerging countries is now leading to a repeat of the same historical problems that developed countries have had to address in the past (Wilson, 2007).

Concept of Domestic Waste

The term "disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid or hazardous waste into or on any land or water so that such solid waste, hazardous waste, or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground water, from community activities (US Law-Solid Waste Act 2, 1990), while domestic wastes are waste generated every day in the residential environment. It is a waste type consisting of everyday items that are discarded by the public. Domestic solid waste is any unwanted solid materials from household activities that cause environmental, social, and health hazards (Imoukhuede, 2016). Garbage can also refer specially to food waste, as in a garbage disposal; the two are sometimes collected separately. They are simply as garbage or trash. Waste with similar characteristics may be generated in other economic activities and can thus be treated and disposed of together with household waste, construction and demolition debris, sanitation residue, and waste from

streets. This garbage is generated mainly from residential and commercial complexes (Parvathamma, 2014). Municipal solid waste can also be divided into recycled and nonrecycled materials. Examples of recycled materials are discarded aluminum soft-drink cans melted down to create new cans, food and yard wastes composted and used to enhance soil fertility, and old newspapers and plastic bottles burned to produce electricity. The nonrecycled portion of municipal solid waste consists of by-products that must generally be removed from the site lest they interfere with production and consumption by attracting vermin and flies, obstructing passage, clogging drains, emitting unpleasant odors, and so on. Whether or not materials are recycled depends on the nature and cost of available production, consumption, recycling, and disposed technologies, as well as on government regulations. These can vary widely across economic settings. In developing countries, municipal solid waste is often disposed of with ash; human waste-where sewage systems do not reach substantial portions of the population (Mensah and Whitney, 1991).

Concept of Waste Disposal Practices

Waste or garbage is any material generated by human activity that is considered to be useless, superfluous valueless or unwanted and is disposal of in the environment. After collection, this waste may be dumped into landfill sites or destined for composting, incineration or recycling. Solid waste generated in urban centers may contain both domestic and commercial wastes along with industrial waste, thus constituting a complex mixture of different substances, of which some are hazardous to health (Bernerdinelli and Montomoli, 2000). Rinkesh (2017), listed some modern ways of solid waste disposal. The first is sanitary landfill, which is the most popular disposal method. Garbage is basically spread out in thin layers, compressed and covered with soil or plastic foam. Modern landfills are designed in such a way that the bottom of the landfill is covered with an impervious liner which is usually made of several layers of thick plastics and sand. This liner protects the ground water from being contaminated because of leaching or percolation. Landfilling of solid hazards waste pose direct threat to surface and ground water by leaching through soil thus, regulating such wastes in a sustainable manner (Pappu, Saxena, and Asoleka, 2007).

Waste Collection Process

The waste collection process contains the way from filling of containers to loading of the collection vehicle. Because of a variety of residential, commercial, and industrial development, it is impossible to collect waste with just one system. A variety of collection systems are used that respective municipal requirements to be used accordingly. Each collection method has compatible container systems and vehicles with dedicated loaders. The collection methods are:

Simple Emptying Method: The simple emptying method is used for the removal of household and small-scale commercial waste with mobile containers which are drained at the consumer. A lot of different standardized containers are used.

Exchange Method: At this method, full containers are exchanged with empty containers at their location. This method is suitable for highly sensitive waste, e.g. construction debris and

sludge, as well as for low density waste from institutions or large hotels. Because of economy, these containers have minimum capacities of 4 m3.

One-Way Method: In the one-way method, waste is picked up in clear plastic or paper bags whose volume is limited to a maximum of 110 L. The bags are picked up by hand, so there are no emptied containers to be returned to the curb and the containers are not cleaned.

Non-systematic Collection: The non-systematic collection method is used for collecting bulky waste or extra-large particles, e.g. bulky goods.

Special Collection Systems: Vacuum extraction and hydraulic flushing are two kinds of special collection systems. Both the pneumatic vacuum transport systems and the hydraulic flushing method combine collection and transport processes, but they have low importance. (Bilitewski, 1997)

The Concept of Waste Collection Systems and Storage Method

Waste storage and collection form a very crucial stage of waste management. Proper waste storage makes for ease of collection. Waste storage has both environmental and health implication. It was observed that waste bins are usually located within the house and provide harborage for disease vectors. Over time, these bins become heavily contaminated, depositing germs at the slightest contact. Most municipal waste management authorities encourage bagging of waste by providing polythene bags to households. Bagging makes waste collection less messy. From previous researches it was seen that plastic bins followed by polythene bags are the most common waste storage containers. Other unconventional waste bins include paper bags, used drums and sacks. Choice of bin is usually based on the nature of waste to be stored, conveyance, durability and affordability. Storage and collection form the final link between waste generators and waste managers and thus can be used as control. It is easier to sort waste at source than after collection (Charles, 2013).

Factors influencing the development and design of waste collection and storage systems

A lot of factors influencing the development and design of waste collection and storage systems. A few of them are: Size of collection area, Economic structure of the area, Residential lifestyle.

Container Systems / Storage

Storage means the holding of waste for a temporary period of time. There are different storage systems in use. In the following, a few of them will be described. To ensure efficient and mechanized waste collection, the number and size of containers must be standardized. Today, wheeled containers with capacities of 110 to 1.000 L, partly as much as 5.000 L, are used for household waste collection.

Garbage Cans and Trash Barrels / Eurobin

The smallest, standardized garbage cans are round with capacities of 35 to 50 L. They are made of galvanized sheet metal or plastic. The next in size standardized cans are made exclusively of plastic, with capacities up to 120 L capacities. Furthermore, cans with up to 360

L capacity already exists. Finally, small amounts of garbage are collected in a variety of trash barrels and dumpsters.

Large-sized Containers

Due to the rising quantities of waste, large sheet metal and plastic containers with wheels were developed. The transport by the consumer and handling by the collection crew is effortless with these containers. This container is appropriated for locations where large quantities of waste are generated. These are for example markets, sporting events or businesses. Just as the other large containers (120-5.000 L), these Large-sized Containers are also serviced using the simple emptying method.

The Concept of Solid Waste Management

Waste management (or waste disposal) is the activities and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment, and disposal of waste, together with the regulation of the waste management process. (United Nations Statistics Division Environment, 2017).

Factors Affecting Waste Disposal Practices

- i. Culture, Education, and Microeconomics: Oftentimes when systems are breaking down and problems are escalating, people look to societal factors to fix the issue. This has often been the case when dealing with the mismanagement of solid waste in the developing world.
- **ii.** The Attitude and Behavior Gap: Waste can mean many things to different people (Moore, 2012). Some people such as the trash pickers of Ghana see "waste" as a resource or a way to make an income in an otherwise limited job market. On the other hand, you have a majority of people living in the developing world that see waste as a burden and a problem that needs to be addressed.
- **iii.** Lack of Education and Awareness: Another major constraint seen throughout the developing world is the lack of education and awareness of effective wastemanagement practices. One study in Gaborone, Botswana, found that even though citizens were aware of recycling and other sustainable waste-management techniques, this does not necessarily translate into participation in proenvironmental activities such as recycling initiatives. The lack of interest in the environment creates a culture of nonparticipation of communities in decision-making processes. That stance enhances lack of responsibility for pollution and waste issues.
- **iv.** Choice versus Response: Another problem is that many people feel that they have no impact on the decision-making process, and as a result do not bother to register complaints with the authorities. Some researchers argue that people of lower socio-economic groups tend to have less regard for environmental issues on the basis that employment and housing are their main priorities (as cited in Périou, 2012).

The Health Problems Relating to Domestic Waste Disposal

Poor management of waste led to contamination of water, soil, and atmosphere and to a major impact on public health. In medieval times, epidemics associated with water contaminated with pathogens decimated the population of Europe and even more recently (19 century), cholera was a common occurrence.

Environmental Implication of Poor Domestic Waste Disposal

Environment is the sum of all social, biological, physical, and chemical factors which compose the surroundings of human beings (Rahman M, Haque K and Hasan M, 2003). Health depends on our ability to understands and manage the interaction between human activities and the physical and biological environment. The maintenance and improvement of health should be at the center of concern about the environment.

The Importance of Waste Management

- i. **Recycling and Recovery:** Recycling is reprocessing the recovered rubbish to be converted into something new and useful. Recycling is specially included in the idea of this practice. Recycling products would only require a small amount of energy. The product produced by recycling can be a renewable source of energy and it is Eco-friendly. Collecting of used trash like plastic, paper and so on is called Recovery.
- **ii. Composting:** This is the process of decomposing waste products that are organic such as leaves, scraps of fruits and vegetables and turning them into a very rich soil also known as the Black Gold. In addition to that, waste gas is produced during this process and is used for the production of electricity.
- **iii. Waste Minimization**: This is practiced by limiting the amount of waste that is generated by helping to eliminate the production of hazardous and harmful wastes effectively. It supports efforts to promoting a more sustainable society. In this method of waste management, you can start producing products that are more complex rather than disposable ones, using second hand items. Purchasing products that can be reused and repairing products that you have at home and prolong its use and purpose.
- **iv.** Landfills: The importance of this is that Methane and Carbondioxide are produced by rotting food waste then oozes up to the air.
- v. Plasma Gasification: Converting organic matter into synthetic gas using plasma. The process of this is done and conducted in sealed vessels with high pressure in it. This disposal process is self-sustaining, environmental friendly and converts garbage into electricity and energy. Residues are left behind, it's known as "char", and it's being used to produce more usable items.
- vi. Incineration or Combustion: this is a waste treatment technology that reduces the amount of waste, from 95%, to be thrown in landfills. It is used to convert waste materials in the gas, ash, steam, and heat. At the end of the process of incineration, which includes combustion of waste, the produced products are later being used for generating electricity. (Karen, 2019)

Causes of Indiscriminate Disposal of Solid Waste

Ugwunwa (2005) identified the causes of indiscriminate disposal of solid waste as carefree attitude, lack of environmental awareness, absence of disposal site and population explosion. In Sub-Saharan Africa (SSA) in particular, the combined influence of poverty, population growth and rapid urbanization has tended to worsen the situation (Walling et al, 2004).

Methodology

The Study Area

The study was carried out in Bama LGA which is one of the 27 LGAs of Borno State located in the North eastern corner of Nigeria. It is located in latitude 12010" and 14000" North and longitude 11030" and 13016" East. Bama LGA has an area of 6,176 square kilometers with two distinct climatic zones (Sudan Savannah and Sahel) with mean temperature of 300c, and mean annual rainfall of 500mm. These climatic conditions are favorable for the cultivation of the local cowpea varieties, hence, majority of the populace of the study area who are predominantly small-scale farmers produce the crop. Bama is a community in Borno State, Nigeria and the center of a Local Government Area of the same name about 30 km to the southeast of Maiduguri, situated on the north bank of the Ngadda River. The population of the Bama Local Government Area is about 17,400. It is one of the sixteen LGAs that constitute the Borno Emirate, a traditional state located in Borno State, Nigeria. The primary languages are_Shuwa Arabic, Yerwa Kanuri Maffa and Wandala/Malgwa. Bama town doubles as the Local Government Area headquarters, amongst other towns and wards of the area are Andara, Ajiri, Wulba, Buduwa, Bula Chirabe, Dipchari, Jere, Dar-Jamal, Kotembe, Gulumba, Bankki Jukkuri, Batra and others.

Research Design

The descriptive survey research design was used for this study. This is considered appropriate because it enables a researcher to carefully describe, interpret and explain factual and detailed information about the variables of interest. This design is selected as the most suitable since the study is intended to examine the sewage disposal practices on Hausari ward of Bama.

Data Analysis and Discussion

Age	Frequency	Percentage (%)		
< 21years	81	40.5		
21-30 years	36	18		
31-40 years	25	12.5		
41 – 50 years	42	21.0		
51- 60 years	16	8.o		
Total	200	100		

Table 1: Distribution of Respondents by Age

Table 1 shows that out of 200 respondents, 40.5% of them are within the age bracket less than 21 years, the age bracket of 21-30 years accounted for 18%., the age bracket of 31-40 years accounted for 12.5%, the age bracket 41-50 years accounted for 21% while the age bracket 51-60 years accounted for 8%. This implies that majority of the respondents are within the age bracket less than 21 years.

Gender	Frequency	Percentage (%)
Male	77	38.5
Female	123	61.5
Total	200	100

Table 2 shows that out of 200 respondents, 61.5% of them are female while 38.5% of them are male. This implies that majority of the respondents are female.

Religion	Frequency	Percentage (%)
Islam	181	90.5
Christian	19	9.5
Traditional	0	o
Total	200	100

Table 3 shows 200 respondents, 90.5% of the respondents are Muslim while 9.5% are Christian and no respondents is practicing traditional or any other religion. This implies majority of the respondents are Muslim.

Table 4: Distribution of Respondents by Ethnic group

Ethnic group	Frequency	Percentage (%)
Kanuri	103	51.5
Babur	66	33.0
Others	31	15.5
Total	200	100

Table 4 shows 200 respondents, 51.5% are Kanuri, 33% are Babur, while another ethnic group are 15.5%. This implies that majority of the respondents are Kanuri.

Marital Status	Frequency	Percentage (%)
Single	114	57
Married	86	43
Total	200	100

Table 5: Distribution of Respondents by Marital Status

Table 5 shows that the respondents who are single are 57% while the respondents who are married are 43%. Meanwhile, there are no respondents who are separated, divorce and widowed. This implies majority of the respondents are single.

Educational qualification	Frequency	Percentage (%)
Non-formal education	19	9.5
O" level	81	40.5
Grade II	6	3.0
NCE	22	11.0
Diploma	14	7.0
HND/BSC	46	23.0
Master's degree	12	6.o
Total	200	100

Table 6: Distribution of Respondents by Educational Qualification

Table 6 shows 200 respondents, 9.5% for those with non-formal education qualification, 40.5% for those with O'level education qualification, 3.0% for those with Grade II education qualification, 11.0% for those with NCE education qualification, 7.0% for those with Diploma education qualification, 23.0% for those HND/BSC qualification while 6.0% for those with Master's degree qualification. This implies that majority of the respondents have an O" level educational qualification.

The Waste Disposal Method Used in your Community One		
Waste Disposal Method	TICK	
Pit in the backyard	13 (6.5%)	
Dumpsite	23 (11.5%)	
Refuse bins / drums	193 (96.5%)	
Plastic bags disposal	23 (11.5%)	
Nostorage	1(0.5%)	

The result of this study shows that respondents have the largest proportion of refuse bins/ drums with the frequency of 193 which accounted for 96.5% out of 100%, dump site have the frequency of 23 which accounted for 11.5% out of 100%, plastic bags disposal have the frequency of 23 which accounted for 11.5% out of 100% and pit in the backyard have the frequency 13 which accounted for 6.5% out of 100%. While, one (1) respondent ticked no storage which accounted for 0.5% out of 100%.

Summary, Conclusion and Recommendations

Holistically, chapter one narrated pre-historic development of waste, and that waste are substances or objects, which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national laws but the major type of waste for this study is domestic waste, which is defined as a waste that is generated as a result of day-to-day use of domestic premise. Domestic waste disposal is an issue that is important to the management of urban areas. Therefore, the importance of waste collection, transfer, and disposal cannot be over-emphasized because many health impacts such as transmission of infections such as cholera, typhoid fever, gastroenteritis, dysentery, soil transmitted helminthes infection, and Lassa fever on rare cases, and all these depend on the type of exposure, nature of the waste, disposal site proximity etc. This chapter indicated five objectives of the study which can be mitigate to be; examining their waste practices, obtaining the relationship the dependent variable and independent variable, identification of the factors can promote and method that can help in improving the waste disposal practice in Hausari ward. Also, chapter two elaborated the previous researchers" work done on this study which are factors affecting waste disposal practices, factors influencing the development and design of waste collection and storage systems. Also, environmental implementation of poor domestic waste disposal was discussed and points explained is that urban solid waste management is considered to be one of the most immediate and serious environmental problems confronting urban governments in developing countries. In addition, the concept of solid waste management was explained and it was indicated in the study that there is a difference between waste management of developed and developing countries. This study also indicated that a health educator is needed for proper management and recycling of solid waste in Nigeria. In chapter three, the research design used for this study was descriptive survey, the population of the study comprised of the residents of Hausari ward, Bama and it comprised of two hundred respondents. The research instrument used was self-developed structured questionnaire and the instrument had .734 Cronbach Alpha values, which showed that the instrument is acceptably reliable. In chapter four, the details on results and discussion of findings are based on socio-demographic characteristic of the respondents, analysis on the research questions and hypothesis. The research questions were analyzed with frequency counts, percentages.

Conclusion

Based on the findings in this study, it is concluded that the people in Hausari ward have low knowledge on the effect of improper domestic waste disposal practice in relation to its health implication. It is equally concluded that proximity to waste facility among the residents in Hausari ward promote disease occurrences. It is also concluded that since there is an indirect and significant relationship between knowledge on domestic waste disposal practices and waste pollution among the people in Hausari ward, improving knowledge on domestic waste

disposal will decrease the practice on waste pollution such as burning of waste in Hausari ward.

Recommendations

Adequate skip containers should be provided in communities to encourage frequent disposal of waste. Adequate skip containers will decrease improper waste disposal method like waste burning, the metropolitan waste management bylaws should be strictly enforced to punish anyone who disposes waste at unapproved areas, Recycling of waste should be encouraged by the government. The government should encourage private sector waste management to enhance recycling of waste, Households should be educated on effects of indiscriminate waste disposal, Issues concerning technical, economic and social constrain hindering proper waste management should be addressed, The media should also show and enlighten the public the aftermath effect of this improper waste disposal method through all means of communication, Every household should obtain waste disposal baskets for refuse collection and dump inside strategically placed waste disposal containers provided by the government that would be emptied regularly, There should be adequate provision of refuse vans and heavy machines for transportation of wastes for land filling purposes, There should be effective public health education campaigns in the community on how to keep the environment free from indiscriminate disposal of refuse and its effects, Policies aimed at keeping the environment clean should be formulated and enforced by appropriate authorities, State and local government authorities should use environmental health officers and sanitary inspectorate division of ministry of environment to supervise refuse disposal in the community, Awareness campaigns on the health implication of environmental riskfactors should be intensified to educate the masses.

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CONFERENCE ON AFRICAN ECONOMY AND DEVELOPMENT STRATEGIES

THE EXCHANGE RATE CHANNEL OF FOREIGN DIRECT INVESTMENT THROUGH OIL SECTOR TO ECONOMIC GROWTH IN NIGERIA 1970-2022.

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Abstract

he study examined the extent to which foreign direct investment through oil export influence employment and hence economic growth in Nigeria (1970-2022). Although it has been difficult to ascertain why oil rich countries similar to Nigeria have benefitted from FDI in oil sector in the area of employment creation but Nigeria has not been able to efficiently benefit from adequately in this regard, it is on this premise that the work offers a practical means of addressing the phenomenon. The study covers the period 1970 -2022, the study is descriptive and quantitative in nature using statistical tools, trends, the Structural Vector Autoregression (SVAR), among other econometric models. The findings of the study showed a relationship among gross domestic Product, Foreign direct investment, oil exports, index of openness, employment and oil price. Finding showed that the lag value of gross domestic product has a positive but a statistically insignificant effect on economic growth in Nigeria. Oil exports have a positive and statistically significant impact on economic growth in Nigeria in the short-run. The analysis implies that a 1% increase in oil exports will lead to a 0.18% increase in economic growth in the economy. The paper concluded by recommended that Pragmatic mechanisms should be put in place to properly channel domestic technology, improve on local technology and co-engage foreign and local technology for on the job training among others.

Keywords; Oil export, Economic growth, foreign direct investment, exchange rate, inflation, employment.

Introduction

Foreign direct investment (FDI) is an important factor in the globalization process and in recent years has outpaced trade (Almsafir et al, 2011); It is also a vital component of the global economic system and a significant catalyst for the transfer of capital and human resources from one nation to another (OECD, 2017). Thus, foreign direct investment is a component of the economic system that promotes economic growth and infrastructural development. Developed and developing nations have in one way or the other provided incentives to encourage foreign direct investment in their economies (Melnyk, Kubatko, & Pysarenko, 2014); and many academics and policy makers report that foreign direct investment (FDI) can have significant favorable effects on the growth of a host economy along with doestic investment In addition to the funds it provides, foreign direct investment can be a source of useful technology and technical know-how that can improve links with local businesses, which can support economic growth.

Furthermore, it has been observed that since the early 1980s a number of nations have implemented regulations meant to promote foreign direct investment and loosen financial flow restrictions and as a result foreign direct investment rose to prominence as one of the key sources of cash flow and a driving force behind economic growth by improving the balance of payments and increasing cash flows, which add more money to the current account and may be used to fund regional projects that are expected to have a favorable impact on the host country's economic performance. In same vein foreign direct investment is seen as a way to improve the the peolples welfare through stimulating economic growth, extending employment possibilities, and increasing trade (Asiedu, 2018).

According to Egolum (2011) He postis that in efforts to encourage the inflow of foreign direct investments (FDI), the Federal Government has adopted a variety of policies and measures which have allowed foreign investors to be almost treated in same vein as local investors with tax breaks and incentives. The National Investment Promotion Commission Act, 1995) was established with the purpose of promoting and facilitating investment in Nigeria with a onestop investment center that brings together and streamlines administrative processes for new firms and investments; this center is supported by cooperation from 27 governmental and parastatal entities by promoting suitable investment climate; with the intention that incentive programs will encourage the inflow of foreign private investments and the government has demonstrated awareness of macro-policy and institutional framework particularly on macro-economic policies which are considered important in influencing investment decisions; eliminated restrictions and ceilings on FDI and permitted 100 percent foreign ownership in all sectors, with the exception of those that are illegal under local and international law (Emudainohwo, 2015). Economic potential is well recognized to be the biggest economy in the West African sub region given the country's considerable resource endowment and coastal location it is clear that it posses potential for strong growth, But yet Nigeria has realized very little because the previous efforts at planning and visioning were not sustained (Onyali & Okafor, 2014).

Background to the Study

Economic openness is widely acknowledged to increase economic growth in both rich and developing countries. The oil and gas industry in Nigeria draws the greatest FDI inflows, according to a sector-by-sector examination of FDI inflows. \$20.83 million and \$203.9 million dollars in foreign capital were invested in the oil and gas industry during the first quarter of 2016, and the second quarter's respectively. A total of \$171.63 million and \$227.3 million were reported in the third and fourth quarters, respectively. In the first six months 2017, foreign investment inflows into Nigeria's oil and gas sector climbed to US\$291.47 million. Compared to the 21.21% inflows saw in the first half of 2016, inflows grew by 31.76%. (NBS, 2017) Beginning in 2020, Nigeria's primary trade partner for crude oil was Europe. In the fourth quarter of 2020, crude oil shipments to Europe were worth roughly N853 billion, which is about US\$2 billion. However, in the fourth quarter of 2020, exports from Nigeria exceeded N880 billion and reached over US\$2.2 billion, making Asia the top destination for Nigerian crude oil. A total, shipments of crude oil drastically declined in the second quarter of 2020. Nigeria's export value is mostly derived from crude oil exports. The Nigerian economy has been significantly impacted by the Covid-19 pandemic epidemic, Due to declining demand, crude oil prices fell precipitously, and the nation continuously reduced daily crude oil output.

About 9% of Nigeria's GDP comes from the country's petroleum industry. However, due to the decreased in demand which was occasioned by the COVID-19 epidemic, Nigeria's oil output and exports decreased. The oil sector's share of this total real GDP in 2020 between October and December was roughly 5.9%, which is a decrease of about 3% from the prior guarter. Finally, the oil sector's share of the nation's GDP increased to 9.25% in the first quarter of 2021. The mineral fuels, petroleum, and distillate products industry contributed more than 80% of Nigeria's export value in 2019, totaling about \$45 billion (NBS, 2021). A downturn in FDI into Nigeria during the past years, coupled with a drop in oil prices on the global market, has slowed Nigeria's oil exports, which has had an adverse effect on economic growth. The government's pursuit of an expansive fiscal policy through public expenditure was simplified as a resultant effect. This decline in her FDI influx will have an impact on employment possibilities, consumption levels, investment levels, and employment growth. Given that global uncertainties decreased net FDI inflows from 1996 to 2019 and that oil exports were influenced by declining oil prices, the current epidemic on FDI is particularly concerning. Majority of the time, rising economies like Nigeria and those in the Asia-Pacific region experience severe shocks brought on by GDP uncertainty (Ho and Gan, 2021). Because of the loss in FDI coming in, host nations like Nigeria may see a drop-in oil output and exports, which would cause the economy to contract. This has made it necessary to conduct a research of this kind, which look at how oil exports affect economic growth in Nigeria.

Statement of the Problem

Nigeria receives a higher proportion of FDI in the petroleum sector than in other industries, similar to other Sub-Saharan African countries. UNCTAD (2020) stated that FDI inflows to

Nigeria surged by 71% from \$2 billion in 2018 to \$3.4 billion in 2019, led by resource-seeking inflows in the petroleum sector. Capital from Nigeria's petroleum sector accounted for the majority of a 17% increase in capital flows to around \$11 billion in West Africa. This demonstrates how cash flows to Nigeria's petroleum industry are distorted.

Nigeria's oil exports and FDI have a favorable correlation, according to empirical literature (see Adereni, Azeez, Elufisan and Awomailo 2019; Afolaya and Jimoh 2019; Hussain and Ahmed 2017; Makuchukwu, Salami; Fatimah, Gazi and Oke 2012). Despite an increase in oil exports fueled by FDI inflows, oil money in Nigeria has not had the desired effects, notably in the aspect of economic progress and development. There is no conclusive evidence that the increase in oil exports brought on by FDI inflows has had any direct or indirect effects on economic growth in Nigeria, unlike other oil-rich nations that have frequently exchanged their oil for fixed capital, leading to enormous capital formation and, consequently, economic growth and development. The development and expansion of Nigeria's economy are gravely threatened by this. Although it is possible that the export of oil would have a direct impact on Nigeria's economic welfare, it is also very likely that this impact will only be indirect. With an increase in oil export profits, the government may decide to spend more or conserve more. Increased government expenditure may be directed toward developing fixed capital or human capital, both of which support economic growth and development. Furthermore, increased government savings add to general savings, which when used can boost the economy. This study aims to conduct an empirical assessment of how oil exports affect Nigeria's economic prosperity.

Research Questions

This study seeks to solve the following puzzles

- i. How has FDI through oil sector impacted on employment generation in Nigeria?
- ii. What is the effect of FDI on economic growth through Employment in Nigeria?

Objectives of the Study

The objective of this study is to examine the relationship between FDI, Oil export and economic growth in Nigeria. The specific objectives are to:

- i. Examine the relationship between FDI, oil export, Employment and economic growth in Nigeria;
- ii. Ascertain the impact of FDI on oil export, employment generation and hence economic growth in Nigeria.

Research Hypotheses

This study is guided by the following hypotheses:

H_o**:** There is no significant relationship between FDI, Oil export, and Employment in Nigeria;

 H_{o_2} : FDI through oil export has no significant impact on Employment in Nigeria.
Significance of the Study

Oil export has unsurprisingly been extremely important to Nigeria's political economy. The transmission channels oil sales towards achieving economic growth in Nigeria have not been adequately subjected to any empirical details, despite the fact that these contributions to economic growth in Nigeria have been enormous and have each been the subject of empirical investigation separately. The relationship and nature of transmission between FDI, through oil export to economic growth in Nigeria have not been adequately documented in empirical literature. Additionally, this research will serve as a resource for decision-makers and aspiring researchers on related subjects, which will incite profound and innovative thoughts that are practically applicable to help improve the management of oil export for the achievement of capital formation for the purpose of achieving real economic prosperity and development in Nigeria and other resource-rich countries.

Review of Related Literature

Despite several empirical works on oil export, there is little conceptual literature on oil exports. The entire amount of oil exported, including both crude oil and refined oil products, is measured in barrels per day (bb/day). According to Akighir and Kpoghul (2020), oil exports include semi-finished and unfinished petroleum products, liquid fuel, lubricating oils, solid and semi-solid goods made from distillate and cracking of crude petroleum, and solid and semi-solid products made from liquid fuel. Oil and gas extraction are a key source of export income and, to a lesser extent, source of employment in many developing economies. However, the most significant benefit that a nation may get from its growth is arguably the fiscal role that the oil and gas industry play in generating tax revenue and other government funds. To ensure that the state, as the owner of the resource, receives a fair share of the economic rent generated by oil and gas development, export strategies and the tax system must be properly established (Sunley, Baunsgaard and Simard, 2002).

Economic Growth

The expansion of a nation's capacity to produce goods and services from one period to the next is referred to as economic growth. It is also referring to as the gradual rise in the quantity of goods and services an economy generates. Ogunleye (2014). The World Bank (2019) sees economic growth as an increase in the production of goods and services over a specific time period. For precision, the measurement of economic growth must take the effects of inflation into account. Business profits increase as a result of economic growth. The effect is a rise in stock prices. Businesses can invest and increase employee numbers as a result. As more employment opportunities are created, income rises. The consumers have sufficient funds to purchase extra goods and services. Purchases stimulate economic growth at a higher rate. This is why good economic growth is the goal of all nations. As a result, one of the important economic indicators is economic growth.

The most reliable growth metric is the Real Gross Domestic Product (RGDP). It eliminates the detrimental effects of inflation. The World Bank uses Gross National Income (GNI) as a growth indicator rather than GDP. It includes cash sent home by Americans working

overseas. It is a key source of revenue for many developing countries like Nigeria. While growth rates are important, the World Bank (2019) Group emphasizes that growth patterns that prioritize increasing opportunities for the disadvantaged and excluded, especially women and youth, can result in more strong and sustainable growth.

Comparisons of GDP by nation will understate the full magnitude of these nations' economies. The GDP does not include unpaid services. This excludes daycare, unpaid volunteer labor, and illegal black-market activities. Environmental expenditures are not included in. For instance, plastic is cheap since disposal fees are not included in. However, the impact of these costs on social wellbeing is not taken into consideration by GDP. A nation's level of living can be improved when environmental costs are considered. Only the values of a society are measured. The gross domestic product is the most reliable measure of economic growth (GDP). It considers the whole nation's economic output, which includes all goods and services produced for export by local businesses whether they are sold domestically or overseas. A measure of output is the GDP. The parts that are created to make a product are not included, though. Because they are made domestically, exports are taken into account. Imports are taken into consideration while adjusting economic growth.

Since 2015, the pace of economic growth has been moderate. After averaging 1.9% in 2018, growth was constant at 2% in the first six months of 2019. Internal demand is still hedged as a result of low private spending and high inflationary episodes (11% in the first six months of 2019). From the perspective of output, the services sector, particularly the telecoms, was the primary engine of development in 2019. The North-East insurgency and ongoing farmerherdsmen disputes are to blame for the continued underperformance of the agriculture sector. Industry performance is inconsistent due to a worse power sector performance in 2019, manufacturing production is slowing down, while GDP growth is steady. It was predicted that output of food and beverages would rise in response to import restrictions. The construction sector, on the other hand, is still performing well as a result of continuing megaprojects, increased public spending in the first half of the year, and import restrictions. The growth rate is too slow to eradicate poverty among the poorest 50 percent of the population. The agriculture sector's failure harms the chances of poor rural inhabitants, while excessive food inflation has a detrimental effect on the poor in urban regions. Oil production is slowing in 2019 as a result of a poorer power sector performance, GDP growth is constant. In reaction to import limitations, an increase in food and beverage production was anticipated.

On the other hand, the construction industry is still doing well thanks to ongoing megaprojects, increased public expenditure in the first half of the year, and import restrictions. The growth rate is too slow to eradicate poverty among the poorest 50 percent of the population. The agriculture sector's failure harms the chances of poor rural inhabitants, while excessive food inflation has a detrimental effect on the poor in urban regions. Despite growth in some industries, employment growth is still slow and insufficient to keep up with the labor force's rapid expansion, leading to a high unemployment rate (23% in 2018) and

20% of the work force being underemployed. The high rate of poverty in the country's North-East area was also a result of the instability in the Northern region and the resulting population relocation.

Nigeria's medium-term growth is forecast to stay constant at roughly 2% in the absence of major fundamental policy adjustments. As a result, it is anticipated that the economy would expand more slowly than the population and that living standards will decline. Growth is also constrained by a weak macroeconomic environment, high persistent inflation, several exchange rate windows, restrictions on foreign exchange, distorting actions of the central bank, and a lack of revenue-driven fiscal consolidation outcomes. The increase of private sector credit is constrained by increasing public debt as well as more complex central bank policy measures. Nigeria's economy is vulnerable to external risks because fiscal buffers have been exhausted and external balances are unstable due to hot money flows. The opportunity exists for the incoming administration to quicken the pace of structural changes in order to create an institutional and regulatory framework capable of controlling the volatility of the oil industry and fostering long-term expansion of the non-oil economy. The abolition of trade and forex restrictions, the elimination of subsidies, enhanced domestic tax mobilization, and more openness and predictability of monetary policy are all bold measures that might have a substantial influence on the economy's trajectory. While raising spending on much needed public services, such measures would help enhance the standard of life for low-income populations. After much consideration, the signing of the Africa Continental Trade Agreement may also provide the economy a boost in the medium run. Economic indicators from the World Bank.

Data Presentation and Analysis of Results Method of the Study

Data was analyzed using descriptive statistics and econometric analytical tools, the unit root test, ADF, KPSS, the SVAR and Variance decomposition tests were carried out. The IRF was also used to track the responsiveness of the regressands in the SVAR to the shocks in the other variables. The variance decomposition explained the extent of movement in the dependent variables explained by their own shock's vis-avis shocks from other factors.

Model specification and Discussion

In tracing the indirect effect of foreign direct investment on the economy, the employment channel will be used as specified. Foreign direct investment inflows create employment avenues in an economy and thus affect economic growth positively. Thus, the transmission which is the pass-through effect of foreign direct investment to economic growth via employment is given as follows:

 $FDI \longrightarrow EMP \longrightarrow GDP$ _ _ _ _ _ 1

Where *FDI* is foreign direct investment inflows, *EMP* is employment, and *GDP* is economic growth (proxy by gross domestic product).

Transposing the transmission yields,

$GDP_{i} = f(GDP_{i-1}, EMP_{i-1}, FDI_{i-1}, EMP_{i}, FDI_{i})$	-	-	-	(2)
$EMP_{i} = f(GDP_{i-1}, EMP_{i-1}, FDI_{i-1}, GDP_{i}, FDI_{i})$	-	-	-	(3)
$FDI_{i} = f(GDP_{i-1}, EMP_{i-1}, FDI_{i-1}, GDP_{i}, EMP_{i})$	-	-	-	(4)

Therefore, the exposition of the normalized SVAR (4.7) system of equation yields the following,

$GDP_{t} = \alpha_{11}^{t}GDP_{t-1} + \alpha_{12}^{t}EMP_{t-1} + \alpha_{13}^{t}FDI_{t-1} + \alpha_{12}^{0}EMP_{t} + \alpha_{13}^{0}FDI_{t} + \varepsilon_{1t}$	-	-	-	(5)
$EMP_{r} = \alpha_{21}^{i}GDP_{r-1} + \alpha_{22}^{i}EMP_{r-1} + \alpha_{23}^{i}FDI_{r-1} + \alpha_{21}^{o}EMP_{r} + \alpha_{23}^{o}FDI_{r} + \varepsilon_{2r}$	-	-	-	(6)
$FDI_{t} = \alpha_{31}^{1}GDP_{t-1} + \alpha_{32}^{1}EMP_{t-1} + \alpha_{33}^{1}FDI_{t-1} + \alpha_{31}^{0}GDP_{t} + \alpha_{32}^{0}EMP_{t} + \varepsilon_{3t}$	-	-	-	(7)

Collecting the contemporaneous effects to the Left-Hand Side (LHS) turns,

$GDP_i - \alpha_{12}^\circ EMP_i - \alpha_{13}^\circ FD_i$	$a_{11} = \alpha_{11}^{\dagger} GDP_{-1} + \alpha_{12}^{\dagger} EM$	$P_{i-1} + \alpha_{i}^{\dagger} FDI_{i-1} + \varepsilon_{i}$	-	-	(8)
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$$-\alpha_{21}^{0}GDP_{i} + EMP_{i} - \alpha_{23}^{0}FDI_{i} = \alpha_{21}^{1}GDP_{i-1} + \alpha_{22}^{1}EMP_{i-1} + \alpha_{23}^{1}FDI_{i-1} + \varepsilon_{2i} - (9)$$

$$-\alpha_{ii}^{0}GDP_{i} - \alpha_{ii}^{0}EMP_{i} + FDI_{i} = \alpha_{ii}^{1}GDP_{i-1} + \alpha_{ii}^{1}EMP_{i-1} + \alpha_{ii}^{1}FDI_{i-1} + \varepsilon_{ii} -$$
(10)

Descriptive Statistics

This sub-section presents the descriptive analysis of the variables used in the study. The descriptive statistics are presented in Table 1.

Table 1: Descriptive Statistics

				Std.			Jarque-		
	Mean	Maximum	Minimum	Dev.	Skewness	Kurtosis	Bera	Prob.	Obs.
EMP	53.26226	56.7	50.2	1.522173	-0.0491	2.064909	1.952249	0.376768	53
EXR	92.16336	448.895	0.55	117.9081	0.40282	3.293498	1.877799	0.382326	53
FDI	325097.3	1360308	-403.688	429099.2	0.921931	2.326293	8.510277	0.014191	53
FORD	679050.9	16819151	-1.5E+07	4756740	-0.17554	6.806868	32.27588	0	53
GDP	71329.7	267550	16211.49	71313.98	1.430868	3.575889	18.81761	0.000082	53
INFL	18.27566	72.8	3.5	15.17763	0.991447	3.286542	1.887478	0.489341	53
INTR	14.34283	36.09	2.6	8.204801	0.514613	2.643383	2.620152	0.2698	53
NOILX	144436.7	569167	203.2	201827.9	1.034254	2.366255	10.33578	0.005697	53
OILP	56.60711	185	12.77	46.73164	1.169301	3.300999	12.27758	0.002158	53
OILX	1271025	9659773	509.622	2591585	2.125181	6.080556	60.8515	0	53
OPEC	2004.768	2631	1246	374.6964	-0.31559	1.962881	3.255092	0.196411	53
OPN	44.70089	81.81	16.35	17.27557	0.188195	2.002617	2.509645	0.285126	53
RES	8321.4709	6775510	159.6448	1.60E+10	1.391408	3.054807	17.10812	0.000193	53

Source: Author's Computation using E-views 10

Table 1 indicates that, employment has a mean value of 53.26% with a maximum value of 56.7% and a minimum value of 50.2%. Its Jarque-Bera statistic value of 1.95 is not statistically significant at 5% level of significance. This implies that the series is normally distributed. The exchange rate has a mean value of 92.16 and a maximum value of 448.8 and a minimum

value of 0.55. The Jarque-Bera statistic value of 1.88 is not statistically significant at 5% level of significance; this suggests that the series is normally distributed.

Furthermore, the table shows that foreign direct investment (FDI has a mean value of USD 325097.3 billion with a maximum value of USD 1360308 billion, and a minimum value of USD -403.688 billion. Its Jarque-Bera statistic value of 8.51 is statistically significant at 5% level of significance. This suggests that the series is not normally distributed. However, the series was transformed using logarithm technique to make it normal. Foreign demand has a mean value of USD 679050.9 billion with a maximum value of USD 16819151 billion and a minimum value of USD-14507068 billion. The Jarque-Bera statistic value of 32.28 is statistically significant at 5% level of significance. This suggests that the series is not normally distributed; but the series was transformed using logarithm technique to make it normal. Again, GDP has a mean value of N71329.7 billion with a maximum value of 18.82is statistically significant at 5% level of significance. This suggests the series are not normally distributed. Thus, the series was transformed using logarithm technique to make it normal.

For inflation (INFL) the table reveals that, it has a mean value of 18.28% with a maximum value of 72.8%, and a minimum value of 3.5%; the Jarque-Bera statistic value of 1.89 is not statistically significant at 5% level of significance. This implies that the series is normally distributed. Interest rate (INTR) has a mean value of 14.34% with a maximum value of 36.09%, and a minimum value of 2.6%. The Jarque-Bera statistic value of 2.62 is not statistically significant at 5% level of significance. This means that the series is normally distributed. The series for non-oil export (NOILX) has a mean value of N144436.7 billion with a maximum value of N569167 billion, and a minimum value was N203.2. The Jarque-Bera statistic value of 10.34 is statistically significant at 5% level of significance. This suggests the series are not normally distributed. However, the series was transformed using logarithm method to make it normal. Oil price (OILP) has a mean value of USD 56.61 with a maximum value of USD 185 and a minimum value of USD 12.77. The Jarque-Bera statistic value of 12.28 is statistically significant at 5% level of significance. This suggests that the series is not normally distributed; but the series was transformed using logarithm technique to make it normal.

Oil export (OILX) has a mean value of USD 1271025 billion with a maximum value of USD 9659773 billion, and a minimum value was USD 509.622. The Jarque-Bera statistic value of 60.85 is statistically significant at 5% level of significance. This suggests the series are not normally distributed. Thus, the series was transformed using logarithm method to make it normal. Opec quota (OPEC) has a mean value of 2004.768 million barrels and a maximum value of 2631 million barrels and a minimum value of 1246 million barrels. The Jarque-Bera statistic value of 3.26 is not statistically significant at 5% level of significance; this suggests that the series is normally distributed. The index of openness (OPN) has a mean value of 44.70% with a maximum value of 81.81% and a minimum value of 16.35%. Its Jarque-Bera statistic value of 2.51 is not statistically significant at 5% level of significance. This implies

that the series is normally distributed. Lastly, the table reveals that foreign reserves (RES) has mean value of USD 8321.47 billion with a maximum value of USD 6775510 billion, and a minimum value was USD 159.6448. The Jarque-Bera statistic value of 17.11is statistically significant at 5% level of significance. This suggests the series are not normally distributed; but it was transformed using logarithm method to make it normal.

Unit Root Tests

To test for the stationarity properties of the series, the ADF and KPSS unit root tests were used and the results are presented in Table 2

Variable	ADFT-Stat	Critical	Order of	KPSS	Critical	Order of
		Value 5%	Cointegration	LM. Stat	Values5%	Co-
						integration
GDP	-6.018833	-2.921175	I(1)	0.086175	0.463000	I(1)
FDI	-9.921839	-2.919952	I(1)	0.127822	0.463000	I(1)
OILX	-5.656261	-2.919952	I(1)	0.093792	0.463000	I(1)
NOILX	-4.523250	-2.919952	I(1)	0.503535	0.653000	I(1)
OILP	-7.132255	-2.921175	I(1)	0.345675	0.463000	I(1)
OPN	-9.608111	-2.919952	I(1)	0.259866	0.463000	I(1)
EXR	-3.797116	-2.922449	I(1)	0.571181	0.643000	I(1)
OPEC	-5.468524	-2.922449	I(1)	0.162756	0.463000	I(1)
INFL	-3.575974	-2.918778	I(o)	0.179261	0.463000	I(o)
EMP	-7.619487	-2.919952	I(1)	0.086757	0.463000	I(1)
INTR	-3.389927	-2.922449	I(1)	0.131756	0.463000	I(1)
RES	-5.326186	-2.919952	I(1)	0.189924	0.463000	I(1)
FORD	-3.498804	-2.921175	I(1)	0.353904	0.463000	I(1)

Table 2: Results of Unit Root tests

Source: Author's Computation using E-views 10

Table 2 shows the unit root tests results of ADF and KPSS for all the series used in this analysis. For both ADF and KPSS, the results indicated that all the series are integrated of order one, that is, I(1) except inflation (INFL) which is integrated of order zero, that is I(0). This suggests that the variables have mean reverting ability. The implication is that, any shock to the variables will fizzle out with the passage of time.

In tracing the indirect effect of foreign direct investment on the Nigerian economy, even though other channels exist but the focus of this paper is the employment channel. The result is presented accordingly as follows. As usual, before estimating the SVAR, the optimal lag selection criteria were estimated and the results are presented in the following table.

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-183.9118	NA	0.306131	7.329876	7.443512	7.373300
1	-50.02346	246.7746	0.002287	2.432293	2.886840	2.605988
2	-31.33908	32.23971*	0.001571*	2.052513*	2.847971*	2.356481*

Table 3: Optimal Lag Selection Criteria

Source: Author's estimation Using E-views 10

The result shows that both the sequential modified LR test statistic (LR), Final prediction error (FPE), Akaike information criterion (AIC), Schwarz information criterion (SC) and Hannan-Quinn information criterion (HQ) have indicated lag two (2) as the optimal lag length for the SVAR. Following the outcome of the optimal lag section criteria, the Johanson cointegration test was estimated and the results are show in Table 4

Table 4: Johanson Cointegration Test

Panel A: Unrestricted Cointegration Rank Test (Trace)						
Hypothesized		Trace	0.05			
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**		
None *	0.242386	31.65740	29.79707	0.0302		
At most 1 *	0.201362	17.50075	15.49471	0.0246		
At most 2 *	0.111574	6.033515	3.841466	0.0140		

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level

Panel B: Unrestricted Cointegration Rank Test (Maximum Eigenvalue)						
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	o.o5 Critical Value	Prob.**		
None At most 1* At most 2 *	0.242386 0.201362 0.111574	14.15665 15.46723 6.033515	21.13162 14.26460 3.841466	0.3523 0.0023 0.0140		

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level

Source: Author's Estimation using E-views 10

From panel A, the trace statistics has indicated 3 co-integrating equations, and from pane B the Max-Eigen statistic indicates 2 co-integrating equations. Therefore, the null hypothesis of no long-run relationship among FDI, EMP and GDPwas rejected, implying the existence of long-run relationship among the series. Given the existence of long-run relationship among the series, the SVAR contemporaneous effect was estimated to trace the pass-through effect of FDI to GDP via EMP channel and the result is presented in the following table.

	GDP	EMP	FDI			
GDP	1	0	0			
EMP	0.7399	1	0			
FDI	1.8124*	0.0468	1			

Table 5: SVAR Contemporaneous Effect

*Denote 5% significance level

Source: Author's Estimation using E-views 10

The contemporaneous matrix shows that there is a positive but statistically insignificant relationship between foreign direct investment and employment in the oil and gas industry in Nigeria. Also, the matrix shows that there is a positive but statistically insignificant relationship between employment and economic growth in Nigeria. Foreign direct investment indicates a positive and statistically significant relationship with GDP in Nigeria. This implies that, a 1% contemporaneous increase in FDI in the oil and gas industry will contemporaneously increase GDP in the economy by 0.74%. From this result, it shows that the employment channel in Nigeria has indicated the potentiality of transmitting the spillover effect of FDI in the oil and gas sector to the Nigeria economic growth; however, the channel is weak. This maybe ascribe to the high-tech nature of employment in the oil and gas sector in the economy. Before analyzing the impulse and variance decomposition, various diagnostic tests were performed and the results are presented in the following tables.

Table 6: Diagnostic Tests

Type of Test	Test statistic	Probability
VAR Residual Serial Correlation LM Tests	Rao F-stat (0.9973)	0.0879
VAR Residual Normality Tests	Joint Jarque-Bera (2.2675)	0.0620
VAR Residual Heteroskedasticity Tests	Joint Chi-Sq (0.5044)	0.0730

Source: Author's Estimation Using E-views 10

Table shows the various diagnostic tests of VAR residuals, that is, Serial Correlation LM Tests, Normality Tests and Heteroskedasticity Tests and their associated probability values. From the table, all the probability values are greater than 0.05 cut-off threshold which leads to the acceptance of the null hypotheses that there is no serial correlation among the series and the residuals are multivariate normal and are homoscedastic. Furthermore, the stability of the SVAR estimates was conducted using inverse roots of AR characteristic polynomial as shown in Figure 1.



Inverse Roots of AR Characteristic Polynomial

Figure 1: Inverse Roots of AR Characteristic Polynomial Source: Author's Estimation Using E-views 10

The figure shows that the estimates of the SVAR are stable over a period of time since all the dotted lines are within the circumference of the circle. Based on the outcome of the diagnostic tests, the impulse response functions were used to examine the response of each variable in the system to shocks from the system variables. First, the impulse response of EMP to FDI



Figure 2: Impulse Response of EMP to FDI Source: Author's estimation Using E-views 10

The figure shows that in the first to second period, innovations in FDI in the oil sector as not significantly exerted any positive impact on employment. Thereafter, EMP exhibited negative response to innovation in FDI in the oil and gas sector up to the sixth period. After

the sixth period EMP responded positively to innovations in FDI in the oil and gas sector in Nigeria and the effect appears to be permanent. This suggests that the spillover effect of FDI in the oil and gas sector on EMP in the country is more noticeable in the long-run rather than the short-run. This may be accounted from as a result of technological diffusion and capacity development in the economy overtime.

Furthermore, the impulse response for GDI to EMP was estimated and the result is presented in Figure 3as follows.

Figure 3 Impulse response for GDI to EMP

Source: Author's estimation Using E-views 10

Figure 3. shows the impulse response for GDP to EMP. it shows that from the initial period to the third period the response of GDP to EMP due to FDI inflows in the oil and gas sector is negative. It turns positive from the fourth period up to the eight periods and responded negatively again. This may ascribe to high tech nature of employment in the oil and gas sector and cases of expatriates employment in the oil and gas sector. Again, the Forecast Variance Error Decomposition (FVED) was estimated and the results are presented in the following table.

Period	S.E.	GDP	EMP	FDI
1	0.779924	1.131142	98.86886	0.000000
2	0.953081	2.798302	97.20006	0.001641
3	1.009235	5.676026	94.19387	0.130108
4	1.037951	8.855630	90.98059	0.163778
5	1.060426	11.93294	87.88996	0.177094
6	1.080026	14.65386	85.17518	0.170958
7	1.097659	17.01159	82.81925	0.169161
8	1.113465	19.02057	80.79608	0.183350
9	1.127559	20.72574	79.05822	0.216041
10	1.140025	22.16259	77.56770	0.269709

Table 7: Forecast Variance Error Decomposition of EMP

Source: Author's estimation Using E-views 10

The variance decomposition result reveals that own shocks of EMP are dominant throughout the forecast periods. It however declined from 98.87% in the first period to 77.57% in the tenth period. This suggests that FDI and GDP are predictors of EMP in the oil and gas sector. FDI in the second period accounted for 0.002% in the innovations in EMP in the oil and gas sector and the effect increased gradually to 0.3% in the tenth period. GDP accounted for 1.13% in the innovations in EMP in the first period and the effect increased significantly to 22.2% in the last forecast period. This suggests that GDP is a stronger predictor of EMP in the oil and gas sector in Nigeria.

Again, the variance decomposition for GDP was estimated and the result is presented in Table 8 as follows.

Period	S.E.	GDP	EMP	FDI
1	0.112094	100.0000	0.000000	0.000000
2	0.174149	68.83202	0.353199	30.81478
3	0.202943	68.02729	0.299374	31.67334
4	0.227244	62.56682	0.279429	37.15375
5	0.242766	59.91350	0.322324	39.76417
6	0.255232	56.96030	0.348328	42.69137
7	0.264145	54.72906	0.344140	44.92680
8	0.271140	52.69596	0.328139	46.97590
9	0.276446	51.01088	0.318314	48.67081
10	0.280673	49.57348	0.324858	50.10166

 Table 8: Forecast Variance Error Decomposition of GDP

Source: Author's estimation Using E-views 10

The table indicates that own shocks of GDP are dominant throughout the forecast periods. It however declined from 100% in the first period to 49.6% in the tenth period. This suggests that EMP and FDI are predictors of GDP in the economy. FDI in the second period accounted for 30.8% in the innovations in GDP and the effect increased rapidly to 50.1% in the tenth period. EMP accounted for 0.35% in the innovations in EMP in the second period and the effect declined gradually to 0.32% in the last forecast period. This suggests that FDI in the oil and gas sector is the strongest predictor of GDP Nigeria.

Lastly, the variance decomposition for FDI was estimated and the result is presented in Table 9.

Period	S.E.	GDP	EMP	FDI
1	0.430757	23.10166	0.711492	76.18685
2	0.471083	32.19913	2.242720	65.55815
3	0.547802	38.28722	3.335717	58.37706
4	0.594779	43.74115	4.849614	51.40924
5	0.644484	48.00444	5.962131	46.03343
6	0.686118	51.66868	6.912354	41.41897
7	0.725017	54.75149	7.596736	37.65177
8	0.759649	57.36520	8.123737	34.51106
9	0.791106	59.57429	8.510230	31.91548
10	0.819327	61.42638	8.799232	29.77439

Table 9: Forecast Variance Error Decomposition of FDI

Source: Author's estimation Using E-views 10

The variance decomposition result shows that own shocks of FDI are dominant from the first period to fourth period. It however declined from 76.2% in the first period to 51.41% in the fourth period, after which GDP became a dominant shock in the fifth period and the effect increased significantly to 61.43% in the tenth period. EMP accounted for 0.71% in the innovations in FDI in the oil and gas sector and the effect increased significantly to 8.80% in the tenth period. This suggests that GDP is a stronger predictor of FDI in the oil and gas sector in Nigeria. Lastly, the variance decomposition for FDI was estimated and the result is presented in Table 10.

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Summary

The study investigated the nexus among foreign direct investment, oil export and economic growth in Nigeria from 1970 to 2021. Specifically, the study examined the pass-through effects of foreign direct investment to economic growth via oil exports. The study utilized the Autoregressive Distributive Lag (ARDL) model and the Structural Vector Autoregressive (SVAR) model in the investigation. Findings of the study revealed that, first, foreign direct investment in oil and gas industry has positive and statistically significant relationship with oil exports both in the short and long-run in Nigeria. Second, the study found that oil exports have positive and statistically significant relationship between foreign direct investment in oil and gas sector and economic growth of the Nigeria both in the short and long-run.

Furthermore, the study investigated the indirect channels through which foreign direct investment in oil and gas transmits spillover effects on economic growth in Nigeria. The channels investigated were weak; the employment, foreign reserves and exchange rate channels. For the employment and foreign reserve channels, the study established that, there is a weak positive transmission effect of foreign direct investment in oil and gas to economic growth in Nigeria. This suggests that, these channels have exhibited positive potentiality of the spillover effects to economic growth. For the exchange rate, the study found that, the channel has exhibited negative and weak transmission effect of foreign direct investment in oil and gas to economic growth. This suggests that foreign direct investment in oil and gas to economic growth in Nigeria. Finally, the study established a strong positive pass-through effect of foreign direct investment in oil and gas to economic growth in Nigeria.

Conclusion

On the basis of the findings of this study, it is concluded that, directly, foreign direct investment in oil and gas exerts strong positive impact on oil exports. Also, oil exports impact positively on economic growth in Nigeria. Again, foreign direct investment in oil and gas exerts strong positive impact on economic growth in Nigeria. Indirectly, foreign direct investment in oil and gas through employment, foreign reserves and exchange rate channels transmits weak spillover effects to economic growth in Nigeria.

Recommendations

On the basis of the findings the study recommends the followings among othres:

- i. The Government through the ministry of industry, trade and investment in collaboration with the ministry of petroleum and gas should make concerted efforts in attracting and retaining foreign direct investment in the oil and gas sector. This can be done by improving on the investment climate in the country through control of rising insecurity and economic policies that can ensure economic stability. Also, by ensuing full implementation of the Petroleum Industry Bill in the country.
- ii. To improve on the positive potentiality of employment transmission effect as a spillover of foreign direct investment in the oil and gas industry, they should be adaptation of indigenous technology and indigenous manpower engagement to acquire skills from the expatriates on the job.

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FROM POLICY TO PROSPERITY: THE FISCAL PATH TO NIGERIA ECONOMIC GROWTH

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Abstract

his paper explores the transformative role of fiscal policy in driving economic prosperity in Nigeria covering 1985 to 2022. By examining how federal government domestic debt, external debt, capital expenditure, recurrent expenditure, oil revenue and non-oil revenue as a proxy for fiscal policy correlate with gross domestic product per capita as a proxy for economic growth. Data for the study were obtained from Central Bank of Nigeria (CBN) Statistical Bulletin 2022. The formulated model was subjected to unit root test using the Augmented Dickey Fuller (ADF) approach. Outcome of the Augmented Dickey Fuller unit root test indicated that the variables were integrated of mixed order I(o), and I (1). The study utilized the Auto-regressive Distributive Lag (ARDL) model to ascertain if there is long-run association-ship between fiscal policy and economic growth using bound test. The Auto-regressive Distributive Lag (ARDL) bound test result revealed that there is a long-run correlation between fiscal policy and economic growth, Result from the regression analysis found that Federal government domestic debt had a negative relationship with gross domestic product per capita in the short-run while federal government external debt reported a negative but significant impact on gross domestic product per capita in the long-run. However, federal government oil and non-oil revenue and recurrent expenditure had a positive and significant impact on gross domestic product per capita while federal government capital expenditure showed an insignificant effect on gross domestic product per capita. Hence, it was concluded that fiscal policy leads to economic prosperity significantly. It was therefore recommended amongst other that the federal ministry of finance should prioritize improving debt management practices to reduce the reliance on domestic debt. This includes developing strategies for refinancing existing high interest debt with lower cost options and integrating debt reduction into fiscal planning.

Keywords: Economic Growth, Federal Government Expenditure, Federal Government Revenue.

Introduction

Fiscal policy, the use of government spending and taxation to influence the economy, is a crucial tool for driving economic growth and development in Nigeria. Fiscal policy refers to the use of government spending and taxation to influence the economy. It involves adjusting the levels and allocation of taxes and government expenditure to manage economic growth, control inflation, reduce unemployment, and achieves other economic objectives. According to Abdurraut (2015); and Gbosi, (2001) fiscal policy is one of the major economic stabilization weapons taken to regulate and control the volume, cost and availability as well as direction of money flow in an economy to achieve some specified macroeconomic policy objective and to counteract undesirable trends in the Nigerian economy. In line with this view, Idebi and Adesina-Uthman, (2022) see fiscal policy as economic instrument or method through which the government of a country could enhance the economic growth of the country by controlling both the public expenses intensities and tax charges. They also consider fiscal policy as when the government uses its spending and taxing powers to have an impact on the economy. Fiscal policy plays a crucial role in influencing economic growth. It helps stimulates economic growth by increasing government spending on infrastructure, education and healthcare, which boosts productivity.

It is therefore imperative to note that the country's journey from policy to prosperity hinges on the effective implementation of fiscal measures that stimulate growth, create jobs, and improve living standards. Nigeria, with its vast natural resources and large production, has significant potential for economic advancement. "From fiscal path to Nigeria economic growth" implies the journey of leveraging fiscal policies to achieve and sustain economic growth in Nigeria. This involves strategic government spending, effective taxation, and prudent fiscal management to drive economic development, create jobs, and improve living standards. Fiscal policies in Nigeria have significantly influenced the country's economic trajectory. One clear examples is the Economic Recovery and Growth Plan (ERGP) launched in 2017. This strategic plan aimed to restore economic growth, invest in the Nigerian people, and build a globally competitive economy. The impact of this plan can be seen in Nigeria's GDP growth rate, which improved from a contraction of -1.6% in 2016 to a growth of 0.8% in 2017 and 2.3% in 2019 before the COVID-19 pandemic disrupted global economies, according to the National Bureau of Statistics (NBS). Government spending, a crucial component of fiscal policy, has been directed toward infrastructure development. Infrastructure are vital for boosting productivity and fostering long-term economic growth. For instance, in 2019, the Nigerian government increased its capital expenditure allocation for infrastructure by over 40% (NBS, 2020). These investments have focused on improving road networks, power supply, and technology, which are essential for enhancing business operations and attracting foreign investment. Furthermore, tax reforms have also played a significant role in Nigeria's fiscal path. The introduction of the finance act 2019 aimed to improve tax compliance and broaden the tax base. This was a strategic move to increase non-oil revenue, reducing Nigeria's dependence on oil revenue, which have historically constituted substantial portion of government income. In 2018, non-oil revenue was only 6% of GDP, whereas in other emerging markets, this figure typically ranges from 15-20%. The reforms are expected to bring Nigeria's non-oil revenue closer to this range, providing a more stable and diversified revenue base.

However, challenges remain on this fiscal path. High inflation rates have been a persistent issue, eroding purchasing power and savings. In 2020, the inflation rate averaged 12.2%, significantly higher than the Central Bank of Nigeria's target range of 6-9%. This high inflation impacts the cost of living and deter investment by creating economic uncertainty. Additionally, Nigeria debt-to-GDP ratio has been a point of concern. While the ratio stood at 2.9% in 2019 according to the Central Bank of Nigeria, which is relatively low compared to global standards, the increasing trend raises questions about the sustainability of current fiscal policies, prudent debt management is crucial to ensure that borrowing supports productive investments that can generate economic returns and not lead to unsustainable debt levels. Equally, it was discovered that the link between fiscal policy and economic growth has not been fully investigated as some of the studies reports conflating and contradicting results. For instance, priori studies conducted by Vladimir (2020); and Tasnia (2018), all came to the conclusion that fiscal path) policy such as government expenditure, public and government revenue leads to prosperity.

Yet, Endurance (2022) in a similar study reported that such measured (government expenditure, public and government revenue) negatively affect economic growth. Surprisingly, Remigius et al (2023); Daoudi (2023); Iwuoha et al (2020); Macek and Janků (2015); and Igwe et al (2015) submitted that fiscal policy is significant but positive in some cases but negative other times. In contrasts, Very importantly, it was equally discovered that, prior studies either used government expenditure, public, government revenue and tax income to proxy fiscal policy, but failed to recognize the impact and implication of federal government oil revenue on economic growth. This suggests a gap in literature which deserved to be filled. It is against this background the paper seek to answer the following questions. How federal government external debt has improves economic growth? If federal government capital expenditure promoted economic growth? If federal government oil revenue contributed to economic growth? The extent to which federal government oil revenue promoted economic growth? If federal government oil revenue contributed to economic growth? The extent to which federal government oil revenue contributed to economic growth? The extent to which federal government oil revenue contributed to economic growth? And the path played by federal government non-

oil revenue on economic growth? To this end, this paper contributed to the body of knowledge by empirically investigated the fiscal path to Nigerian economic growth from 1985 to 2022, thereby expanding the scope of the study from what has been done in time past.

Literature Review Theoretical Literature Supply-Side Theory

In 1980, Robert Mundel proposed the supply-side economic which is often referred to as supply-side theory, revolves around the ides that economic growth and prosperity can be enhanced by policies that stimulate production and investment. Here's a logical explanation of its assumptions, viewpoints from opponents, along with examples: Supply-side theory assumes that economic growth is primarily driven by the supply of goods and services rather than demand. Proponents such as Arthur Laffe, Ronald Reagan. Jude Wanniski, Milton Friedman etc argue that reducing barriers to production, such as taxes and regulations, encourages businesses to invest, innovate, and expand output. They contend that by incentivizing work, saving, and investment, economies can achieve sustainable long-term growth. For instance, proponents point to the Reagan administration's tax cuts in the 1980's, which aimed to stimulate economic activity by reducing marginal tax rates on income and capital gains. This policy was intended to spur investment and job creation, contributing to a period of economic expansion.

However, opponents of supply-side theory like Paul Krugman, Joseph Stigiiz and Thomas Pikety argue that its emphasis on reducing taxes and regulations disproportionately benefits the wealthy and corporations, potentially exacerbating income inequality. They contend that tax cuts may not necessarily lead to increased investment and economic growth if businesses and individuals use the savings for non-productive purposes, such as stock buybacks or luxury consumption. Critics also argue that supply-side policies can lead to budget deficits and reduce government revenue, potentially limiting the ability to fund essential public services and infrastructure.

Endogenous Growth Theory

The endogenous growth theory, also known as new growth theory, was primarily propounded by Romer in 1986. The theory emphasizes the role of internal factors, such as human capital, innovation, and knowledge in driving economic growth. Unlike traditional growth theories that consider technological advancement as an exogenous factor, endogenous growth theory asserts that economic policies, institutions, and investments within an economy can influence its long-term growth rate. Here's a logical explanation of its assumptions along with views from proponents and opponents. The Endogenous growth theory assumes that economic growth is primarily driven by factors within the economy rather than external forces. One key assumption is that investments in human capital, innovation, and knowledge creation lead to sustained economic growth. Proponents such as Robert Lucas, Gene Grossman, Ehanman Helpman, Philippe Aghion and Peter Howitt argue that policies encouraging education, research and development (R&D), and technological

innovation can have long-lasting positive effects on an economy's growth rate. For example, the success of Silicon Valley can be seen as a case where investments in education and innovation led to significant economic growth.

Paul Romer, one of the main proponents of endogenous growth theory, posits that ideas and knowledge are crucial drivers of growth. He emphasizes the importance of non-rivalrous and partially excludable goods like technology, which can lead to increasing returns to scale. Romer's model suggest that policies promoting research and development protecting intellectual property rights, and encouraging innovation can enhance an economy's growth potential. For instance, countries like South Korea and Taiwan have experienced rapid economic growth by investing heavily in education and technology. Another assumption of endogenous growth theory from Robbert Slow, Gregory Mankiv and Williams Easterly opined that there are no diminishing returns to capital in the context of human capital and innovation. This contrasts with traditional growth theories, which assume diminishing returns to physical capital. They further argue that continuous investments in human capital and technological innovation can sustain high growth rates indefinitely. They point to the long-term growth trajectories of developed countries, which have maintained high growth rates through continuous innovation and improvements in human capital. For example, some critics argue that theory does not adequately account for the role of external shocks, such as financial crisis or global economic downturns, which can significantly impact on economy's growth trajectory. The 2008 financial crisis illustrated how external shocks can disrupt even the most innovative and knowledge-driven economies. Moreover, opponents contend that endogenous growth theory may underemphasize the role of physical capital and infrastructure in driving growth. They argue that while human capital innovation are important, adequate investments in physical infrastructure, such as transportation and energy, are also crucial for sustaining economic growth. Countries with inadequate infrastructure may struggle to fully realize the benefits of investments in human capital and innovation.

Review of Related Empirical Studies

Several empirical studies have been conducted in the area of fiscal policy in relation to economic growth. However, findings of such researches were mixed and inconsistent in some cases. The effect of fiscal policy on Nigeria's economy growth was investigated by Remigius et al (2023). The study revealed that: total recurrent expenditure had positive and significant effect on gross domestic product (prob. – 0.000); total capital expenditure had negative and non-significant effect on gross domestic product (prob. – 0.313); total government revenue had positive but non-significant effect on gross domestic product (prob. – 0.283) in Nigeria for the period reviewed. Also, Daoudi (2023) analyze the impact of fiscal policy on economic growth in Algeria using the Autoregressive Structural Vector Methodology (SVAR). The study concluded that there is a positive effect of public spending on the economic growth in Algeria, but it is smaller, and it is only in the short term and then turns into a negative impact in the medium and long term. This indicates that ordinary taxation is very limited to increase economic growth in Algeria with the strong presence of

petroleum taxation. When a negative shock occurs in the price of a barrel then the effect is transferred directly to the public revenues and automatically to the public spending.

Furthermore, Endurance et al (2022) examined the impact of fiscal policy on economic growth in Nigeria over the period 1970 to 2019, using annual data obtained from secondary sources. The results obtained from the analyses show that government capital expenditure had a significant negative relationship with economic growth in Nigeria in the deregulated period but an insignificant effect in the regulated period; while government recurrent expenditure had a significant positive relationship with economic growth in Nigeria in the deregulated period and an insignificant effect in the regulated period. The regression coefficient of the dummy variable (Regime) was positively signed and significant implying that there is a significant difference in the impact of fiscal policy across the two periods (regulation and deregulation).

Besides, Olisaji and Onuora (2021) examined the impact of fiscal policy on Nigerian economic growth between 2015 and 2019. The result revealed, that there is a significant and positive relationship between Companies Income Tax (CIT) and Economic Growth (EG) measured using Gross Domestic Product (GDP) with a p-value of 0.030 which is less than the 5% level of significance adopted. On the same note, the study found an insignificant and negative relationship between Government Expenditure (GE) and Economic Growth (GDP) with a p-value of 0.334 which is greater than the 5% significant level adopted.

Similarly, Vladimir (2020) examines the impact of fiscal policy measured by (Government expenditure, Government revenues, public debt) factors on GDP growth for the period 1999-2017 in Rwanda. The study used multiple linear regression and least squares method (OLS) to test the study hypotheses. The study found that government expenditure, public debt and government revenues have a positive and significant impact on the Rwandan GDP growth.

Likewise, Iwuoha et al (2020) examined the impact of fiscal policy on Nigeria's macroeconomic performance. The results indicate that government revenue significantly reduces economic growth by 7.85% and increases unemployment by 3.33% in the following year, government debt stock significantly boosts economic growth and reduces unemployment in the following year by 1.88% and 4.3% respectively, while government expenditure boosts the growth of the economy by 5.43%, reduces unemployment by 1.09% but spurs inflation by 8.95%. It is therefore evident from the study that reducing the tax burden while maintaining fiscal deficit and growing government expenditure is still necessary if the economy must be set on the path of growth and stability.

Moreso, Tasnia (2018) examines the impact of fiscal policy on economic growth in four countries of South Asia for the period 1980 to 2016. I use the Error Correction Model (ECM) and Autoregressive Distributed Lag (ARDL) model on pooled cross-section time-series data, and on panel data that can be handled by employing fixed-effects and random-effects estimators. Empirical results show that both government expenditure and tax revenue have

no significant impact on real GDP growth in those South Asian countries. Moreover, real investment is strongly positively correlated with real GDP growth in these countries.

Correspondingly, Ghulam and Noman (2017) investigated the impact of fiscal policy on economic growth by using time series data period from 1980 to 2014. The key variables used in this analysis are gross domestic product (GDP), distortionary taxation (DT), nondistortionary taxation (NDT), labour force participation rate (LFP), interest rate (IR), defense expenditures (DFEXP) and trade openness (TOP). For unit root an Augmented Ducky Fuller (ADF) used, all variables are stationary at level when linear trend and intercept are included. Johansen Co-integration test is used to check the long run relationship between the variables by using the Johansen maximum likelihood method and VECM are used for short run relationship. The co-integration result declared there is two co-integration equations in short run and VECM revealed that there is positive relation between GDP, DT and NDT in short run.

Alike, Macek and Janků (2015) examines the impact of fiscal policy on economic growth depending on the institutional conditions in the OECD countries over the time period 2000-2012. The analysis is based on the methods and tests of panel regression. From the analysis results it is evident that in the case of government spending there is (1) positive impact on economic growth in the countries with lower fiscal transparency; (2) negative impact in countries with higher fiscal transparency.

As well, Igwe et al (2015) investigate the impact of fiscal policy variables (capital expenditure, recurrent expenditure and direct income tax) on economic growth in Nigeria. The VECM analysis indicates that capital expenditure and recurrent expenditure are positively related and statistically significant in determining economic growth in the long run. As expected, direct income tax is inversely related and statistically significant in determining economic growth in the long run. As expected, or an increase of 3.94% in income. A 1% increase in capital expenditure leads to an increase of 3.94% in income. A 1% increase in direct income tax leads to a fall of 6.83% in national output. Moreover, only tax determines economic growth in the short run, as a 1% in direct income tax causes national output to fall by 0.39%. The pairwise granger causality indicates that causality relationship does not exist between any of the fiscal policy variables and economic growth

Methodology

This study basically dependents on secondary data which was obtained from World Banks World Development Indicators, 1985 to 2021. Interest Rate (LR), Inflation Rate (IFR), Exchange Rate, (EXR), and Trade Openness (TOP), were used to proxy "Exchange Rate" while, Manufacturing value added (MVA), was adopted to capture "Manufacturing Sector. The formulated model was subjected to unit root test using Augmented Dickey Fuller (ADF) approach. Based on the outcome of the ADF, the study employed both the Auto-regressive Distributive Lag (ARDL) Model, Johansen and Error Correction Mechanism.

Model Specification

This study is based on the modification of Olisaji and Onuora (2021) when investigating the impact of Fiscal Policy on the Growth of Nigerian Economy. Their model is specified as follows:

RGDP = f(GExp, CITRev)

1

2

4

Where: (RGDP) represents Gross Domestic Products, (GExp), Government Expenditure (CITRev); Companies Income Tax Revenue

The model was modified by introducing Oil Revenue (ORV). The model is specified as follows:

GD P-PCf(DDT, EDT, RXE, ORV, NOR)

The mathematical model could be symbolically expressed as; $GDP-PC = \beta_0 + \beta_1 DDT + \beta_2 EDT + \beta_3 CXE + \beta_4 RXE \beta_5 ORV + \beta_6 NOR$ 3

Equation (3.2) above is transformed into an econometric model by incorporating the disturbance term (ϵ) as follows:

$$GDP-PC = \beta_0 + \beta_1 DDT + \beta_2 EDT + \beta_3 CXE + \beta_4 RXE + \beta_5 ORV + \beta_6 NOR + e$$

Logarithmic transformation are also a convenient means of transforming a highly skewed variable into one that is more approximately normal (Kenneth 2011)

The modified version of the model adopted for this study now take the form of $LGDP-PC = \beta_0 + \beta_1 LDDT + \beta_2 LEDT + \beta_3 LCXE + \beta_4 LRXE + \beta_5 LORV + \beta_6 LNOR + e$ 5

Where:

GDP-PC = Gross Domestic Product Per Capita, DDT = Federal Government Domestic Debt, EDT = EDT = Federal Government External Debt, CXE = Federal Government Capital Expenditure, RXE = Federal Government Recurrent Expenditure, ORV = Federal Government Oil Revenue, NOR = Federal Government Non-Oil Revenue, f = functional relationship β_0 = Intercept of relationship in the model/constant B_1 - B_6 = Coefficients of each independent or explanatory variable e= Stochastic or Error term.

Description of Variables in the Model

Gross Domestic Product Per Capita (GDP-PC): This is a measure of the average economic output per person in a country, calculated by dividing the country's total GDP by its population. In the Context of Nigeria, GDP per capita is an essential indicator of economic health. A higher GDP per capita generally suggests better living standards and economic productivity and living conditions. However, a low GDP per capita can indicate widespread poverty and low living standards, which are challenges Nigeria faces due to its large population. Higher GDP per capita can make Nigeria more attractive to foreign investor by indicating a more stable and prosperous economic environment. Gross Domestic Product (GDP) per capita is being used to proxy economic growth.

Federal Government Domestic Debt (**DDT**): This refers to the total amount of money that the federal government owes to lenders within the country. This debt is typically incurred through the issuance of government bonds, treasury bills, and other financial instruments to finance budget deficits, infrastructure projects, and other public expenditures. This means that federal government domestic debt have significant effect on a nation's economy. For instance, high levels of domestic debt will lead to increased borrowing costs for the private sector. When the government borrows heavily, it can drive up interest rates, making it more expensive for businesses and individuals to borrow and invest, potentially slowing economic growth. This is known as "crowding out". High debt servicing costs can limit the government's ability to invest in essential public services and development projects, negatively impacting GDP per capita. Therefore, this paper assumes that increase in federal government domestic debt will negatively affect the growth path of an economy. Federal government domestic debt is used to capture fiscal policy and measured in billions of Naira annually

Federal Government External Debt (EDT): This refers to the total amount of money that a nation's central government owes to foreign creditors, which can include international financial institutions, foreign governments, and private foreign investors. This debt is incurred through borrowing in foreign currencies to finance governmental projects, budget deficits, or other needs. This means that external debt can boost economic growth if borrowed funds are used for productive investments like infrastructure, education, and healthcare, enhancing the country's economic capacity and leading to higher GDP per capita. Therefore, this paper hypothesized a positive relationship between federal government external debt and gross domestic product per capita. Federal government external debt is used to capture fiscal policy and is measured in billions of Naira annually.

Federal Government Capital Expenditure (**CXE**): This refers to the spending by the central government on acquiring, maintaining, or improving fixed assets such as buildings, infrastructure, equipment, and other long-term investments. This type of expenditure is aimed at creating future benefits, fostering economic growth, and enhancing the productive capacity of the economy. Capital expenditure is expected to boost economic growth by improving infrastructure, which in turn enhances productivity and efficiency in various sectors of the economy. Better roads, bridges, ports, and other infrastructure reduce transportation and transaction costs, facilitating trade and commerce, leading to higher economic output and consequently, an increase in GDP per capita. This paper therefore expect a positive relationship between federal government capital expenditure and gross domestic product per capita. Federal government capital expenditure is used to proxy fiscal policy and is measured in billions of Naira annually.

Federal Government Recurrent Expenditure (**RXE**): This expenditure refers to the regular, ongoing spending required for the day-to-day functioning of government operations and services. This includes expenditures on salaries and wages for government employees maintenance of infrastructure, operational costs, and consumption of goods and

services necessary to run government programs. Federal government recurrent expenditure is essential for maintaining public services and administrative functions that support economic stability and growth. Adequate spending on education, healthcare, public safety, and other services can improve the quality of life, enhance human capital, and boost productivity, potentially leading to an increase in GDP per capita. As a consequence, this paper hypothesized a positive relationship between federal government recurrent expenditure and gross domestic product per capita. Federal government recurrent expenditure is used as a surrogate for fiscal policy and is measured in billions of Naira annually.

Federal Government Oil Revenue (**ORV**): This refers to the income that a nation's central government earns from the extraction, production, and sale of oil and related products. This revenue typically comes from taxes, royalties, and profits from state-owned oil enterprises, as well as leases and fees paid by private oil companies operating within the country. Oil revenue can significantly boost a country's GDP per capita by providing substantial financial resources that the government can invest in economic development. With high oil revenue, the government can fund infrastructure projects, improve healthcare and education systems, and support various social programs, all of which can enhance economic productivity and improve living standards, leading to higher GDP per capita. Therefore, this study expect a positive relationship between federal government oil revenue and gross domestic product per capita. Federal government oil revenue is used as a substitute for fiscal policy and is measured in billions of Naira annually.

Federal Government Non-Oil Revenue (**NOR**): This refers to the income that a nation's central government earns from sources other than the extractions, production, and sale of oil related products. This revenue comes from various taxes (such as income tax, value-added tax), customs duties, tariffs, fees, licenses, and other forms of revenue generated from eco mic activities and transactions within the country. Non-oil revenue sources are diverse and stable compared to oil revenue, which can be volatile due to fluctuations in global oil prices. Therefore, increasing non-oil revenue can provide a more sustainable and reliable source of income for the government to finance public services and infrastructure investments that can support economic growth and improve living standards, ultimately leading to a higher GDP per capita. This paper suggest that federal government non-oil revenue will have a positive impact on gross domestic product per capita. Federal government non-oil revenue is used as a replacement for fiscal policy and is measured in billions of Naira annually.

Unit Root Test

The study employed the Augmented Dickey Fuller (ADF) unit root test to identify the order of integration of the variables under study to select appropriate methodology in order to avoid spurious regression.

Variables	Levels	0 0	First Differe	ence	Order of	P-value
	T. Statistics	5% Critical Value	T. Statistics	5%	Integrati	
				Critical	on	
				Value		
LGDP-PC	-2.439525	-2.943427	8.500980	-2.945842	I(1)	0.0000
LDDT	-5.611527	-2.945842	-4.977310	-2.945842	I(1)	0.0000
LEDT	-1.596656	-2.963972	-4.598056	-2.945842	I(1)	0.0023
LCXE	-1.339352	-2.943427	-4.190016	-2.945842	I(1)	0.0100
LRXE	-1.607687	-2.943427	-6.191324	-2.945842	I(1)	0.0000
LORV	-2.440030	-2.943427	-8.333166	-2.945842	I(1)	0.0000
LNOR	-3.714478	-2.954021	-6.020973		I(o)	0.0084

Table 1: Unit Root Test Using Augmented Dickey Fuller (ADF)

Source: Extracts from E-view 10. * Level of significance at 5%

The variables included in the study were put through Augmented Dickey Fuller (ADF) Tests to assess if they are stationary series or non-stationary series, according to the results from table.1 above. The stationarity test results show that LGDP-PC, LDDT, LEDT, LCXE, LRXE, and LORV were stationary at initial difference I(1), whereas LNOR and LTOP was stationary at level I(0). The variables exhibit mixed order of integration or stationarity of level and first differences, according to assessments of the variables' stationarity. For the data analysis, the Autoregressive Distributive Lag (ARDL) method, which can handle both stationary at level I(0) and first difference I(1), was used. The ARDL test, which takes into account both short-and long-term trends when examining the connection between the dependent and independent variables, is therefore the most appropriate analytical technique.

Test Statistics	Value	K	
F-statistics	4.498280	6	
Significance	I (o)	1(1)	
10%	2.12	3.23	
5%	2.45	3.61	
2.5%	2.75	3.90	
1%	3.15	4.43	

Table 2: ARDL Bound Test

Source: Authors computation 2024

Table. 2 presents the results of the bound test, which compared the F-statistics with the critical bound values. The value of the F-statistic is 4.498280. The outcome demonstrated that, at a significance level of 0.05, the F-statistic is bigger than both the lower and upper limits of the critical values, which are 2.45 and 3.61, respectively. It follows that there is a degree of co-integration between fiscal policy and economic growth in Nigeria. As a consequence, the projected results of the long-run and short-run Auto-Regressive Distributive Lag (ARDL).

Variable	Coefficient	Std. Error	t-statistics	Prob	
LDDT	1.388656	0.621462	2.234498	0.0523	
LEDT	-0.456973	0.128835	-3.546970	0.0062	
LCXE	0.220184	0.272664	0.807528	0.4402	
LRXE	1.345245	0.567365	2.371041	0.0418	
LORV	0.442669	0.439297	1007677	0.3399	
LNOR	-2.769528	1.133214	-2.443958	0.0371	
EC = LMVA - (-0.1191*IR + 0.1966*IFR + 0.9415*LEXR -0.4270*LTOP)					

Table 3: ARDL Long-run Result (Dependent Variable = LGDP-PC)

Source: Authors computation 2024

Table 3 of the Autoregressive Distributive Lag (ARDL) long-run result suggest a positive +1.388656 relationship between the logarithm of domestic debt (LDDT) and the log value of gross domestic product per capita (LGDP-PC) as a proxy for economic growth. This means that a unit increase in LDDT is associated with a decrease in annual LGDP-PC of 1.4 unit's yearly. However, the p-value of 0.0523 indicate that there is no statistical significant relationship between LDDT and LGDP-PC. Investigation of the log value of gross domestic product per capita (LGDP-PC) as a proxy for economic growth. The result denotes that a unit rise in LEDT is related to a decline in annual LGDP-PC of about 46 percent increase per year. Astoundingly, the p-value of 0.0062 shows that there is a statistical significant relationship between LEDT and LGDP-PC.

Furthermore, the log value of capital expenditure (LCXE) suggest a positive +0.220184 relationship with the log value of gross domestic product per capita (LGDP-PC) as a proxy for economic growth. This implies that a unit increase in the log value of capital expenditure (LCXE) will result to about 0.22 percent in annual LGDP-PC per yearly. Conversely, the p-value of 0.4402 signpost that there is no statistical significant relationship between LCXE and LGDP-PC.

Also, the log value of recurrent expenditure (LRXE) suggest a positive +1.345245 relationship with the log value of gross domestic product per capita (LGDP-PC) as a proxy for economic growth. This implies that a unit increase in the log value of recurrent expenditure (LRXE) will result to about 1.3 units in LGDP-PC per yearly. Conversely, the p-value of o.0418 indicates that there is a statistical significant relationship between LRXE and LGDP-PC. Still, the log value of oil revenue (LORV) suggest a positive +0.442669 relationship with the log value of gross domestic product per capita (LGDP-PC) as a proxy for economic growth. This implies that a unit increase in the log value of oil revenue (LORV) will result to about 0.44 percent in annual LGDP-PC per yearly. Conversely, the p-value of 0.3399 signpost that there is no statistical significant relationship between LORV and LGDP-PC.

Finally, the log value of non-oil revenue (LNOR) suggest a negative -2.769528 relationship with log value of gross domestic product per capita (LGDP-PC) as a proxy for economic growth. This suggests that a unit increase in the log value of non-oil revenue (LNOR) will

result to about 2.8 units in LMVA per yearly. Conversely, the p-value of 0.0371 indicates that there is a statistical significant relationship between LNOR and LGDP-PC.

-		· -				
Variables	Coefficient	Std. Error	t-Statistics	Prob		
С	5.635213	0.806609	6.986298	0.0001		
D(LDDT)	-0.147535	0.456232	-0.323376	0.7538		
D(LDDT(-1)	-3.386101	0.603931	-5.606770	0.0003		
D(LDDT(-2)	-0.832592	0.601288	-1.467835	0.1762		
D(LEDT)	0.475617	0.177160	2.684107	0.0250		
D(LEDT(-1)	-0.137408	0.209761	-0.655070	0.5288		
D(LEDT(-2)	0.126014	0.154125	0.817612	0.4347		
D(LCXE)	-0.421032	0.198096	-2.125389	0.0625		
D(LCXE(-1)	0.390911	0.191670	2.039498	0.0718		
D(LCXE(-2)	0.305268	0.183889	1.660067	0.1313		
D(LRXE)	-0.666768	0.325511	-2.048246	0.0708		
D(LRXE(-1)	-2.015275	0.448847	-4.489894	0.0015		
D(LRXE(-2)	0.933286	0.459931	2.029185	0.0730		
D(LORV)	0.462277	0.194720	2.374060	0.0416		
D(LORV(-1)	0.172023	0.201938	0.851860	0.4164		
D(LORV(-2)	-0.509076	0.214811	-2.373599	0.0417		
D(LNOR)	-2.554816	0.375271	-6.807923	0.0001		
D(LNOR(-1)	1.062231	0.270798	3.922596	0.0035		
D(LNOR(-2)	-0.078500	0.291509	-0.269289	0.7938		
ECM(-1)	-1.055476	0.145697	-7.244303	0.0000		
Adj R ² =0.779255, F-statistics = 7.317063 (0.000152), DW =2.397467						

Table 4: ARDL Short-run Result (Dependent Variable = LGDP-PC)

Source: Authors computation 2024

The coefficient estimate for the error correction term, ECM (-1) has a negative value and is significant at the 0.05 level. It suggests that the model will reach long-run equilibrium at a rate of 1.1 units every year. This means that a yearly adjustment speed of 1.1 units may fix the mistake from the previous year.

The independent variables (LDDT, LEDT, LCXE, LRXE, LORV, & LNOR) explain 80% of the total variance in the dependent variable (LGDP-PC), according to the corrected R-Square (R2) value. As a whole, the model is noteworthy since the F-statistic is significant at the 5% level of significance. Without serial correlation, the model would not work, according to the Durbin-Watson statistics of 2.397467, which is close to 2.

Table 3 displays the model's short-run outcome. A positive logarithm of domestic debt (LDDT) of (-3.386101) was seen in the previous, year periods when the log value of gross domestic product (LGDP-PC) was used as a surrogate for fiscal policy in Nigeria. This means that the log value of the gross domestic product (LGDP-PC), would fall by approximately 3.4 units for every unit increase in the logarithm of domestic debt (LDDT) in Nigeria. Domestic debt and gross domestic product log value correlate statistically (p=0.0003). Economic

theory predicts this outcome. The log value of the gross domestic product is likely to rise in response to an increase in logarithm of domestic debt Using the log value of the gross domestic product (LGDP-PC) in Nigeria over the current and previous year, the log value of external debt (LEDT) have a positive value of +0.475617. If the log value of external debt (LEDT) in Nigeria increases by one unit, the log value of the gross domestic product (LGDP-PC), would rise by about 0.48%. Based on the p-value of 0.0250, it can be concluded that the log value of external debt is significantly related to the log value of gross domestic product. Economic theory support this outcome. The predicted outcome is that the log value of the gross domestic product rise in response to an increase in the external debt.

As a surrogate for economic growth variable in Nigeria in the preceding and subsequent year, the log value of the gross domestic product is negative (+0.390911 and +0.305268) when applied to the logarithm value of capital expenditure (LCXE). This means that the log value of the gross domestic product (LGDP-PC), which is a component of economic growth variable, would decline by about 0.40% and 0.31% for every unit rise in the log value of the capital expenditure (LCXE) in Nigeria. The correlation between the logarithm of the capital expenditure and the logarithm of the gross domestic product is statistically significant (p=0.0718 and p=0.1313). Economic theory predicts this outcome. As the capital expenditure increase, the log value of the gross domestic product is anticipated to increase due to increase in job creation and income generation.

Furthermore, as a surrogate for economic growth variable in Nigeria in the current year, the log value of the gross domestic product (LGDP-PC) is negative (-2.015275) when applied to the logarithm value of recurrent expenditure (LRXE). This means that the log value of the gross domestic product (LGDP-PC), which is a stand-in for economic growth, would decline by about 2 units for every unit rise in the log value of the recurrent expenditure (LRXE) in Nigeria. The correlation between the logarithm of the recurrent expenditure and the logarithm of the gross domestic product is statistically significant (p=0.0015). Economic theory predicts this outcome. As the recurrent expenditure increases, the log value of the gross domestic product is anticipated to increase due to increase in recurrent expenditure.

As a surrogate for economic growth in Nigeria in the current year, the log value of the gross domestic product (LGDP-PC) is positive (+0.462277) when applied to the logarithm value of oil revenue (LORV). This means that the log value of the gross domestic product (LGDP-PC), which is a replacement of economic growth, would increase by about 0.46% for every unit rise in the log value of the oil revenue (LORV) in Nigeria. The correlation between the logarithm of the oil revenue and the logarithm of the gross domestic product (LGDP-PC) is statistically significant (p=0.0416). Economic theory predicts this outcome. As the oil revenue increases, the log value of the gross domestic product is anticipated to rise.

Finally, using the log value of gross domestic product as a stand-in for macroeconomic variable in Nigeria in the current year, the log value of non-oil revenue (LNOR) is positive (+1.062231). If the log value of non-oil revenue (LNOR) in Nigeria were to rise by one unit, the

log value of the gross domestic product (LGDP-PC), would rise by about 1.1 units. The correlation between the log of non-oil revenue and the logarithm of gross domestic product (LGDP-PC) is statistically significant (p=0.0035). Economic theory predicts this outcome. The predicted outcome of a rise in non-oil revenue on economic growth is that the log value of the gross domestic product (LGDP-PC) will increase.

Diagnostic Test Table 5: Ramsey Reset Test, Serial Correlation LM Test and Homoscedasticity Test Results

	F-Statistic	Prob.Value
Ramsey Reset Test	2.017262	0.1933
Breusch-Godfrey Serial Correlation LM Test	0.828668	0.4753
Breusch-Pagan-Godfrey Heteroskedasticity	1.335708	0.3377
Test		

Source: Author's Computation using E-view 10

According to Table 5, above, the results of the diagnostic test reveal that the Ramsey reset test's linearity test revealed that the f-statistic (2.017262) with a computed p-value of 0.1933, which is greater than the 5 percent (0.05) critical value, indicates that the model is correctly specified. The study therefore rejected the null hypothesis.

Breusch-Godfrey Serial Correlation LM Test results for the serial or autocorrelation test indicate that the f-statistic is 0.828668 and the Chi-Square probability value is 0.4753. As a result, the investigation demonstrates that there is no serial correlation in the model, with a probability value of roughly 48 percent (0.4753) being more than the 5 percent (0.05) threshold value.

The outcome of the Breusch-Pegan-Godfrey test for heteroscedasticity reveals that the fstatistic is 1.335708, and the Chi-Square probability value is 0.3377. Since the probability Chisquare value is more than 5% (P > 0.05), the result shows that there is no indication of heteroskedasticity in the model. Therefore, residuals are homoscedastic because they have constant variance, which is desired in regression.





Figure 1, shows summary of the normality test with Jarque-Bara value of 0.620158 and a corresponding probability value of 0.733389 more than 0.05 level of significance, indicating that the residuals are normally distributed.

Figure 2: Stability Test



Figure 2, shows summary of the stability test, the result showed that the model is stable. This is evident to the fact that the blue line is in-between the two red (-5 & +5) or less than 0.05 level of significance.

Discussion of Findings

Domestic Debt and Gross Domestic Product Per Capita in Nigeria.

In the current year's time period of the short-run, the results of the regression analysis using the Auto-Regressive Distributive Lag (ARDL) method showed that domestic debt (DDT) has a negative association with gross domestic product per capita (GDP-PC). It supports economic theory that domestic debt (DDT) and gross domestic product per capita (GDP-PC) have a positive relationship. The general public forestalls that when governments borrow domestically, they use it to fund infrastructure and social programs, which enhance productivity and stimulate economic growth. This situation will influence liquidity and interest rates to boost economic activity. Also, the result from the p-value shows that domestic debt (DDT) has a statistically significant effect on the LGDP-PC. Therefore, the analysis concludes that the null hypothesis that the DDT and GDP-PC are not significantly related is incorrect. The results of this study are not in line with those of earlier research by Vladimir (2020).

External Debt and Gross Domestic Product Per Capita in Nigeria.

A negative association between external debt (EDT) and gross domestic product per capita (GDP-PC) was inferred using regression analysis. It is inconsistent with economic theory that external debt (EDT) has a negative connection with the gross domestic product per capita (GDP-PC). Since high levels of external debt requires significant interest and principal repayments, which can divert resources away from productive investments and essential public services, thereby slowing economic growth. This situation can lead to currency depreciation, making imports more expensive and increasing inflation which negatively impacts the standard of living. External debt (EDT) has a statistically significant effect on gross domestic product per capita (GDP-PC), according to the p-value of the finding. Therefore, the analysis concludes that the null hypothesis that the external debt (UNE) and gross domestic product per capita (GDP-PC) do not have a significant link is incorrect.

Capital Expenditure and Gross Domestic Product Per Capita in Nigeria.

Also, in the previous and second year, as well as the long-run years worth of data, we see that the link between the capital expenditure (CXE) and the gross domestic product per capita (GDP-PC) is positive. Economists' predictions about a positive correlation between the CXE and the GDP-PC are spot on. The anticipated rise in gross domestic product per capita is due to increase in government spending on infrastructure, education, healthcare and other long-term assets that enhance productivity and economic capacity. This increase and improvement in infrastructure facilitates business operations, reduces costs, and attracts investment, leading to job creation and higher incomes. The result's p-value, however, suggests that the capital expenditure (CXE) has a statistically insignificant effect on the GDP-PC. Accordingly, the study's results approve the null hypothesis that the correlation between the CXE and GDP-PC is not statistically significant. The results of this study are in line with those of earlier research by Igwe et al (2015).

Recurrent Expenditure and Gross Domestic Product Per Capita in Nigeria.

From what we can see, in the long term, there is a direct link between the recurrent expenditure (RXE) and the gross domestic product per capita (GDP-PC). Economic theory predicts a positive correlation between the RXE and the GDP-PC. It is believed that recurrent expenditure on public sector salaries, maintenance and essential services such as healthcare, and security will support economic stability and growth. Investments in these areas enhance the skills and productivity of the workforce, thereby boosting gross domestic product per capita. Recurrent expenditure (RXE) have a statistically significant effect on gross domestic product per capita (GDP-PC), according to the p-value of the outcome. Since the research found a significant link between recurrent expenditure (RXE) and gross domestic product per capita (GDP-PC), the null hypothesis that there is no relationship between the two is not true. The results of this study are in line with those of earlier research by Remigius et al (2023).

Oil Revenue and Gross Domestic Product Per Capita in Nigeria.

Likewise, the estimated model's results showed that a positive oil revenue (ORV) has a shortterm effect on the gross domestic product per capita (GDP-PC), after the previous year. Economic theory predicts a positive correlation between the oil revenue (ORV) and the gross domestic product per capita (GDP-PC). Oil revenue provides governments with substantial financial resources, which can be allocated towards various sectors and projects aimed at promoting economic growth and employment. As a result, governments can invest in infrastructure development, such as roads, ports, and energy facilities, which creates job directly in construction and indirectly in related sectors. Oil revenue (ORV) does have a statistically significant effect on gross domestic product per capita (GDP-PC), according to the p-value of the finding. It follows that the investigation does not support the null hypothesis that the correlation between the ORV and the GDP-PC is not statistically significant is false.

Non-oil Revenue and Gross Domestic Product Per Capita in Nigeria.

Finally, the estimated model's results showed that a positive non-oil revenue (NOR) has a short-term effect on the gross domestic product per capita (GDP-PC), after the previous year. Economic theory predicts a positive correlation between the non-oil revenue (NOR) and the gross domestic product per capita (GDP-PC). As a result of the increase in non-oil revenue government are able to invest in infrastructure projects, education, healthcare, and social welfare programs. These investments directly create employment opportunities in sectors such as construction, education, and healthcare services, thereby contributing to economic growth. Non-oil revenue (NOR) have a statistically significant effect on gross domestic product per capita (GDP-PC), according to the p-value of the finding. It follows that the investigation do not support the null hypothesis that the correlation between the NOR and the GDP-PC is not statistically significant is false. The results of this study are in line with those of earlier research by Vladimir (2020).

Conclusion

This research discourse utilised the Augmented Dickey fuller unit root (ADF), Auto-Regressive Distributive Lag (ARDL) bound test Model to investigate the fiscal path to economic growth in Nigeria for 37 year (1985 to 2022). Domestic debt, external debt, capital expenditure, recurrent expenditure, oil revenue and non-oil revenue were used to proxy the explanatory variables while gross domestic product per capita was used to proxy the dependent variable.

Based on the findings, it is therefore concluded that fiscal policy had negative significant effect on economic growth in Nigeria. Specifically, recurrent expenditure, domestic and external debts had a negative and significant impact on gross domestic product per capita both in the long-run and short-run while oil and non-oil revenue were both positive and significant in the short-run. However, capital expenditure showed an insignificant relationship with gross domestic product per capita both in the long-run and short-run. Hence, it was concluded that fiscal policy is the linchpin determining the economic growth in in Nigeria.

Recommendations

Based on the findings, the following recommendation were made below;

- i. The federal ministry of finance should prioritize improving debt management practices to reduce the reliance on domestic debt. This includes developing strategies for refinancing existing high interest debt with lower cost options and integrating debt reduction into fiscal planning.
- ii. The ministry of finance, budget and National planning should implement a comprehensive review of government expenditure to cut wasteful spending and enhance efficiency as well as improve tax collection mechanisms to increase revenue.
- iii. The ministry of finance, budget and national planning should ensure that capital expenditures are directed towards high impact projects such as infrastructure, education and healthcare. This involves implementing rigorous project evaluation

and selection processes to prioritize projects with the highest potential return.

- iv. Also, the ministry of finance, budget and National planning recurrent expenditure and reallocate funds towards productive investment. This involves conducting a comprehensive review of current spending to identify and eliminate wasteful expenditures such as excessive administrative costs and non-essential services.
- v. Additionally, the ministry of finance, budget, and national planning should focus on prudent fiscal management to ensure that oil revenue are used effectively. This involves creating a stabilization found to save excess oil revenues during periods of high prices which can be used to cushion the economy during downturn.
- vi. Finally, federal ministry of finance, budget and national planning should continue to strengthen tax administration and broaden the tax base.

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HEALTH EXPENDITURE, LABOR PRODUCTIVITY AND ECONOMIC GROWTH IN NIGERIA: A STRUCTURAL VAR APPROACH

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Abstract

he study investigated the relationship between health expenditure, labour productivity and economic growth in Nigeria. Secondary data from 1986 to 2022 were used to analyze these relationships with the help of the Structural Vector Autoregressive Model (SVAR), it was found that there is a long run relationship between health expenditure, labor productivity and economic growth in Nigeria. The study also found that in the short-run, health expenditure has a positive but insignificant relationship with labor productivity; and labor productivity in the short-run has a positive but statistically insignificant relationship with economic growth in Nigeria. Additionally, the variance decomposition analysis shows that health expenditure is a more significant predictor of economic growth than labor productivity in the short run, with labor productivity being more responsive to health investments than to economic output during the same period. It was concluded that health expenditure in Nigeria has the positive potentials of boosting labour productivity in the country, however, at present, the impact is negligible because of inadequate health care expenditure. Emergent from the above findings and conclusion, it was recommended that as a matter of urgency, the government should increase investment in the health sector and in addition to increasing investment, there is a pressing need to improve the efficiency of resource allocation in the health sector. This should involve a concerted effort by the Ministry of Health, the Bureau of Public Procurement, and anti-corruption agencies to minimize wastage, corruption, and mismanagement of funds.

Keywords: Health expenditure, Labor productivity and Economic growth

Background to the Study

Economic growth is the central focus of most economies, especially developing countries, as it promotes higher national income, job creation, and poverty reduction. Achieving sustainable economic growth, however, requires the effective management of both human and natural resources. One of the critical pathways through which economies can grow is by investing in human capital—namely, education and health—which enhances labor productivity and, in turn, stimulates economic growth. As Todaro and Smith (2009) observe, human capital refers to the knowledge, skills, and health possessed by workers that contribute to economic production. Therefore, improvements in human capital, particularly through health expenditure, are essential for enhancing labor productivity, which drives long-term economic prosperity.

In recent years, the relationship between health expenditure and economic growth has gained considerable attention in empirical research. Theoretically, healthier workers are more productive, and they contribute more effectively to the economy by working longer, producing higher-quality output, and requiring fewer sick days (Piabuo & Tieguhong, 2017; Sahnoun, 2018). Additionally, higher public health spending often correlates with improved healthcare services and health status, which ultimately boosts labor efficiency and increases overall national productivity. This relationship is particularly pertinent in developing countries such as Nigeria, where health infrastructure remains underdeveloped and public health expenditure is often insufficient.

The significance of health expenditure in promoting economic growth is supported by a growing body of empirical research. Scholars such as Sarpong et al. (2018) have highlighted the positive link between health and labor productivity, noting that investments in health enhance workforce capabilities and raise economic output. In line with this, Agenor (2008) and Mekdad, Dahmani, and Louaj (2014) emphasized that health, alongside education, constitutes a major driver of innovation and economic growth. As a result, the Nigerian government's spending on healthcare is an important aspect of the nation's development strategy, intended to improve workforce productivity and drive economic growth.

Nigeria, with its abundant human resources, should theoretically be a model of economic growth driven by high labor productivity. However, the country continues to grapple with issues of underemployment, poor healthcare infrastructure, and low productivity, which hinder its economic potential. Recent reports by the World Bank (2020) rank Nigeria among countries with low human capital performance, revealing significant gaps in both healthcare provision and labor productivity. Although government spending on health has increased in recent years, as shown by Central Bank of Nigeria (CBN) data, the outcomes in terms of labor productivity and economic growth remain limited. This disconnect suggests that the effects of health expenditure on labor productivity and growth are either underexplored or inadequately addressed by existing policies. Furthermore, much of the existing literature on Nigeria focuses primarily on education as the key driver of human capital, while the crucial role of health in shaping labor productivity remains understudied.

This study, therefore, aims to explore the transmission effect of health expenditure on economic growth through labor productivity in Nigeria. It also aims to bridge this gap by investigating how health investments translate into economic growth through the channel of labor productivity. Specifically, it seeks to analyze this relationship using a Structural Vector Auto regression (SVAR) approach, which will allow for the investigation of both short- and long-term dynamics between these variables. By focusing on Nigeria's health expenditure, labor productivity, and economic growth, this study contributes to the existing body of knowledge and provides policy insights aimed at improving human capital development and achieving sustainable economic growth in the country. Through this, the study, also hopes to provide valuable insights for policymakers to better align health expenditure with productivity gains and growth outcomes in Nigeria.

Literature Review

Theoretical Framework

Neoclassical Growth Theory: The Neoclassical Growth Theory, particularly Solow's model (1956), attributes economic growth to the accumulation of physical capital, labor force expansion, and technological progress. Solow's model uses a Cobb-Douglas production function to show how these factors contribute to aggregate output. When both labor and capital grow at the same rate, the economy grows through the interaction of labor, capital, and technical change. The model posits that growth depends heavily on technological progress (exogenous in Solow's framework). However, it is recognized that education and health improvements, as forms of human capital investment, can significantly augment the labor force's effectiveness, thereby fostering economic growth. Incorporating human capital into Solow's model has led to a broader understanding of how education and health spending-important elements of public expenditure-affect labor productivity and growth. The augmented Solow model, developed by Mankiw (1992) and others, introduced human capital into the growth equation, highlighting how investments in human capital (education and health) can increase productivity. This model underscores that human capital is critical for long-term economic development, enhancing labor productivity and fostering technological innovation.

Wagner's Law of Increasing State Activities: Wagner's Law, propounded by Adolph Wagner in 1883, posits that as economies develop, the role of government, particularly its expenditures, increases. Wagner argued that economic development brings increased complexity in legal and social relationships, which in turn requires expanded government involvement in providing public services, including education and health. Wagner suggested that as societies become wealthier, public demand for services such as education, health, and welfare increases, leading to higher government spending. This theory aligns with the idea that health expenditure rises with economic development, as governments seek to provide services that enhance the population's productivity, including improving healthcare. Wagner's Law implies a direct relationship between national income growth and public sector expansion, which is crucial for this study on health expenditure and its impact on labor productivity.

This research is grounded in both Neoclassical Growth Theory and Wagner's Law. Neoclassical theory highlights the role of human capital (particularly education and health) in enhancing productivity and fostering economic growth. In this framework, health investments are essential for labor productivity, which drives long-term growth. Wagner's Law complements this by explaining why governments increasingly invest in sectors like health as economies grow, thereby promoting greater human capital development and, in turn, productivity and growth. Together, these theories suggest that health expenditure is not merely a social investment but a critical economic strategy. Public investment in health can lead to a more productive workforce, enhancing the overall growth trajectory of the economy.

Empirical Review

The empirical works on human capital expenditure and labour productivity primarily focus on the positive relationship between investments in health and education, and improvements in labor productivity. Several studies confirm that investments in human capital, particularly in health and education, lead to improvements in labor productivity. Gul, Khan & Ajmair (2022) found a positive correlation between human capital and labor productivity in Pakistan, recommending the government to enhance human capital development to boost productivity. In a similar vein, Wijaya (2019), focusing on Indonesia, and Samargandi (2018), examining Middle East and North African countries, identified government expenditure as a key determinant of labor productivity in both the short and long run. These studies highlight that human capital investments, especially in education and health, play a crucial role in boosting labor productivity, which in turn enhances overall economic growth.

In Nigeria, Okowa and Vincent (2017) found a positive relationship between tertiary enrollment and labor productivity, suggesting that higher education plays a significant role in enhancing worker efficiency. Similarly, Ugwu et al. (2020), Olayemi (2012) and Oluwatoyin & Fagbeminiyi (2010) demonstrated that government spending on education and health positively impacts labor productivity in the long run, though capital expenditures on education were found to have little effect. A recurrent theme is the distinction between the long-run and short-run effects of human capital investments on labor productivity. Awotunde (2018), examining the effects of government expenditure on health and education in Nigeria, found that the impact of health expenditure impacts labor productivity variably over time. In the short run, labor productivity may decline before rising again as the benefits of education investment take effect. Mbaleki (2020) also demonstrated that government expenditure on health and education in South Africa positively and significantly affects labor productivity in both the short and long run, except for defense spending, which has a negative effect.

The literature generally supports the view that labor productivity is a critical driver of economic growth, although its effects can vary depending on the sector and the quality of

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human capital. Ngutsav and Ijirshar (2018) showed that labor productivity in the agricultural and service sectors significantly contributes to economic growth, but its role in manufacturing and oil and gas sectors remains limited. This suggests a need for targeted policies that improve productivity in high-growth sectors while addressing the structural challenges in less productive industries. Onyema and Nyenke (2019) further emphasized the role of healthcare in shaping labor productivity, showing how poor health services can constrain productivity, thereby limiting economic growth. Addressing these health challenges is crucial for improving workforce efficiency and driving sustainable economic development.

Methodology

This study adopted ex-post facto research design. The data used for this study is time series data obtained from secondary sources about the study variables. The variables include Real Gross Domestics Product (GDP), Labour Productivity (LAP), and Government expenditure on health (GXH). The data was collected from Central Bank of Nigeria (CBN) for all variables except for labour productivity which was obtained from National Bureau of Statistics. The study used Granger causality test, which was used to examine the relationship between health expenditure, labor productivity and economic growth while SVAR, impulse response and variance decomposition estimates traced the instantaneous effects and the transmission mechanism. ADF and Ng-Perron tests were used to test for the presence or otherwise of unit roots in variables.

Theoretical Model

This study adopted a Solow's neo-classical growth model, (Solow, 1956, 1970). The production functions may be expressed as follows:

$$Y = f(A, K, L)$$

Where Y = output, A = level of technology, K = capital stock, and L = labour quantity Equation (1) can be rewritten as

$$Y_t = A_t F(K_t L_t)$$

Where Yt = aggregate real output, K = capital stock, L = labour, A = efficiency factor, and t = time dimension.

This proportion led to the formulation of the augmented Solow model using Cobb-Douglas production function by incorporating human capital into it. Therefore, following Mankiw et el (1997), the augmented Solow model is written as:

$$Y_{(t)} = K_{(t)} a H_{(t)} b (A_{(t)} L_{(t)})^{1-a-b}$$

Where; H = stock of human capital, a b < 1 = decreasing returns to capital.

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This study however, adopts the model as specified implicitly by Mankiw et al (1992), Ayara (2002) and Uwatt (2002) as thus:

$$Y_t = A_{(t)} K^{a_1} L^{a_2} H^{a_3}$$

Where H is human capital and is accounted for by the variables; Education and Health. $\alpha_1 + \alpha_2 = 1$ (assuming constant returns to scale) while other variables are as defined earlier.

Taking the natural log of both sides of the equation produces a linear equation in levels of the form:

$$LnY = a_0 + a_1 LnK + a_2 LnL + a_3 LnH + e$$
5

Where Y is the Real GDP as a proxy for Economic Growth, K is real gross capital formation, L is labour productivity, and H is human capital where government expenditure on Education and Health are used as proxies.

Model Specification

From the above theoretical model, the following variables were used to estimate different relationships meant to achieve the objectives of the study. The general relationship is stated as:

$$RGDP = f(GFCF, LAB, GXE, GXH, TBL, HCE)$$

Where GDP = Real Gross Domestic Product (proxy for economic growth), GFCF = Gross Fixed Capital Formation, LAP = Labour productivity, GXE = Government Expenditure on education, GXH = Government Expenditure on Health, TBL = Trade Balance (as an additional variable to include the external sector), and HCE= Household Consumption Expenditure. In order to achieve the objective of the study, SVAR model was adopted since it seeks to establish the contemporaneous and shock effects of the variables of the study.

$$A_{0}Z_{t} = A_{1}Z_{t-1} + \xi_{it}$$
⁷

Where $A_0 = n x n$ matrix of contemporaneous effects of the endogenous parameters

 $Z_t = nx1$ Column vector matrix of estimable endogenous variables

 $A_{I=} nxn$ matrix of lagged estimable endogenous variables

 $Z_{t-1} = nx1$ Column vector matrix of lagged estimable endogenous variables

 $\xi_{it} = nxl$ column vector of error term in the system

The transmission channel sought to be traced here is centred around the notion that, increased government expenditure on health (GXH) will trigger an improvement in the level

of labour productivity (LAP) which will in turn impact positively on economic growth (GDP). Thus, by following the Cholesky pattern of ordering from the most exogenous to the least exogenous variables, equation (1) can be rearranged to become:

$$Z = [GDP, LAP, GXH]$$

But to maintain the transmission channel of [*GXH LAP GDP*] which shows that as government spends more on health, it should translate to having a healthier population with higher labour productivity that will boost the level of national output in the economy. Equation (8) can be rewritten as follows with a sign of *prime (')* indicating that the equation remains the same when reversed.

$$Z = [GXH, LAP, GDP]$$

By taking the log of the model, the study obtains:

$$Z = [\ell G X H, \ell L A P, \ell G D P]'$$

Thus, equation can be expressed in matrix form as:

$$\begin{bmatrix} 1 & -\mathcal{G}_{12}^{0} & -\mathcal{G}_{13}^{0} \\ -\mathcal{G}_{21}^{0} & 1 & -\mathcal{G}_{23}^{0} \\ -\mathcal{G}_{31}^{0} & -\mathcal{G}_{32}^{0} & 1 \end{bmatrix} \begin{bmatrix} \ell GDP_{t} \\ \ell LAP_{t} \\ \ell GXH_{t} \end{bmatrix} = \begin{bmatrix} \mathcal{G}_{11}^{1} & \mathcal{G}_{12}^{1} & \mathcal{G}_{12}^{1} \\ \mathcal{G}_{21}^{1} & \mathcal{G}_{22}^{1} & \mathcal{G}_{23}^{1} \\ \mathcal{G}_{31}^{1} & \mathcal{G}_{32}^{1} & \mathcal{G}_{33}^{1} \end{bmatrix} \begin{bmatrix} \ell GDP_{t-1} \\ \ell LAP_{t-1} \\ \ell GXH_{t-1} \end{bmatrix} + \begin{bmatrix} V_{1t} \\ V_{2t} \\ V_{3t} \end{bmatrix} 4.41$$

Where $A_0 = 3x3$ matrix that captures the contemporaneous effects $Y_t = 3x1$ column vector matrix of the estimable endogenous variables $A_1 = 3x3$ matrices of the estimable endogenous variables $V_t = 3x1$ column vector of the matrix of the error terms in the model

However, it may be difficult to use SVAR to estimate the above model since it has been over parameterized. Therefore, there was a need to use the recursive approach where restrictions have been imposed on the parameters of the A_0 matrix based on institutional knowledge to resolve the issue of identification in the SVAR model. Accordingly, by imposing restrictions based on the recursive approach, we arrive at triangular contemporaneous matrix as follows:

$\ell GDP_t = lags + v_{1t}$	11
$\ell LAP_t = \ell GDP_t + lags + v_{2t}$	12
$\ell GXH_t = \ell GDP_t + \ell LAP_t + lags + v_{3t}$	13

Thus, rewriting the RHS of equation (8) and setting it equal to the matrix of error terms, it becomes:

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$$A_{0} = \begin{bmatrix} 1 & 0 & 0 \\ -\mathcal{G}_{21}^{0} & 1 & 0 \\ -\mathcal{G}_{31}^{0} & -\mathcal{G}_{32}^{0} & 1 \end{bmatrix} \begin{bmatrix} \ell G D P_{t} \\ \ell L A P_{t} \\ \ell G X H_{t} \end{bmatrix} = \begin{bmatrix} V_{1t} \\ V_{2t} \\ V_{3t} \end{bmatrix}$$
14

Recall that, $Ay_t = A_1^S y_{t-1} + \dots + A_p^S y_{t-p} + C^s x_t + Bu_t$ and given that, $\xi_t = \beta \mu_t$

However, that
$$\beta = \begin{bmatrix} \delta_1^2 & 0 & 0 \\ 0 & \delta_2^2 & 0 \\ 0 & 0 & \delta_3^2 \end{bmatrix}$$
 15

It thus implies that β is a unit variance and, as such, var $|(\mathfrak{y}_t)|=1$. Consequently, by setting $A_0 = \beta$, equation (14) can be rewritten as:

$$A_{0} = \begin{bmatrix} 1 & 1 & 1 & 1 \\ -\mathcal{G}_{21}^{0} & 1 & 1 & 1 \\ -\mathcal{G}_{21}^{0} & -\mathcal{G}_{21}^{0} & 1 & 1 \end{bmatrix} \begin{bmatrix} \ell GDP_{t} \\ \ell LAP_{t} \\ \ell GXH_{t} \end{bmatrix} = \begin{bmatrix} \delta_{1}^{2} & 0 & 0 \\ 0 & \delta_{2}^{2} & 0 \\ 0 & 0 & \delta_{3}^{2} \end{bmatrix} \begin{bmatrix} \mu_{1t} \ell GDP \\ \mu_{2t} \ell LAP \\ \mu_{3t} \ell GXH \end{bmatrix}$$
16

One distinct characteristic of SVAR as opposed to the conventional VAR is that, it distils out spill overs in errors. This ensures that the errors are uncorrelated and is expressed as:

$$\begin{bmatrix} \cdot \end{bmatrix} \begin{bmatrix} \cdot \end{bmatrix} = \begin{bmatrix} \delta_1^2 & 0 & 0 \\ 0 & \delta_1^2 & 0 \\ 0 & 0 & \delta_1^2 \end{bmatrix} \begin{bmatrix} \mu_{1t} \\ \mu_{2t} \\ \mu_{3t} \end{bmatrix}$$
 17

Thus, distilling out the spill over effects of errors, equation (16) becomes:

$$\begin{bmatrix} 1 & 1 & 1 \\ -\mathcal{P}_{21}^{0} & 1 & 1 \\ -\mathcal{P}_{31}^{0} & -\mathcal{P}_{32}^{0} & 1 \end{bmatrix} \begin{bmatrix} \mu_{1t}^{\ell}GDP \\ \mu_{2t}^{\ell}LAP \\ \mu_{3t}^{\ell}GXH \end{bmatrix} = \begin{bmatrix} \delta_{1}^{2} & 0 & 0 \\ 0 & \delta_{2}^{2} & 0 \\ 0 & 0 & \delta_{3}^{2} \end{bmatrix} \begin{bmatrix} \ell GDP_{t} \\ \ell LAP_{t} \\ \ell GXH_{t} \end{bmatrix}$$
18

This thus implies that:

$$A_{0,t} = \beta_{\mu_t}$$

Consequently, the initial impulse or variance forecast can be specified in matrix form as:

$$\xi_{t} = A_{0}^{-1} \beta \mu_{t} = \begin{bmatrix} \xi_{t}^{(GDP)} \\ \xi_{t}^{(LAP)} \\ \xi_{t}^{(GXH)} \end{bmatrix} = \begin{bmatrix} a & 0 & 0 \\ b & c & 0 \\ d & e & f \\ & & & \end{bmatrix} \begin{bmatrix} \mu_{1t} \\ \mu_{2t} \\ \mu_{3t} \end{bmatrix}$$
20

where \mathcal{A} is the response of $lGDP_t$ to its own shocks; \boldsymbol{b} is the response of $lLAP_t$ to shocks in GDP_t ; \boldsymbol{c} is the response of $lLAP_t$ to own shocks; \boldsymbol{d} is the response of $lGXH_t$ to shocks in GDP_t ; \boldsymbol{e} is the response of $lGXH_t$ to shocks in $lLAP_t$; \boldsymbol{f} is the response of $lGXH_t$ to own shocks;

Results and Discussion Descriptive Statistics

The summary of the descriptive statistics on the variables captured in this study are presented in Table 1.

	RGDP	GXE	LAP
Mean	43373.80	201.7276	352.1854
Median	38777.00	82.39000	343.5800
Maximum	77799.70	771.4600	718.1400
Minimum	17180.50	2.080000	13.52000
Std. Dev.	21365.69	236.5310	208.9246
Skewness	0.265102	1.060342	0.064016
Kurtosis	1.435785	2.794480	1.785649
	4.20548		
Jarque-Bera	8	6.998459	2.298687
Probability	0.122121	0.030221	0.316845
Observations	37	37	37

Table 1 Descriptive Statistics

Sources: Authors computation using E-views 10

Table 1 presents the descriptive properties of the series used in the analysis. It is evident from the table that, real gross domestic product has a mean value of N 43,373.80 billion with a maximum value of N77,799.70 billion and it had a minimum value N17,180.50 billion, The Jarque-Bera statistic value of 4.205 is not statistically significant at 5% level of significance. This implies that the series is normally distributed. Similarly, Household Consumption

Expenditure (HCE) had a mean value of 33,875.02 and maximum values of 130,077.6 and a minimum growth rate value of 82.73000. The Jarque-Bera statistic value of 5.90 is statistically significant at 5% level of significance, implying that the series is not normally distributed.

Also, the table shows that government expenditure on health (GXH) had a mean value of N119.1757 billion, maximum value of N711.2800 billion and a minimum value of N0.0400 billion, The Jarque-Bera statistic value of 38.01 is statistically significant at 5% level of significance. This suggests that the series is also not normally distributed. Furthermore, it was observed that the variable Labour Productivity (LAP) had a mean value of 352.1854 and a maximum value of 718.1400, and a minimum value of 13.52000, the Jarque-Bera statistic value of 2.29 is statistically significance at 5% level of significance, and this implies that the series is normally distributed.

Unit Root Test Results

The results of the unit root test estimated are displayed in Table 2.

Variables	At level	Prob.	First	Cr	itical Valu	es	Prob.	Order of
		Value	Differenc				Values	Co-
			e					integratio
								n
				1%	5%	10%		
RGDP	-1.227493	0.6514	-6.685617	-	-2.951125	-	0.0000	I(1)
				3.63940		2.614300		
				7				
GXH	-	0.1273	-10.78795	-	-	-	0.0000	I(1)
	2.486468			3.63290	2.94840	2.612874		
				0	4			
LAP	-	0.0147		-	-	-		I(o)
	3.476746			3.63290	2.94840	2.612874		
				0	4			

Table 2: Augmented Dickey-Fuller Unit Root Test Results

Source: Extract from E-views 10 output. Note: These critical values are computed from Mackinnon (1996) and if the probability value of a particular variable is less than the critical value, then this implies that the said variable is stationary at the specific level of concern. This study adopted the 5% level of significance

From the results in Table 2, all the variables were found to be stationary at 1st difference except Labour Productivity which was found to be stationary at levels. In order to validate the result of the test, the Ng-Perron test was employed and the results presented in Table 3.

Levels	MZa	MZt	MSB	MPT
LNRGDP	-0.61495	-0.31136	0.50633**	17.2253
LNGXH	0.86334	0.78792	0.91264**	57.4189
LNLAP	0.67526	1.20441	1.78364	191.960
1 st Difference	MZa	MZt	MSB	MPT
LNRGDP	-26.0786	-3.61085	0.13846	0.93993
LNGXH	-6.62255	-1.79447	0.27096	3.78498
LNLAP	-0.60160	-0.35168	0.58459**	20.7526

Table 3: Unit Root Test Results (Ng-Perron)

Source: Extract from E-views 10 output. Note: ** denotes Stationarity at 5% level of Significance

The Ng-Perron result showed that all the variables where stationary at levels except Labour productivity that became stationary after 1st difference.

The Contemporaneous Response of Economic Growth to changes in Government Expenditure on health through Labour Productivity in Nigeria

In line with the objective of the study, SVAR model was used to explore the contemporaneous response. The indicators used were real gross domestic product, government expenditure on health and labour productivity.

Lag selection Criteria

Before the estimating the SVAR that examines the response of economic growth to changes in labour productivity through government expenditure on health in Nigeria, the optimal lag length was estimated and the results are presented in Table 4.

Table 4: Optimal Lag Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-66.06556	NA	0.011668	4.062680	4.197359	4.108609
1	31.48026	172.1397*	6.40e-05*	-1.145898*	-0.607182*	-0.962180*
2	37.70877	9.892336	7.65e-05	-0.982869	-0.040117	-0.661363
3	44.88627	10.13295	8.82e-05	-0.875663	0.471125	-0.416370

* indicates lag order selected by the criterion

Source: Author's Computation Using E-Views 10

Table 4 shows that both the results of sequential modified LR test statistic, Final Prediction Error and Akaike Information Criterion, Schwarz Information Criterion and Hannan-Quinn information criterion showed that Lag 1 is the optimal lag length for the study. Lag 1 was therefore used for the SVAR model estimation. Given the result of lag length criterion, the Johansen cointegration test was conducted and the results presented in Table 5

		5	()	
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None*	0.272698	32.70156	29.79707	0.0424
At most 1*	0.259780	17.55709	15.49471	0.0359
At most 2	0.082899	3.028816	3.841466	0.0818

Table 5: Unrestricted Cointegration Rank Test (Trace)

Source: Author's Computation using Eviews 10

The result of the unrestricted rank test (Trace) revealed the existence of 2 cointegrating equations among the series. The null hypothesis of no cointegration among series was therefore rejected, in favour of the alternate hypothesis. This connotes the presence of a long-run relationship among the variables.

 Table 6:Unrestricted Cointegration Rank (Maximum - Eigenvalue)

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None*	0.272698	31.14446	21.13162	0.0029
At most 1*	0.259780	17.52828	14.26460	0.0495
At most 2	0.082899	3.028816	3.841466	0.0818

Source: Author's Computation Using E-views 10

The result of Unrestricted Co-integration Rank (Maximum –Eigenvalue) reveals the existence of 2 co-integrating equations among the series. This suggests the presence of long-run relationship among the variables used in the model. The contemporaneous structural parameters were estimated to ascertain the short-run relationship among the variables. The results are shown in Table 7.

rubie // Istimuteu contemporaneous structurari arameters						
	RGDP	LAP	GXH	-		
RGDP	1	0	0	-		
LAP	-0.019403 (0.4541)	1	0			
GXH	0.252330(0.5152)	-0.396626(0.8744)	1			

 Table 7: Estimated Contemporaneous Structural Parameters

Probability values in Parentheses.

Source: Author's Computation using E-views 10

The estimated contemporaneous structural parameters show that government expenditure on health had a negative and statistically not significant impact on labour productivity in Nigeria in the short-run, during the period of this study. This means that a 1% increase in the contemporaneous impact of government expenditure on health would to 0.39% reduction in labour productivity in Nigeria within the study period. This may be attributed to the fact that government investment on the health sector of the economy was too little to have a perceptible effect. This could have led to a lower health workforce, and a high level of absenteeism and low productivity.

Again, the estimated contemporaneous structural parameters showed that labour productivity had a negative and statistically not significant impact on economic growth in Nigeria in the short-run. This implies that 1% increase in the contemporaneous impact of labour productivity led to reduction in economic growth by 0.02% in Nigeria.

Diagnostic Tests

Before analyzing the impulse responses and the variance decompositions, the diagnostic tests were performed. First, the VAR residual serial correlation test was conducted and the results are as presented in Table 8.

Lag	LRE* stat	Df	Prob.	Rao F-stat	df	Prob.
1 2	6.448014 10.48297	9 9	0.6944 0.3128	0.712409 1.197367	(9, 58.6) (9, 58.6)	0.6953 0.3141
Lag	LRE* stat	Df	Prob.	Rao F-stat	df	Prob.
1 2	6.448014 19.50554	9 18	0.6944 0.3613	0.712409 1.107430	(9, 58.6) (18, 59.9)	0.6953 0.3680

Table 8: VAR Residual Serial

Source: Author's computation using Eviews 10

Table 8 shows the results of the VAR residual serial correlation LM test and the results shows that both the LRE*stat and Reo F-stat are not statistically significant which led to the conclusion of no serial correlation in the SVAR. That is, successive errors in the SVAR model were not correlated with each other. Second, the VAR Residual Heteroskedasticity Tests with cross terms was conducted and the results are presented in Table 9.

Table 9: VAR Residual Heteroskedasticity Tests (Includes Cross Terms)

Chi-sq	df	Prob.
191.2152	162	0.0581

Source: Author's Computation using Eviews 10

Table 9 showed VAR Residual Heteroskedasticity Tests (Includes Cross Terms) result. From the results, the Chi-squares are not statistically significant, implying no presence of heteroskedasticity in the SVAR model.

Impulse Response Functions

The Impulse Response Functions (IRF) shows the response of each variable in the system to shocks from the system variables. In order to further buttress how shocks in the health

expenditure impact on economic growth through labour productivity in Nigeria, the impulse response functions were estimated and the results presented in Figure 1



Figure 1: Impulse Response of Real Gross Domestic Product

The impulse response function graph provides valuable insights into the relationship between economic growth and innovations in labour productivity. From the initial period analyzed, it becomes evident that real gross domestic product (GDP) experiences a notable uptick in response to innovations in labour productivity. This increase serves as a testament to the pivotal role those advancements in labour efficiency play in driving overall economic expansion. What is particularly striking is that this positive effect persists over the entire forecast period of 10 years. Such sustained growth within the positive region indicates not only an immediate impact but also a lasting influence of enhanced labour productivity on economic performance. This suggests that investments or policies aimed at boosting productivity can lead to continuous economic growth over the long term. Furthermore, the findings from the impulse response function graph offer justification for prioritizing initiatives that aim to improve labour productivity.

The impulse response function of labour productivity to innovations in the government expenditure on health was estimated and the results presented in Figure 2



Figure 2: Impulse Response of Labour Productivity

The impact of government expenditure on health on labour productivity is quite notable. When subjected to innovations equivalent to one standard deviation, the resulting impulse response is positive. This means that there is a tangible increase in labour productivity following such expenditures. Moreover, this positive response persists over time, indicating a sustained and potentially long-term benefit to productivity levels. This observation explains the significant role that investments in health can play in enhancing overall productivity within an economy."

Forecast Error Variance Decomposition

The Forecast Error Variance Decomposition (FEVD) provided information about the proportion of movements in a sequence due to its own shocks and the shocks due to other variables in the system. The FEVD was estimated and the results presented in Table 10.

Period	S.E.	RGDP	LAP	GXH			
1	0.246518	100.0000	0.000000	0.000000			
2	0.253635	96.39640	0.618326	2.985276			
3	0.265834	91.18911	1.115545	7.695348			
4	0.272276	87.15106	1.893986	10.95495			
5	0.278338	83.53395	2.606543	13.85951			
6	0.282776	80.94764	3.348759	15.70360			
7	0.286455	78.88704	4.030861	17.08209			
8	0.289334	77.32584	4.669627	18.00454			
9	0.291687	76.08317	5.244726	18.67210			
10	0.293600	75.09515	5.760721	19.14413			

Table 10: Variance Decomposition of RGDP

Source: Author's Computation using Eviews 10

The variance decomposition results reveal that own shocks of real gross domestic product were dominant from the first period to the tenth period. It however, declined from 100% from the first period to 75.09% in the tenth period; meaning that, the variables labour produtivity, and government expenditure on health were the predictors of economic growth in Nigeria within the study period. A unit change in labour productivity in the second period accounted for about 0.62% in the forecast error variance of RGDP in the second period and the results increased significantly to 5.76% in the tenth period. For government expenditure on health, a unit change in government expenditure on health was able to explain about 2.99% in the forecast error variance of RGDP in the second period and the results increased significantly to 19.14% in the tenth period. This implies that government expenditure on health was better predictor of economic growth in Nigeria than labour productivity was a weaker predictor within the period understudy.

Period	S.E.	RGDP	LAP	GXH
1	0.041785	0.021119	99.97888	0.000000
2	0.067224	0.067867	98.52966	1.402473
3	0.085998	0.064944	97.08496	2.850095
4	0.100251	0.060972	95.22004	4.718984
5	0.111368	0.055738	93.41581	6.528455
6	0.120284	0.051173	91.68523	8.263600
7	0.127555	0.047330	90.13313	9.819539
8	0.133568	0.044205	88.76265	11.19314
9	0.138581	0.041679	87.57863	12.37969
10	0.142789	0.039638	86.56410	13.39627

 Table 11: Variance Decomposition of Labour Productivity

Source: Author's Computation using Eviews 10

The variance decomposition results revealed that own shocks of labour productivity are dominant from the first period to the tenth period. It however, declined from 99.97% from the first period to 86.54% in the tenth period; meaning that, real gross domestic product, and government expenditure on health were the predictors of labour productivity in Nigeria. The result also showed that, a unit change in real gross domestic product in the first period accounted for about 0.021% in the forecast error variance of labour productivity in the first period and the results increased gradually to 0.039% in the tenth period. In a similar way, the shocks of government expenditure on health accounted for 1.40% in the forecast error variance of labour productivity in the second period and the results increased significantly to 13.39% in the tenth period. The implication is that government expenditure on health is a better predictor of labour productivity.

Period	S.E.	RGDP	LAP	GXH
1	0.630661	0.170779	0.275199	99.55402
2	0.677837	0.155124	4.177469	95.66741
3	0.755044	0.134313	6.353798	93.51189
4	0.792646	0.123753	9.091652	90.78460
5	0.827250	0.114700	11.11545	88.76985
6	0.851940	0.108503	12.97886	86.91264
7	0.872580	0.103580	14.49955	85.39687
8	0.889026	0.099831	15.81210	84.08807
9	0.902711	0.096840	16.91319	82.98997
10	0.914037	0.094456	17.85006	82.05549

Table 12: Variance Decomposition of government Expenditure on Health

Source: Author's Computation using Eviews 10

The variance decomposition results revealed that own shocks of government expenditure on health are dominant from the first period to the tenth period. It however, declined from

99.55% in the first period to 82.05% in the tenth period; meaning that, real gross domestic product, and labour productivity are the predictors of government expenditure on health. The result also showed that, a unit change in real gross domestic product in the first period accounted for about 0.17% in the forecast error variance of government expenditure on health in the first period, the results decreased gradually to 0.09% in the tenth period. For labour productivity, a unit change in labour productivity explained about 0.28% in the forecast error variance of government expenditure on health in the first period and the results increased significantly to 17.85% in the tenth period. The implication is that labour productivity was the strongest predictors of government expenditure on health in Nigeria within the study period.

Conclusion

The study concludes that while health expenditure positively affects labor productivity over the long term, its short-term impact on economic growth is minimal and even negative in some cases. This suggests that the current level of government investment in health is insufficient to generate immediate gains in productivity, likely due to inefficiencies in the allocation and utilization of resources within the health sector. These inefficiencies manifest in a lower health workforce, high absenteeism rates, and reduced productivity, which in turn dampen economic growth. Despite these short-term challenges, the study's impulse response function analysis demonstrates that improvements in labor productivity—driven by better health outcomes—have a sustained, positive influence on economic growth over a longer horizon. Additionally, the variance decomposition analysis shows that health expenditure is a more significant predictor of economic growth than labor productivity in the short run, with labor productivity being more responsive to health investments than to economic output during the same period. Therefore, the study underscores the importance of strategic and long-term investment in health and labor productivity as crucial components for achieving sustained economic prosperity in Nigeria.

Policy Recommendations

To effectively harness the potential of health expenditure to boost labor productivity and drive economic growth, policymakers should focus on several key areas. First, the Nigerian government, through both federal and state agencies, particularly the Ministries of Health and Finance, should prioritize long-term investments in the health and human capital sectors. These investments must be sustained over time to ensure that the benefits of improved health translate into enhanced labor productivity and, subsequently, economic growth. The current study reveals that the short-term impacts of health expenditure may be limited, but the long-term effects are crucial for driving productivity. Therefore, it is essential to allocate a stable and increasing budget to health programs, with funding continuity guaranteed over multiple years. The government should implement multi-year strategic health plans that align with the nation's broader development goals, ensuring that health spending contributes directly to improving labor productivity and boosting the economy.

In addition to increasing investment, there is a pressing need to improve the efficiency of resource allocation in the health sector. This should involve a concerted effort by the Ministry of Health, the Bureau of Public Procurement, and anti-corruption agencies to minimize wastage, corruption, and mismanagement of funds. The study suggests that poor management of health resources has contributed to the weak short-term impact of health expenditure on labor productivity. To address this, policymakers should introduce more stringent procurement and financial tracking systems to ensure that allocated funds are used effectively. The use of digital financial management systems can promote transparency, while regular audits and public disclosure of health expenditures can foster accountability, helping to ensure that funds reach their intended targets and produce measurable improvements in health outcomes.

Furthermore, regular monitoring and evaluation of health expenditure and its impact on labor productivity and economic growth should become a core part of the policy framework. The National Bureau of Statistics, in collaboration with the Ministry of Health and independent research institutions, should develop robust, data-driven frameworks to monitor the outcomes of health spending. Continuous monitoring would allow policymakers to track the effectiveness of their investments, identify areas needing improvement, and adjust strategies in response to real-time data. This approach will not only enhance the transparency of health spending but will also enable more targeted interventions that maximize the productivity and growth impact of health sector investments.

Lastly, increased investment in research and innovation within the health sector is crucial for developing the technologies, methodologies, and interventions needed to drive productivity and economic growth. The Ministry of Health, working in partnership with universities and research institutions, should foster an environment that encourages public-private collaborations to promote healthcare innovation. Grants and incentives for research in healthcare can stimulate the development of new solutions that enhance productivity and health outcomes. Moreover, collaboration with international organizations and the adoption of best practices in healthcare delivery can significantly improve the quality of health services in Nigeria, further boosting labor productivity and contributing to long-term economic growth.

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ADOPTION AND IMPLEMENTATION OF TREATIES BY STATES IN INTERNATIONAL RELATIONS: A CRITICAL REFLECTION ON THE DOMESTICATION OF THE 'CONVENTION OF THE RIGHT OF THE CHILD (CRC)' IN NIGERIA

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Abstract

Nigeria like every other state in the globe is a signatory to many forms of international treaties such as the international instruments and/or charter with the United Nations on Convention of the Right of the Child (CRC) entered on 20th November, 1989, and the charter with Organisation of African Union (OAU) on the Rights and Welfare of the child (CRWC) in July 1990 and had rectified them in 1991 and 2000 respectively. Hence, in order to domesticate the Convention on the Right of the Child, the Child Right Act in Nigeria was passed into law by National Assembly in July 2003 and was signed into law in September 2003. Despite all the rectifications, Nigeria has not been able to fully implement the convention and charter at the federal level, and has failed to make sure the federating units are propelled to implement the rectified treaties to be fully alive at the municipal level. The study adopted secondary data which were extrapolated, summarised and analysed qualitatively through linkage study design, while anchoring on liberal international relations theory as the beacon of analysis. The study deciphered that only 25 states out of 36 states have localized the Child Right Act. And that 11 states in northern Nigeria are yet to domesticate the Child Right Act. The study recommended that the Nigerian state should include the Child Right Act into the Exclusive Legislative List of the federal government, as this will automatically become applicable in all the 36 states/FCT.

Keywords: Treaties, States, International Relations, Child Right Act.

Background to the Study

Treaties have revolutionized agreement among states since Vienna convention of 1969, and after the Westphalia Treaty of 1948, (which helped in the establishment of modern Nationstate attributes). Before now, kingdoms and empires have stabilized relationship among themselves with the use of pacts, covenants, truce etc. to ease their relationship on politics, and trans-border trade which also served as basis for peace, and restrained war among them; and as such, anyone who defied the established provisions of the agreements was jointly punished. Amongst these ancient kingdoms were: Othman empire, French, Greece, Roman Empire, Isreal and Chinese etc. (Offor, Odoh, & Iwuozor, 2023).

Treaty is a binding written document between two state (Bilateral) or between three or more states (multi-lateral) that has legal effect in international law. According to Article 11 of Vienna convention on law of treaties 1969, treaty is an agreement by which two or more states establish or seek to establish relationships between them governed by international law. The Magna Carta treaty which was called 'Great Charter' of June 15th 1215 was one of the earliest treaties to end the Baron's war. This was a document guaranteeing English political liberties that was drafted at Runnymede, a meadow by the Rivas Thames, and was signed by King John under pressure from his rebellious barons. This was an attempt to achieve peace between royalist and rebel factions in 1215, (Britannica, n.d).

According to Pillalamani (2019), Other early treaties that helped in checkmating the excesses of war among states in international relations before the outbreak of World War II can be classified as: Treaty of Tordesillas of 1494 between Portugal and Spain that was negotiated by the papacy which aim was dividing the newly discovered lands outside Europe between the two countries (Portugal and Spain) along line of longitude through what is now eastern Brazil. The 1648 peace of Westphalia. This treaty consists two related treaties, the treaty of Munster and the treaty of Osnabruck signed at the end of 30 years' war between catholic and protestant states. The treaty of Paris 1783 established the United States of America and ended her Revolution. It is the oldest treaty signed by the United States still in effect. The congress of Vienna 1814 which was also tagged Treaty of Paris. This treaty was signed at the end of Napoleonic war which dramatically reshaped political history of Europe. The congress of Vienna was notable because it prevented outbreak of war for a hundred years. Treaty of Versailles (1919), was signed between the Western allies and Germany at the end of World War I (Offor, Odoh, & Iwuozor, 2023).

The notable treaties that have acted as basis for stabilizing world peace and shaping international law among nations after the World War II are; the United Nations Charter (UN) of 26^{th} June 1945. The Vienna convention on diplomatic relations 18th April 1961, and was first- implemented on 24th April 1964 on the rules and treatment of envoys between state which have been established in customary law for hundreds of years. Paris peace Treaties of 10th February, 1947 after the end of the World War II in 1945 to allow the defeated

Axis powers to resume their responsibilities as a sovereign state in international affairs and also to qualify for membership of (UN) (IPPFA & UNFPA, 2006). The Universal Declaration of Human Right (UDHR) of 10th December, 1948 to protect the freedom, right and dignity of every individual under universal protection. Fourth Geneva convention 1949 for humanitarian protection of civilians in a war zone. The convention on the prevention and punishment of crime on Genocide (genocide convention) of 9th December 1948, to prevent Genocidal crime against humanity and to bring the perpetrators to book under international criminal law (ICRP BUDAPEST, 2020).

Convention of the rights of the child was adopted by General Assembly resolution 44/25 on 20th November 1989 and came into force on 2nd September, 1990 in accordance with article 49 which main purpose was to care for child as stated in Geneva declaration of the right of the child of 1924 and in the declaration of the right of the child adopted by the General Assembly on 20th November 1959 have on its provision among others emphasis on the need of every member nation of UN to in part 1 of Article 2: state that parties shall respect and ensure the rights in the present convention to each child within their jurisdiction without discrimination of any kind, irrespective of the child's or his or her parents or legal guardians race, colour, sex, language, religion, political or other opinion, national, ethnic or social origin, poverty, disability, birth or other status.

The child right convention is for the best interest of a child and shall guide the primary motive of what we are doing as a nation. UNICEF (2019), summarized four cardinal principles of the convention on the right of the child as; non-discrimination; Best interest of the child; the Right to survival and development, and the views of the child (Iguh, 2011). Nigeria is among the world nations that rectified the United Nations General Assembly adoption on convention of the Right of the child (CRC) on 20th November, 1989 and also rectified the organization of African union (OAU) now African union (AU) Assembly of Heads of states and Governments charter on the Rights and Welfare of the child (CRWC) in July 1990. Despite all the rectifications, Nigeria has not been able to implement this convention and charter across the state of the federation. When it was first introduced in 2002, it was strongly opposed by supreme council for Sharia because it did not sit-well with the religious-culture of the people. (Akinwunmi, 2009; Bashir, 2023). Amalu (2010), observed that Nigeria was signatory to both international instruments and had rectified them in 1991 and 2000 respectively. In order to domesticate the convention on the right of the child, the child right act in Nigeria was passed into law by National Assembly in July 2003 and was signed into law by President Olusegun Obansajo on September 2003. The Child's Right Act of September 2003 only expanded the human right on citizens in Nigeria's constitution of 1999 to children.

Conceptual Delineations International Law

According to Shaw (2017, p. 12), "International law is a system of rules and principles that govern the behaviour of states and other international actors." Similarly, Cassese (2013, p.

23), asserted that "International law aims to promote peace, justice, and cooperation among states and other international actors." These definitions, captured the salient elements inherent in international law and what it represents. Thus, International law refers to the set of rules and principles that govern the conduct of states and other international actors, such as international organizations and individuals, in their interactions with each other. It encompasses various areas, including human rights, humanitarian law, trade law, environmental law, and diplomatic law.

Municipal Law

In the words of Dicey (2013, p. 34), "Municipal law regulates the internal affairs of a country, including the conduct of citizens and the administration of justice." In the same vein, the Black's Law Dictionary (2020, p. 1134), submitted that "Municipal law is the law of a state or nation, as opposed to international law." Essentially, municipal law refers to the body of law that governs the internal affairs of a country, state, or local government, as opposed to international law, which governs relations between nations. It encompasses various areas, including constitutional law, administrative law, criminal law, civil law, and procedural law.

Treaties

Essentially, treaties are written agreements between states that are governed by international law. Treaties are referred to by different names, including agreements, conventions, covenants, protocols and exchanges of notes. If states want to enter into a written agreement that is not intended to be a treaty, they often refer to it as a Memorandum of Understanding and provide that it is not governed by international law (Rafael, 2010). Treaties can be bilateral, multilateral, regional and global. The law of treaties is now set out in the 1969 Vienna Convention on the Law of Treaties which contains the basic principles of treaty law, the procedures for how treaties becoming binding and enter into force, the consequences of a breach of treaty, and principles for interpreting treaties. The basic principle underlying the law of treaties is *pacta sunt servanda* which means every treaty in force is binding upon the parties to it and must be performed by them in good faith. The other important principle is that treaties are binding only on States parties. They are not binding on third States without their consent. However, it may be possible for some or even most of the provisions of a multilateral, regional or global treaty to become binding on all States as rules of customary international law (Shaw, 2003; Rafael, 2010).

There are now global conventions covering most major topics of international law. They are usually adopted at an international conference and opened for signature. Treaties are sometimes referred to by the place and year of adoption, e.g. the 1969 Vienna Convention. If a State becomes a signatory to such a treaty, it is not bound by the treaty, but it undertakes an obligation to refrain from acts which would defeat the object and purpose of the treaty. A state expresses its consent to be bound by the provisions of a treaty when it deposits an instrument of accession or ratification to the official depository of the treaty. If a State is a signatory to an international convention, it sends an instrument of ratification. If a State is not a signatory to an international convention but decides to become a party, it sends an instrument of accession. The legal effect of the two documents is the same. A treaty usually enters into force after a certain number of States have expressed their consent to be bound through accession or ratification. Once a State has expressed its consent to be bound and the treaty is in force, it is referred to as a party to the treaty (Shaw, 2003). The general rule is that a treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in light of its object and purpose. The preparatory work of the treaty and the circumstances of its conclusion, often called the travaux preparatoires, are a supplementary means of interpretation in the event of ambiguity (Rafael, 2010).

A treaty is a formal, legally binding written agreement between actors in international law. It is usually entered into by sovereign states and international organizations, but can sometimes include individuals, business entities, and other Legal persons. A treaty may also be known as an international agreement, protocol, covenant, convention, pact, or exchange of letters, among other terms. Regardless of terminology, only instruments that are legally binding upon the parties are considered treaties pursuant to, and governed by, international law.

Bilateral and multilateral treaties:

Bilateral treaties are concluded between two states or entities. It is possible for a bilateral treaty to have more than two parties; for example, each of the bilateral treaties between Switzerland and the European Union (EU) has seventeen parties: The parties are divided into two groups, the Swiss (on the one part) and the EU and its member states (on the other part). The treaty establishes rights and obligations between the Swiss and the EU and the member states severally, as it does not establish any rights and obligations amongst the EU and its member states. A multilateral treaty is concluded among several countries, establishing rights and obligations between each party and every other party. Multilateral treaties may be regional or may involve states across the world. Treaties of 'mutual guarantee' are international compacts, e.g., the Treaty of Locarno which guarantees each signatory against attack from another. (Rafael, 2010).

International Convention

An international convention is a formal agreement between countries that establishes rules, standards, or guidelines for a particular issue or activity. Conventions are often created to address global challenges, promote cooperation, and establish norms for international behaviour (Offor, Odoh, & Iwuozor, 2023).

Some of the notable international conventions include:

- i. Paris Agreement (2015) addressing climate change.
- ii. United Nations Convention on the Law of the Sea (UNCLOS) (1982) regulating the use of the world's oceans.
- iii. International Convention on the Elimination of All Forms of Racial Discrimination (ICERD)(1965) combating racial discrimination.

- iv. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (1975) protecting endangered species.
- v. Geneva Conventions (1949) setting humanitarian law standards for war
- vi. International Labour Organization (ILO) Conventions promoting fair labour practices
- vii. United Nations Convention on the Rights of the Child (CRC) (1989) protecting children's rights.
- viii. International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (ICRMW) (1990) - safeguarding migrant workers' rights. These conventions demonstrate the global community's commitment to addressing shared challenges and promoting cooperation, peace, and development.

Theoretical Framework and Research Procedure

The study adopted liberal international relations theory. Proponents of the theory are Carr and Schmidt. Liberal international relations theory, arose amongst the 'institution-builders' after World War II. The liberal school of thought as an off-shoot of 'idealism' holds that state preferences, rather than state capabilities, are the primary determinant of state behaviour. It also holds that a state should make its internal political philosophy the goal of its foreign policy. For example, an idealist might believe that ending poverty at home should be coupled with tackling poverty abroad. Unlike realism, where the state is seen as a unitary actor, liberalism allows for plurality in state actions, (hence, the mutuality or symbiotic bilateral/multilateral relations of states on trade, peace, and other co-operations). Thus, preferences will vary from state to state, depending on factors such as culture, economic system or type of government. Thus, instead of an anarchic international system, there are plenty of opportunities for cooperation and broader notions of power, such as cultural capital (for example, the influence of films leading to the popularity of the country's culture and creating a market for its exports globally). Another assumption is that absolute gains can be made through co-operation and interdependence, thus peace can be achieved.

The theory is relevant and applicable to the study, as it seeks to explain why states like Nigeria seek to engage in mutual-beneficial and multi-sectoral bilateral/multilateral treaties and understanding with other states with regards to her national interests, and welfare and protection of children in the country. Methodologically, data for the study were collected from secondary sources, such as text-books, journal articles, and online materials/publications, which were extrapolated, summarised and analysed qualitatively through linkage study design (a strand of longitudinal research design).

The Analytical Discourses

Adoption and Implementation of Treaties in Nigeria

Treaty application and implementation among member states that entered into bilateral or multi-lateral agreement is what brings the treaty into force. A ratified treaty has to be taken to the legislative body of such country to be enacted by that country into its municipal law to make it enforceable. Therefore, application of any treaty relates to the level of enforcement

within a country; whereas, its implementation is the actual process of giving treaties the force of law within a country.

In Nigeria for instance, it is done by the enabling law of the National Assembly and States' Houses of Assemblies. Oyebode (2003), opined that implementation of treaties could mean the execution or fulfilment of the obligation arising from treaties concluded by state. That is making the concluded treaties come into force. Though, that the treaty may have been concluded and rectified by the executive, does not actually pave way for its implementation. It needs legislative backup. Longjohn (2006), asserts that ratification of treaty by the executive is not sufficient to give a treaty the enabling force domestically, it is the legislative approval of the treaty in form of enabling statute that open the door for its implementation. In view of this, executive ratified treaties have to be domesticated which means transformation of treaties into the nations municipal law. Subjecting of treaties made on behalf of the federation to the legislative process, as in the case with other municipal legislation in term domestication of treaties (Akper, n.d). As a common practice with other countries in relation to the application of international law, Nigeria adheres to a dualist approach.

Thus, treaties validly concluded between Nigeria and other subject of international law or entered into as member of United Nation (UN) do not automatically transform into Nigerian law, except there is a legislative enactment on such international law. The 1999 constitution of the federal Republic of Nigeria as amended, section 12 stipulate thus that before any international law will have the force of law, it has to be domesticated in Nigeria municipal law through the legislative enactment.

Furthermore, in order for the international treaties entered into by the executive to fully become law among all strata of the state bearing in mind the federal constitution of Nigeria (as in the case of Nigeria), Okeke & Anusiem (2018), reiterated that a Bill for an Act of National Assembly for the purpose of implementing a treaty with respect to matters outside the exclusive legislative list shall not be enacted into law unless it is ratified by a majority of all the states' Houses of Assembly in Nigeria. Hence, it guarantees the States' Houses of Assembly which has exclusive legislative powers over residual matters and share legislative powers with the National Assembly over matters in the concurrent legislative list, to have contributed in the implementation of treaties that will affect their respective states.

Understanding 'who a Child is in Nigeria'

It is not easy to categorically state who is a Child in Nigeria, as the Supreme Law of the Country, the Nigerian Constitution failed woefully to define a Child in clear terms. Albeit, several Conventions, Protocols and Statutes have given some definitions as hereunder stated:

- i. In the CYPL Child means a person under the age of fourteen years and went further to defined a Young Person as one under the age of seventeen (17) years.
- ii. In the Child Rights Act a child is a person under the age of eighteen (18) years.

iii. Furthermore, under the CRC, a Child means every human being below the age of eighteen years unless under the law applicable to the child, the age of majority is attained earlier.

Major Provisions of the Child Right Act (CRA) of 2003

Quoting from the Child Right Act (2003), (Ikpeze, & Oti-Onyeama, 2021), surmised that the CRA contains 278 sections of great importance. These sections are: 1 – 268. For the purpose of this treatise, reference will be made to the following sections as they are laced directly to the rights of a child:

- i. Best interest of a Child to be of paramount consideration in all actions.
- ii. A Child to be given protection and care necessary for his well-being.
- iii. Application of Chapter IV of 1999 Constitution etc.
- iv. Right to survival and development.
- v. Right to freedom from discrimination.
- vi. Right to dignity of the child.
- vii. Right of a Child to free compulsory and universal primary education etc.
- viii. Right of a child in need of special protection measure.
- ix. Right of the unborn Child to protection against harms, etc.
- x. Responsibilities of a Child and parent.
- xi. Parent, etc. to provide guidance with respect to Child's responsibilities
- xii. Prohibition of child marriage.
- xiii. Prohibition of Child betrothal.
- xiv. Use of children in other criminal activities.
- xv. Prohibition of exploitive labour.
- xvi. Unlawful sexual intercourse with a Child.
- xvii. Forms of sexual abuse and exploitation.
- xviii. Other forms of exploitation.
- xix. Emergency Protection Order
- xx. Refuge for Children at risk.
- xxi. Power of certain persons to bring children in need of care and protection before a Court in certain cases.
- xxii. Power of Court to order parents etc. contribute to maintenance.

xxiii. Power of Court to make Order in respect to custody or rights of access to a child.

Appraising the Domestication of the Convention of the Right of the Child (CRC) in Nigeria

It unarguable that International Conventions, Charters and Declarations stated in the outset of this treatise influenced the enactment of the Child's Right Act of Nigeria in 2003. The Act attempted to jettison the clamour for sustenance of supremacy of Customary. Practices in the Nigerian society (Okunola, & Ikuomola, 2010). It is pertinent to note that Nigeria's first attempt at Legal protection of the Child was in 1943 when the Children and Young Persons Act (CYPA) was promulgated by the Governor in Council an ordinance to the protectorates of Nigeria as a national Law. By several legislations, provision was made for its

adoption as regional laws and thus it became applicable to the Western and Eastern region by 1946 and became the (CYPL). It became applicable also to the Northern Nigeria in 1958 (Ikpeze, & Oti-Onyeama, 2021).

The Nigeria State and the Application of the Child Right Act

Nigeria is among the world nations that ratified the United Nations General Assembly adoption on convention of the Right of the child (CRC) on 20th November, 1989 and also rectified the organization of African union (OAU) now African union (AU) Assembly of Heads of states and Governments charter on the Rights and Welfare of the child (CRWC) in July 1990. Despite all the rectifications, Nigeria has not been able to implement this convention and charter across the state of the federation. Amalu (2010), observed that Nigeria was signatory to both international instruments and had rectified them in 1991 and 2000 respectively. In order to domesticate the convention on the right of the child, the child right act in Nigeria was signed into law by the Nigerian Legislature (National Assembly) in July 2003, and was signed into law by President Olusegun Obansajo on September 2003.

The Child Right Act of September 2003 only expanded the human right on citizens in Nigeria's constitution of 1999 (as amended) to children. It was strongly opposed by supreme council for Sharia, when it was introduced in 2002. However, despite the Act been passed into law since 2003, only 24 States Houses of Assembly out of 36 States have passed the Act into law for onward enforcement. The states include: Abia, Akwa Ibom, Anambra, Benue, Cross river, Delta, Edo, Ekiti, Imo, Kwara, Lagos, Jigawa, Kogi, Rivers, Ogun, Taraba, Nassarawa, Oyo, Niger, Ondo, Ogun, Plateau and Osun (Amalu, 2020).

Enugu state was the recent state to enact the law in December 2016. With the domestic passage of the Act, it means the children will be well protected and any breach of the Act attracts punishments to the offenders. Also, the implication arising from not passage of the law by some state will necessitate furtherance of child abuse because the children under such states in Nigeria may have their rights infringed upon and offenders cannot be punished in such states. For instance, in furtherance of pursue of the Child Right, Amalu (2010), discovered that in Jos, Plateau state, 10 children between age 6-8 years, were working in mechanic workshop instead of being in school; while, in Akwa-Ibom state children are labelled witches and wizards and are beaten and starved irrespective of the fact that both states have passed the Child Right Act into law.

Insight to Cultural and Religious Practices amidst Child Right Act in Nigeria

Putting the revolutionary provisions of the Child Rights Act into perspective, there is no gainsaying that the toughest challenge which the implementation of the act will face is the deep-rooted religious and cultural practices which the Act seem to attempt to eradicate. Generally, culture and religion have their vantage points in raising the Nigerian child. However, there are certain cultural and religious practices which tends to endanger the life of the child which the Act seeks to protect.

Nzarga (2016), averred that no sooner than the Childs Right Act was ratified in Nigeria, that the Supreme Council for Shariah in Nigeria (SCSN), protested the attempt of the country's federal government to impose the Child Rights Act, passed by the National Assembly in 2003, on state Assemblies. According to the SCSN,

... any law that seeks to give equal rights to male and female children in inheritance, seeks to give an illegitimate child the same rights as the legitimate one, and establish a court (family court) that ousts the jurisdiction of shariah courts on all matters affecting children, is unacceptable to Muslims (Nzarga, 2016, p. 7).

Threading the cultural and religious lines, it is no wonder why the 11 states that are yet to adopt the Child Rights Act are from the 12 Shariah implementing states in the Northern part of Nigeria and it is not farfetched to find that the failure of adoption is due to religious reasons. Culturally, there are several practices including early child marriages, tribal marks engraving on a child, female genital mutilation, denial of right to inheritance and several other practices that tend to have deep rooted foundation in the cultures of different tribes in Nigeria. It is in the light of the forgoing that the impact of the Child Rights Act is to be considered in terms of changing the religious and cultural narratives (Nzarga, 2016; Bashir, 2023).

To that extent, with regards to child marriages, it is reckoned that poverty is one of the factors fuelling child marriages as many Nigerian societies, especially in the rural areas live below poverty line and one of the means of survival that is usually within the disposal of most parents is their child or children particularly girl children. It is added that while many of the parents give their girl children out in marriage, others push their children into child prostitution, child labour among others (Lachman, 2002; Bashir; 2023). It must be said that no excuse or reason can justify the scourge of the child marriage as it is established that pregnancies-related deaths are the leading cause of mortality in 15-19 years old girls. In view of the said scourge, it is praiseworthy that the Child Rights Act has now prohibited child betrothal and marriage as the Act stipulates that no person under the age of 18 years is capable of contracting a valid marriage, and accordingly, a marriage so contracted is null and void of no effect whatsoever. The Act takes one step further to also provide sanctions of fine in the sum of N500,000.00 or five years imprisonment or both for any person who married a child; or to whom a child is betrothed; or who promotes the marriage of a child; or who betroths a child (Bashir, 2023).

In view of the provision of the Marriage Act which allows a person under the age of 21 to get married subject to consent of the parent, it would now mean that the 'under the age of 21' cannot be stretched further less than the age of 18. Notwithstanding the laudable provision of the Act, it is reported that the practice is still widely rampant in Nigeria and in 2009, 2 girls of the ages of 12 and 18 were married off and taken to their husbands without their knowledge (Arowolo, 2018). With regards to female genital mutilation, it is observed that the practice is still recurrent in southern and eastern zones of Nigeria while the engraving of tattoos and tribal marks are considered to be typical of the Western part of the country. In the face of the grave havoc such practice causes to the child, the Child Rights Act has now prohibited such practice by stipulating that a person who tattoos or makes a skin mark on a child commits an offence under the Act and is liable on conviction to a fine not exceeding five thousand naira or imprisonment for a term not exceeding one month or to both such fine and imprisonment. Although the criminalization of the act of inflicting tattoos and marks on a child is laudable, it must be said that the maximum sum of N5,000.00 as fine may not be potent enough to deter the entrenched practice (Arowolo, 2018; Bashir, 2023).

Insight to Child Labour and Economic Manipulation amidst Child Right Act in Nigeria

It is without doubt that poverty is the harbinger of child labour. However, some cases of child labour have transcended to a level of economic exploitation as adults now engage in using children to generate revenue either by using them to carry out sale of goods or begging for alms. It is reported that Nigeria with about two hundred million population has child labour accounting for 20-30% of the population and in urban areas, such as Lagos, 1.1 million working children are less than 15 years of age as is evident in the increased number of street children, child hawkers, child sex workers and child beggars (IPPF & UNFPA, 2006; Ihinmoya & Folami, 2018).

It was observed that in Lagos State, child labourers are easy to source and cheap: first, child labourers are often from the rural area, conflict zones like Niger Delta, Plateau State, Benue and other Boko Haram terrorists' ravage region while many child labourers moved to cities because their regions have been affected by draught, flood, landslide and famine, for instance, natural disaster force Fulani herdsmen to migrate from the Niger and the Chad to Nigeria (Nzarga, 2016; Nwanna, & Ogunniran, 2019).

In the face of the prevalence of child labour in Nigeria, especially as the street hawking and begging are concerned, it was indeed imperative for the Child Rights Act to provide as it did, a specific prohibition of child labour. In this regard, section 28 (1) and (2) provides thus:

- A. Subject to this Act, no child shall be:
 - i. Subjected to any forced or exploitative labour; or
 - ii. employed to work in any capacity except where he is employed by a member of his family on light work of an agricultural, horticultural or domestic character approved by the Commissioner; or
 - iii. required, in any case, to lift, carry or move anything so heavy as to be likely to adversely affect his physical, mental, spiritual, moral or social development; or
 - iv. employed as a domestic help outside his own home or family environment.
- B. No child shall be employed or work in an industrial undertaking and nothing in this subsection shall apply to work done by children in technical schools or similar approved institutions if the work is supervised by the appropriate authority.

The Act goes a step further to also provide punishment for any person who violates the prohibition of child labour by providing that any person who contravenes any provision of subsection (1) or (2) of this section commits an offence and is liable on conviction to a fine not exceeding fifty thousand naira or imprisonment for a term of five years or to both such fine and imprisonment.

Challenges to the Application of Child's Right Act in Nigeria

The application of the CRA in Nigeria is not without challenges. Thus, there is no gainsaying that the full impact of the Child Rights Act is yet to be felt as cases of child marriages, child labour and other several forms of child right abuse are still prevalent in the Nigerian Society. There are reasons why the Child Right Act, have not been fully domesticated in the entire states. Nigeria operates a federal system of government, as such, the national passage of law that is not in exclusive list does not automatically become applicable in all of its 36 states. In terms of the constitution, children's issues are the preserve of the constituent states. State legislatures make national law applicable within its territory. Surprisingly, only 25 states out of 36 states have localized the child's rightsact.

Assim (2020), affirmed that 11 states in northern Nigeria are yet to domesticate the Child Right Act. The states lay claims that other laws, including the constitution are able to protect children, and as such, no discussion on the Child Right Act by the legislatures, but yet children in these states are still subjected to obnoxious practices of early marriage, female genital mutilating and begging. Religion, ethnic and cultural diversity has contributed to the unwillingness to pass the Child Right Act by the northern states apart from federal structure of Nigeria in application of the treaties (Assim, 2020).

According to Bashir (2023), the said prevalence is attributable to several factors which include:

A. Lack of Proper Policy that can Eradicate Poverty:

while the labour Act is merely a law, it must be said that there are certain foundational issues which breeds the challenges faced by the Nigerian child such as poverty which is fueled by the terrible economic setting of the country. In this regard, where the parent of a child cannot afford to provide basic needs of the child, it becomes an avenue for the parent to send the child off to several other un-dignifying means for survival. As long as poverty level continues to rise, it is difficult to see how the sufferings of the Nigerian child will come to an end.

B. Unhealthy Adherence to Culture and Religious Bias:

Notwithstanding, the provisions of the Child rights Act, the culture of child betrothal, female genital mutilation and infliction of tribal marks still persists as many folks refuse to give up such practice. In addition, there is the debate as to whether the Islamic religion opposes setting the age of eighteen years as marriageable age and also the issue of corporal punishments as prescribed under the Shariah Penal Codes of a significant number of states in the Northern part of the Country.

C. Lack of Political Will on the part of the Federal and State Governments:

The failure of creation of institutions by the government and the training of personnel who would run the institutions which can effectively bring about the full implementation of the lofty ideals proffered by the Act is also a huge hindering factor in achieving the full implementation of the Child Rights Act and complete eradication of all forms of child right abuses which the Act attempts to eradicate. It is befuddling to find many children on the streets of FCT, Abuja being involved in one form of child labour or the other including begging for alms.

Conclusion and Recommendations

Conclusively, the workability of concluded and ratified treaties by states (or parties) whether a bilateral or multilateral is deeply rooted in the adoption and/or application through the domestication of same in the states' municipal laws. Also, the ability of the states to make sure that (it is enforced by their relevant enforcement agencies when it has been enacted domestically will propel the ratified treaty to be fully alive. The international law depends much on the involved states on the possible enforcement of the ratified treaties.

In view of the Child Right Act examined in this discourse, it is pertinent to note that the onus lies on the Nigerian state for its applicability, as the international law relies mostly on the domestic implementation of Nigerian tribunals. Essentially, Rogoff (2016), affirms that in practice, domestic courts could be the only bodies that are realistically positioned to apply or effectuate international law or the decisions of international tribunals in specific cases. Rogoff's position portends that the important of states as a determinant factor in international relations. In view on how the state will give effect on the international agreement entered in the eyes of the law, Rogoff (2006) noted; that; however, international law does not prescribe how a state must give effect to an international legal obligation. This means that the state determines how to fulfil its international legal obligation. In all, the implication of un-uniformity of implementation of Child Right Act, is that the Nigerian state has failed in its role to ensure that every state of the federation pass the Act into state laws, having ratified the Child Right Convention and Africa Children's Charter by eliminating all impediment (as a means of denying the Nigerian children their basic rights rather than improving it) due to Cultural, religious, customary or traditional practices working against the charter.

The study recommended that:

- i. The Nigerian state should include the Child Right Act into the Exclusive Legislative List of the federal government, as this will automatically become applicable in all the 36 states/FCT, and also become a federal concern. Thus, the domestication of the Child Rights Act 2003 in all 36 states of the Federation cannot be overemphasized as the Child Rights Act is compatible, relevant and in the best interest of the Nigerian child.
- ii. Introduction and implementation of a robust poverty eradication program: this along with educational and health care programs and provision of necessary social

amenities will go a long way in supporting parents who are living hand to mouth and perhaps boost their sense of responsibilities towards their children.

- iii. Recurrent Grassroot Orientation on the rights of a Child: this can help those who are still clinging to the cultural orientation at the most remote villages and towns across the country to change their ways.
- iv. Harmonization of other statutes relating to the child: laws including the Immigration Act which refers to persons below the age of 16 as minors while the Matrimonial Causes Act stipulates the age of majority as 21 all need to align with the provisions of the Child Rights Act.
- v. Setting up of all institutions as required by the Act: Institutions such as the Family Court and the Specialised Children Police Unit for the investigation and handling of criminal cases involving a child. In addition to the specialized unit of police which is intended to be stationed, there should be set up a mobile unit of the same police force to keep the general public in the regular mindfulness of how serious the government takes the case of child right abuse.

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FISCAL POLICY RESPONSE TO UNEMPLOYMENT IN NIGERIA: EMPIRICAL INSIGHTS AND POLICY IMPLICATION

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Abstract

his study examines fiscal policy response to unemployment in Nigeria from 1991 to 2022. Data were obtained from the Central Bank of Nigeria Statistical Bulletin and the World Bank's World Development Indicators, 2022. Domestic debt, external debt, capital expenditure, recurrent expenditure, oil revenue, and tax revenue are adopted to proxy fiscal policy while unemployment is used as the dependent variable. The individual series were subjected to unit root tests using the Augmented Dickey Fuller approach and the diagnoses established mixed orders of I(o) and I(1) integrations, thereby necessitating application of the Auto-Regressive Distributive lag bounds test as well as the short-run versions. The analyzed model's result using the bound test established that there is no long-run relationship between fiscal policy and unemployment. Therefore, further findings from the short-run regression revealed that domestic debt, capital expenditure and tax revenue had a negative but significant influence on unemployment. However, the external debt and recurrent expenditure reported an insignificant impact on unemployment whereas oil revenue had a positive and statistically significant relationship with unemployment. Hence, it was concluded that fiscal policy significantly responds to unemployment in Nigeria. It was therefore recommended amongst other that federal ministry of finance should review the country's fiscal policies. They should consider adjustments to ensure that domestic debt levels, do not inadvertently ate unemployment.

Keywords: Unemployment, Domestic Debt, External Debt, Capital Expenditure, Recurrent Expenditure, Oil Revenue, Tax Revenue

Background to the Study

Unemployment in Nigeria remains a persistent challenge, affecting millions of lives and posing significant hurdles to economic prosperity. Unemployment refers to individuals who are willing and able to work but are unable to find employment. According to Musa et al (2021) unemployment refers to the percentage of the labour force that is without a job but is able and willing to work at the prevailing wage rate. In line with this view, Oloruntuyi (2020) described unemployment as the number of people who do not have a job, have actively search for work within the past four weeks and are currently available for employment. In Nigeria, unemployment rates have been a significant economic challenge. As of 2023, the unemployment rate stood at 33% with youth unemployment at 45%, according to data from the Nigerian National Bureau of Statistics. This is an indication of high and rising unemployment rate. High unemployment rates in Nigeria has several implications. Economically, it leads to reduced productivity and output, as a large segment of the labor force remains underutilized. This situation contributes to income inequality and social unrest, as unemployed individuals face financial strain and reduced access to basic necessities. Socially, it can lead to increased crime rates and psychological stress among affected individuals and families.

In response to this pressing issue, fiscal policy has emerged as a crucial tool in the government's arsenal to combat joblessness and stimulate economic growth. Fiscal policy can be defined as changes in taxation and government spending. such activity play a crucial role in shaping the macroeconomic environment and determining the trajectory of prices in Nigeria. According to Maheswaranathan and Jeewanthi, (2021) fiscal policy connotes the utilization of policy instruments such as budget, government expenditure, taxation and transfer payments to control and regulate the economy by altering revenue and spending levels. With Nigeria experiencing varying unemployment rates over the years, currently standing at .33% as of 2022, the role of fiscal policy in mitigating joblessness cannot be overstated. Take for instance, during periods of economic downturns, such as the global financial crisis of 2008-2009, the Nigerian government implemented expansionary fiscal measures. These included increased spending on infrastructure projects, such as road construction and power regeneration, aimed at stimulating aggregate demand and supporting economic recovery. For instance, government expenditure on infrastructure rose significantly from 6.8% of GDP in 2007 to 12.6% in 2010 NBS, 2020, contributing to improved economic activity and job creation.

Fiscal policy plays a crucial role addressing unemployment in Nigeria by directly influencing economic activity and job creation. For example, increased government spending on infrastructure projects such as road and construction not only improves transportation networks but also generates jobs for engineers, construction workers, and support staff. Similarly, tax incentives and reductions can stimulate private sector investment and expansion, leading to more job opportunities in industries ranging from manufacturing to services. Social program like unemployment benefits provide essential support to individuals during job transitions, helping to maintain consumer spending levels and

overall economic stability. Moreover, targeted labor market policies such as vocational training programs and job placement services help match unemployed individuals with available job openings, reducing the frictional unemployment rate. Public sector employment initiatives further contribute by directly employing individuals in areas of public service and development.

In Nigeria, the adoption and effective implementation of these fiscal policy measures are crucial for addressing the persistent issue of unemployment. By strategically deploying these tools, policymakers can foster sustainable economic growth, enhance labor market outcomes, and improve overall welfare for the population. However, despite several fiscal policy tools adopted by the Nigerian government, unemployment rate continues to upsurge. For example, Nigerian unemployment rate increased to 33.3% in Q4 2020, which likely contributed to the contraction of the gross domestic product (GDP) by 1.92% in 2020 due to decreased consumer demand (WDI, 2022. This rise in unemployment rate has resulted to increased poverty and inequality. The World Bank reported in 2020 that over 40% of the Nigerian live below the national poverty line, and with the high unemployment rate, more people struggle to meet their basic need without a steady income. This situation exacerbates poverty and widens the gap between the rich and the poor. Also, with over 53% in Q4 2020 of youth unemployment rate according to the World Bank, the country has is not fully benefiting from the potential contributions of its young population to the economic growth and development.

Against this backdrop, the role of fiscal policy as a key instrument for influencing unemployment has garnered increased attention. Therefore, this paper seek to answer the following question as a mean to addressing issues and concerns raised in the study. How has domestic debt impacted unemployment? Has external debt reduced unemployment? To what extent has capital expenditure impacted unemployment? How has recurrent expenditure eased unemployment? To what extent has oil revenue lessened unemployment? And how has tax revenue lightened unemployment?

Literature Review Theoretical Framework

Keynesian Theory of Public Spending

Keynesian theory, developed primarily by John Maynard Keynes in 1936 posits that fluctuations in aggregate demand are central to understanding economic fluctuations, including unemployment. Keynes argued that involuntary unemployment persists when aggregate demand is insufficient to full employ available labor resources. This type of unemployment occurs because prices and wages are sticky in the short term, meaning they do not adjust quickly to changes in demand. Keynes advocated for government intervention to manage aggregate demand and stabilize the economy. He proposed that during periods of economic downturns, the government should increase its spending or reduce takes to stimulate consumer and business spending, thereby boosting aggregate demand and reducing unemployment. This intervention is aimed at filling the gap left by insufficient private sector spending.

Proponents of Keynesian economics argue that government intervention through fiscal policy is necessary to achieve full employment and economic stability. They believe that by actively managing aggregate demand, government can mitigate the negative impact of recessions and depressions. Opponents, such as classical economists, criticize Keynesian theory for potentially leading to inefficiencies and market are self-regulating and that government intervention, particularly through deficit spending, can lead to long-term economic problems such as inflation or debt accumulation. Neoclassical economists, while incorporating some Keynesian insights, generally emphasize the ole of market mechanisms and monetary policy in stabilizing the economy.

The Automatic Stabilizer Theory

Alvin Hansen was credited with the Automatic stabilizer theory in 1975. The automatic stabilizer theory posits that certain features of fiscal policy can automatically stabilize the economy without requiring active government intervention. It assumes that progressive income taxes, unemployment benefits, and welfare programs adjust automatically in response to economic conditions. Proponents of automatic stabilizers argue that these mechanisms effectively stabilize the economy by moderating changes in consumer spending and government revenues. They believe that progressive tax systems, which collect more revenue during economic booms and less during downturns, help maintain stability without the need for discretionary fiscal policy changes. Opponents of the theory may argue that automatic stabilizers could potentially create disincentives, such as extended unemployment benefits discouraging individuals from seeking work. Critics might also express concerns about the strain on government budgets during economic downturns when welfare spending increases and tax revenues decline. While the automatic stabilizer theory doesn't have a singular propounded in the same way Keynes, it supported by economists who emphasize the importance of these built-in stabilizing mechanisms in managing economic cycles more smoothly.

Empirical Literature

Ejinkonye et al (2024) assessed the fiscal policy and unemployment nexus in Nigeria using time series data covering 1990 to 2021. The test results showed that: GCE had a coefficient of 3.84 and a probability of 0.9893; GRE had -0.000481 coefficient and a probability of 0.6365; GED had 0.000584 coefficient and a probability of 0.1292 while GTR had 0.002070 coefficient and a probability of 0.0000.

Alhaj (2023) investigate the impact of fiscal policy tools on unemployment rates in Jordan during the period 1986-2019. The results for the first model clarified that the increase in aggregate government expenditure causes unemployment rates to decline in the short and long run. On the other hand, the results for the second model showed that the increase in tax revenues increases unemployment rates in the short and long run. Moreover, current

government spending has significant negative short and long-run effects on unemployment rates, while capital spending has only a significant negative short-run impact.

Ibrahim (2023) investigates the impact of fiscal policy tools on unemployment rate in Nigeria between 1991 and 2021 using the autoregressive distributed lag model. The study has found the presence of cointegration among the variables. Additionally, taxation was found in the long-run to have no impact on unemployment rate while government spending in the long-run worsens unemployment largely due to unproductive and wasteful spending. In the short run, both taxation and government spending worsen the unemployment situation in Nigeria. It, therefore, indicates that the tax system in Nigeria may not be very effective over time.

Jitendra (2023) impact of government expenditure, unemployment, inflation, and household consumption on the economic growth of India over the period 1990-2021 has been examined in this paper. The study found that increasing government expenditure has a strong positive influence on the growth of national income and consumption and a negative influence on unemployment in India. The study recommends increasing government expenditure that could accelerate economic growth and create employment opportunities that also have a positive impact on improving consumption. Results indicate that inflation significantly depresses economic performance in India because of uncertainty and reduces investment, employment, and consequently output and consumption level. Unemployment has not significantly impacted the real GDP in India. Investment in physical capital and human capital has significantly promoted economic performance in India because investment in human capital improves the productivity of the labor forces and hence increases output and investment in physical capital increases the amount of capital per unit of labor and these have the potency of increasing productivity perworker.

Chukwuemeka (2022) investigated the impact of fiscal policy on unemployment rate in Nigeria. Time series data spanning from 1991 to 2020 which were sourced from the Central Bank of Nigeria (CBN) statistical bulletin and the World Development Indicators (WDI). The long run result of the study showed that there is a positive and significant impact between total expenditure (TEXP) and unemployment rate in Nigeria but a negative and significant impact between non-oil revenue (NOR) and unemployment rate in Nigeria. The long run result showed that there is no relationship between total public debt (TDBT) and unemployment rate in Nigeria while the short run result showed that total public expenditure has a positive and significant impact on unemployment rate in Nigeria. Shadi (2020) estimate the effects of Government spending on unemployment in Jordan for the period 1990 to 2019. By using the ARDL co-integration test we found a negative and statistically significant long-run relationship between government spending and the unemployment rate in Jordan. The study also noticed that, in the short-run, government spending has a positive and significant impact on unemployment.

Udeze et al (2020) examine the impact of fiscal policy on urban unemployment in Nigeria. Specifically, the study investigated the impact of government spending, government revenue, fiscal deficit and public debt on urban unemployment in Nigeria. Using time series spanning from 1981 to 2018, the study estimated generalized linear model (GLM). The results obtained show that capital expenditure and government revenue have significant negative impact on urban unemployment in Nigeria. Also, recurrent expenditure and fiscal deficit were found not to exert significant impact on urban unemployment within the period. However, public debt reinforces unemployment in urban centres in Nigeria. Onodugo et al (2017) making use of a regression model with annual data from 1980 to 2013, empirically determined the impact of public sector expenditures (CEXP and REXP) together with private sector investment (PINV) on unemployment (UNEMP) in Nigeria. Capital expenditure and private sector investment both in the medium to long-run were found to serve as catalyst towards reduction of unemployment, while recurrent expenditure was not statistically strong enough to do same.

Dear and Khalil (2017) ascertain if government development expenditures can cause to reducing unemployment rates in different provinces? The present study in term of purpose is applied and in term of nature is causal-correlational with the type of the mixed data Research. The study period is 1998-2013. The results revealed that Government development expenditures have a significant negative effect on the unemployment rate in the province. Also, all logarithmic models on large and small provinces for the government development expenditures on large provinces a negative coefficient 0.049 is obtained which is significant at 5% probability level and in small provinces negative coefficient of 0.07 is obtained which is significant at 5% probability level.

Unal (2015) focuses on the effects of fiscal policy in Netherlands analyzed in a VAR context. Fiscal shocks are found to involve significant impacts on GDP, unemployment rate, consumption and investment. In this regard, Keynesian effects are observed. In addition, the results suggest that unemployment rises in response to a fiscal contraction whereas it falls following a fiscal expansion. When government spending increases output increases; when total net taxes increase output falls. A social security tax innovation also leads to a rise in unemployment rate. Moreover, the results indicate that the social security taxes is a more effective tool compared to total net taxes for policy-makers in Netherlands in terms of GDP and its private components. Enueshike et al (2021) examined the effect of tax revenue on unemployment in Nigeria from the period between 1994 to 2020. The finding show corporate taxes and Value Added Tax has a positive and significant effect on unemployment in Nigeria.

Gaps and Value Addition

Consequently, this research paper reviewed a large body of relevant prior work on fiscal policy, in relation to unemployment. Despite the mixed and occasionally contradictory results, research by Jitendra (2023); and Dear and Khalid (2017), all came to the same

conclusion that fiscal policy measures such as oil revenue, non-oil revenue, government expenditure and debt reduces or slow down unemployment significantly. On the other hand, according to Ejinkonye et al (2024); submitted that fiscal policy measures via oil revenue, non-oil revenue, government expenditure and debt reduces is insignificant to have any influence on unemployment during the period. In contrasts, this paper discovered that some of earlier studies conducted by Alhaji (2023); Ibrahim (2023); Chukwuemeka (2022); Enueshike et al (2021); Shadi (2020); Udeze et al (2020); Onodugo et al (2017); and Unal (2015) reported that fiscal policy tools such as tax revenue, government expenditure are positive in some cases and negative in other times but statistically significant to impact unemployment. It was also found that previous studies either proxy fiscal policy with government expenditure, tax revenue or non-tax revenue. None of the prior studies holistically substitute fiscal policy with domestic debt, external debt, capital expenditure, recurrent expenditure, oil revenue, and tax revenue. Therefore, this study will be an addition to existing literature by including domestic debt, external debt, capital expenditure, recurrent expenditure, oil revenue, and tax revenue to capture fiscal policy in a single study. This points to a hole in the existing literature.

Methodology

Secondary data for this article came from the World Bank's development indicators and the Central Bank of Nigeria's (CBN) statistics bulletin; the research methodology used was expost facto. In the context of this study, this data source is deemed trustworthy and reliable. There will be thirty-two (31) years of data, spanning the years 1991 to 2022. To represent fiscal policy, we used the following proxies: domestic debt (DDT), external debt (EDT), capital expenditure (CXE), recurrent expenditure (RXE), oil revenue (ORV), and tax revenue (TR). Unemployment (UNE) is used as the dependent variable.

Model Specification

This study's model is an adaptation of Gbadebo *et al.* (2018) when investigating the effect of government policy on price stability. Their model was;

UNE = f (TAX, GEX, DIN, FDI, CON)

(1)

where; UNE is unemployment rate, *Tax* is government tax revenue; *GEX* is government spending; *DIN* is domestic investment; *FDI* is foreign direct investment; and *CON* is private consumption expenditure during the years of study.

Thus, the researcher adjusted the model to include more factors in order to accomplish the goal of this study. Domestic debt (DDT). External debt (EDT), oil revenue, (ORV), and tax revenue (TR) are all part of this set. The following is a statement of the new enlarged model:

UNE	=	f(DDT, ,EDT, CXE, RXE, ORV, TR, POR)	(2)
UNE	=	$\beta_0 + \beta_1 DDT + \beta_2 EDT + \beta_3 CXE + \beta_4 RXE + \beta_5 ORV + \beta_6 TR$	(3)
UNE _t	=	$\beta_{o} + \beta_{i}\beta_{i}DDT_{t} + \beta_{2}EDT_{t} + \beta_{3}CXE_{t} + \beta_{4}RXE_{t} + \beta_{5}ORV + \beta_{6}TR + \mu_{t}$	(4)

Where:

UNE = Unemployment, DDT = Domestic Debt, CXE = Capita Expenditure, RXE= Recurrent Expenditure, ORV = Oil Revenue, TR = Tax Revenue, μ = Error term, β_0 = Constant and β_1 to β_6 = Parameter Estimates. The expectations are: β_3 , β_4 , β_5 and $\beta_6 < 0$, β_4 , and $\beta_2 > 0$ suggesting that, the sign of β_3 , β_4 , β_5 and β_6 are by theory expected to have a negative relationship with unemployment, since increase in CXE, RXE, ORV and TR will create demand for labor in construction, engineering, and related sectors. This direct employment generation helps reduce unemployment rates by providing job opportunities to workers in Nigeria, while β_1 and β_2 is expected to have a positive relationship with poverty rate.

$Description \, of \, Variables \, in \, the \, Model$

i. Unemployment (UNE): This signifies the inability of individuals who are willing and able to work to secure suitable employment opportunities within an economy. For developing countries, the consequences of unemployment are profound and multifaceted. High unemployment rates hinder economic growth by reducing aggregate demand and consumption levels. This leads to underutilization of resources and limits the overall production capacity of the economy. As a result, countries may struggle to achieve sustainable economic expansion and improve living standards for their populations. Unemployment is the dependent variable and is measured in US\$.

ii. **Domestic Debt (DDT):** This refers to the total amount of money that a country's government owes to creditors within its own borders. It includes government bonds, Treasury bill, and other debt instruments issued by the government to finance budget deficits or other expenditures when tax revenues are insufficient. Domestic debt impact unemployment primarily through economic channels such as the crowding out effect, fiscal policy constraints, investor confidence, and macroeconomic stability. For instance, when governments borrow domestically, they complete with the private sector for available funds. This competition will drive up interest rates, making it more expensive for businesses to borrow money for investments and expansions. As a result, businesses may reduce their hiring or postpone expansion plans, leading to higher unemployment rates. This paper therefore hypothesized that domestic debt will be positively related to unemployment. Domestic debt is measured in billions of Naira annually.

iii. External Debt (EDT): This refers to the total amount of money that a country's government owes to foreign creditors and international financial institutions. It typically includes loans, bonds, and other financial instruments borrowed from abroad to finance various projects and budget deficits. The impact of external debt on unemployment can be significant. High levels of external debt can lead to substantial debt servicing burdens, where a large portion of government revenue is allocated to repay loans and interest rather than being invested in productive sectors that create jobs. This situation can constrain government spending on social programs and infrastructure development, which is crucial for employment generation. Additionally, high external debt can undermine investor

confidence and economic stability. It will lead to currency depreciation, higher borrowing costs, and reduced foreign investment inflows. These factors can dampen economic growth, limit job creation, and exacerbate unemployment rates. By implication, increase in external debt is expected to have a positive effect on unemployment. External debt will be measured in billions of Naira annually.

iv. Capital Expenditure (CXE): This represents government spending on long-term investments in physical infrastructure, such as roads, bridges, schools, hospitals, and other public facilities. Capital expenditure have pivotal impact on unemployment. When governments allocate funds to capital projects, they create demand for labor in construction, engineering, and related sectors. This direct employment generation helps reduce unemployment rates by providing job opportunities to workers. Additionally, infrastructure development can attract private sector investments, further stimulating economic activity and job creation. Therefore, an inverse relationship is expected between capital expenditure and unemployment. Capital expenditure is measured in billions of naira annually.

v. Recurrent Expenditure (RXE): This refer to regular and repetitive government spending on day-to-day operational costs and current expenses, such as salaries, wages, pensions, utilities, and maintenance of existing infrastructure and services. The impact of recurrent expenditure on unemployment is indirect and multifaceted. On one hand, recurrent expenditure supports public sector employment by finding salaries and wages for government employees, including teachers, healthcare workers, police officers, and civil servants. Consequently, this study believed that recurrent expenditure on social programs, such as education, healthcare, and social welfare, plays a crucial role in human capital development and poverty alleviation. Investments in these areas enhance the skills and productivity of the workforce, thereby reducing unemployment over the long term. Therefore, a negative relationship is expected between recurrent expenditure and unemployment. Recurrent expenditure in this study is measured in billions of Naira annually.

v. Oil Revenue (ORV: This refers to the income generated by a country from the extraction, production, and export of crude oil and petroleum products. It constitutes a significant portion of government revenue in many oil-producing countries, include Nigeria. The impact of oil revenue on unemployment can be understood through several channels: Oil revenue provides governments with substantial financial resources, which can be allocated towards various sectors and projects aimed at promoting economic growth and employment. For instance, governments can invest in infrastructure development, such as roads, ports, and energy facilities, which creates job directly in construction and indirectly in related sectors. It also enables governments to finance social programs and public services, including education, healthcare, and social welfare. It is believed that oil revenue will be negatively to unemployment. Oil revenue is measured in billions of Naira annually.

vi. Tax Revenue (TR): This refers to the funds collected by governments from various sources, including individuals, businesses, and other entities through taxation. Tax revenue serves as a crucial component of government finances, enabling the funding of public expenditures and the implementation of fiscal policies aimed at promoting economic stability and growth. In the context of unemployment, tax revenue impacts the economy in several ways, Firstly, it provides governments with the financial resources needed to invest in infrastructure projects, education, healthcare, and social welfare programs. These investments directly create employment opportunities in sectors such as construction, education, and healthcare services, thereby contributing to a reduction in unemployment. This means that there will a negative relationship between tax revenue and unemployment Tax revenue is measured in billions of Naira annually.

Empirical Data Analysis

Unit Root Test

In order to minimize false regression, the research used the Augmented Dickey Fuller (ADF) unit root test to determine the order of integration of the variables under consideration. This helped in selecting the proper technique.

Variables	Levels		First Difference		Order of	P-value
	ADF	5%	ADF	5%	Integration	
	Statistics	Critical	Statistics	Critical		
		Value		Value		
LUNE	-3.234529	-2.963972			1(0)	0.0277
LDDT	-2.132672	-2.960411	-4.023012	-2.963972	1(1)	0.0042
LEDT	-1.05370	-2.963972	-3.876639	-2.963972	1(1)	0.0060
LCXE	-1.285439	-2.960411	-5.627755	-2.963972	1(1)	0.0001
LRXE	-1.499271	-2.960411	-7.541504	-2.963972	1(1)	0.0000
LORV	491628	-2.960411	-5.333008	-2.963972	1(1)	0.0001
LTR	-2.476081	-2.960411	-5.47507	-2.963972	1(1)	0.0001

Table 1: Unit Root Test Using Augmented Dickey Fuller (ADF)

Source: *Author Computation 2024** Level of significance at 5%

This study employs the Augmented Dickey-Fuller (ADF) unit root tests to check the order of integration of the variables and the results are presented in Table 1 The results of Augmented Dickey-Fuller (ADF) showed that the variables are integrated in different order or a combination of I(o) and I(1) series. The ADF result revealed that LUNE was stationary at levels 1(o) while, LDDT, LEDT, LCXE, LRXE, LORV and LTR, are stationary after first differencing 1(1). This condition makes the Autoregressive Distributive Lag (ARDL) Bounds test approach to co-integration appropriate for investigating the long-run relationship among these variables.

Test Statistics	Value	K
F-statistics	2.542044	6
Significance	I (o)	1(1)
10%	2.12	3.23
5%	2.45	3.61
2.5%	2.75	3.99
1%	3.15	4.43

Table 2: ARDL Bound Test

Source: Authors Computation 2024

Table 2 shows that the variables are related to one another over the long term, as the Fstatistic of 2.542044 is greater than the critical values of the lower but less than upper bounds. We conclude that there is no long-term association and accept the alternative hypothesis. This indicates that the unemployment in Nigeria is not related to fiscal policy over the long term. Therefore, the study estimate the short-run relationship between fiscal policy and unemployment below.

Variable	Coefficient	Std. Error	t-Statistic	Prob		
С	-1.689683	0.269624	-6.266804	0.0082		
D(LDDT)	0.855273	0.195204	4.381442	0.0020		
D(LDDT-1)	-0.590877	0.15153	-3.906534	0.0298		
D(LDDT(-2)	-0.366714	0.158406	-2.315032	0.1039		
D(LEDT)	0.063079	0.032074	1.966663	0.1439		
D(LEDT(-1)	0.013508	0.028351	0.476457	0.6663		
D(LEDT(-2)	-0.042888	0.023150	-1.852633	0.1610		
D(LCXE)	-0.154274	0.036861	-4.185292	0.0249		
D(LCXE(-1)	-0.001327	0.031054	-0.042730	0.9686		
D(LCXE(-2)	0.052039	0.028191	1.845962	0.1621		
D(LRXE)	0.092162	0.080621	1.143154	0.3359		
D(LRXE(-1)	0.091596	0.073218	-1.251011	0.2996		
D(LRXE(-2)	-0.025284	0.071090	-0.355660	0.7456		
D(LORV)	0.685545	0.169528	4.043843	0.0272		
D(LORV(-1)	-0.477360	0.203604	-2.343857	0.1009		
D(LORV(-2)	0.117408	0.155373	0.755651	0.5048		
D(LTR)	-0.705170	0.198035	-3.560461	0.0378		
D(LTR(-1)	-0.680335	0.269693	2.522632	0.0860		
D(LTR(-2)	-0.241708	0.192952	-1.252686	0.2911		
Ecm (-1)	-1.322592	0.201968	-6.548506	0.0072		
Adj $R^2 = 0.688346$,	Adj R ² = 0.688346, F-stat = 4.254903 (0.015504), DW = 2.123751					

Table 3: ARDL Short-run Result (LUNE)

Source: Authors computation 2024

The coefficient estimates for the error correction term, ECM (-1) has a negative value and is significant at the 0.05 level. It suggests that the model will reach long-run equilibrium at a rate of 24% every year. This means that a yearly adjustment speed of 24% may fix the mistake from the previous year. The independent variables (LDDT, LEDT, LCXE, LRXE, LORV, & LTR) explain 69% of the total variance in the dependent variable (LUNE), according to the corrected R-Square (R2) value. As a whole, the model is noteworthy since the F-statistic is significant at the 5% level of significance. Without serial correlation, the model would not work, according to the Durbin-Watson statistics of 2.123751, which is close to 2.

Table 3 displays the model's short-run outcome. A positive logarithm of domestic debt (LDDT) of (+0.855273) was seen in the current, year periods when the log value of the unemployment (LUNE) was used as a surrogate for fiscal policy in Nigeria. This means that the log value of the unemployment (LUNE), would fall by approximately 0.86% for every unit increase in the logarithm of domestic debt (LDDT) in Nigeria. Domestic debt and unemployment log value correlate statistically (p=0.0020). Economic theory predicts this outcome. The log value of the unemployment is likely to rise in response to an increase in logarithm of domestic debt. Using the log value of the unemployment (LUNE) have a positive value of +0.063079 and +0.013508. If the log value of external debt (LEDT) in Nigeria increases by one unit, the log value of the unemployment (LUNE), would rise by about 0.06% and 0.01%%. Based on the p-value of 0.1439 and 0.6663, it can be concluded that the log value of external debt is insignificantly related to the log value of unemployment. Economic theory supports this outcome. The predicted outcome is that the log value of the unemployment rises in response to an increase in the external debt.

As a surrogate for macroeconomic variable in Nigeria in the current year, the log value of the unemployment (LUNE) is negative (-0.154274) when applied to the logarithm value of capital expenditure (LCXE). This means that the log value of the unemployment (LUNE), which is a component of macroeconomic variable, would decline by about 0.015% for every unit rise in the log value of the capital expenditure (LCXE) in Nigeria. The correlation between the logarithm of the recurrent expenditure and the logarithm of the unemployment is statistically significant (p=0.0249). Economic theory predicts this outcome. As the capital expenditure increases, the log value of the unemployment is anticipated to fall due to increase in job creation and income generation.

Furthermore, as a surrogate for macroeconomic variable in Nigeria in the second year, the log value of the unemployment (LUNE) is negative (-0.025284) when applied to the logarithm value of recurrent expenditure (LRXE). This means that the log value of the unemployment (LUNE), which is a component of macroeconomic variable, would decline by about 0.03% for every unit rise in the log value of the recurrent expenditure (LRXE) in Nigeria. The correlation between the logarithm of the recurrent expenditure and the logarithm of the unemployment is statistically insignificant (p=0.7456). Economic theory predicts this outcome. As the capital expenditure increases, the log value of the

unemployment is anticipated to increase due to increase in recurrent expenditure. As a surrogate for macroeconomic variable in Nigeria in the current year, the log value of the unemployment (LUNE) is positive (+0.685545) when applied to the logarithm value of oil revenue (LORV). This means that the log value of the unemployment (LUNE), which is a component of macroeconomic variable, would increase by about 0.69% for every unit rise in the log value of the oil revenue (LORV) in Nigeria. The correlation between the logarithm of the oil revenue and the logarithm of the unemployment is statistically significant (p=0.0272). Economic theory do not predicts this outcome. As the oil revenue increases, the log value of the unemployment is anticipated to fall.

Finally, using the log value of unemployment (LUNE) as a stand-in for macroeconomic variable in Nigeria in the current year, the log value of tax revenue (LTR) is negative (- 0.680_{335}). If the log value of tax revenue (LTR) in Nigeria were to rise by one unit, the log value of the unemployment (LUNE), would fall by about 0.68%. The correlation between the log of tax revenue and the logarithm of unemployment is statistically significant (p = 0.0378). Economic theory predicts this outcome. The predicted outcome of a rise in tax revenue on poverty rate is that the log value of the unemployment will fall.

Diagnostic Test

Table 4: Ramsey Reset Test, Serial Correlation LM Test and Homoscedasticity Test Results

	F-Statistic	Prob-Value
Ramsey Reset Test	4.095336	0.1803
Breusch-Godfrey Serial Correlation LM Test	23.79944	0.1434
Breusch-Pagan-Godfrey Heteroskedasticity Test	0.843590	0.6646

Source: Authors computation 2024

From the diagnostic test results in Table 4, we can see that the Ramsey Reset test for linearity found an f-statistic of 4.095336 and a computed p-value of 0.1803, both of which are greater than the 5% (0.05) critical value. Consequently, we can reject the null hypothesis and conclude that the model is correctly specified. The f-statistic is 23.79944 and the Chi-Square probability value is 0.1434, according to the Serial or Autocorrelation Test utilizing the Breusch-Godfrey Serial Correlation LM Test. This proves that there is no serial correlation in the model, as the probability value of around 14% (0.1434) is higher than the crucial value of 5% (0.05).

An f-statistic of 0.843590 and a Chi-Square probability value of 0.6646 were produced by the heteroscedasticity test that used the Breusch-Pegan-Godfrey test. With a probability Chi-square value more than 5% (P >0.05), the results point to the absence of heteroskedasticity in the model. Thus, residuals are homoscedastic, meaning they have a constant variance, an ideal property for regression.

Normality Test



The residuals are normally distributed, as shown in Figure 1, which summarizes the normalcy test. The Jarque-Bara value is 0.581549, and the associated probability value is 0.747684, both of which are more than the 0.05 threshold of significance.

Stability



Figure 2, shows summary of the stability test, the result showed that the model is stable. This is evident to the fact that the blue line is in-between the two red (-5 & +5) or less than 0.05 level of significance.

Discussion of Findings

(i) Domestic Debt and Unemployment in Nigeria

In the current years' time period of the short-run, the results of the regression analysis using the Auto-Regressive Distributive Lag (ARDL) method showed that domestic debt (DDT) has a positive association with unemployment (UNE). It supports economic theory that domestic debt (DDT) and unemployment (UNE) have a positive relationship. The general public forestalls that when governments borrow domestically, they complete with the private sector for available funds. This competition will drive up interest rates, making it more expensive for businesses to borrow money for investments and expansions. Also, the result from the p-value shows that domestic debt (DDT) has a statistically significant effect on the UNE. Therefore, the analysis concludes that the null hypothesis that the DDT and UNE are not significantly related is incorrect. The results of this study are not in line with those of earlier research by Ejinkonye et al (2024).

(ii) External Debt and Unemployment in Nigeria

A positive association between external debt (EDT) and unemployment (UNE) was inferred using regression analysis. It is consistent with economic theory that external debt (EDT) has a positive connection with the unemployment (UNE). Since high levels of external debt can

lead to substantial debt servicing burdens, where a large portion of government revenue is allocated to repay loans and interest rather than being invested in productive sectors that create jobs. This situation can constrain government spending on social programs and infrastructure development, which is crucial for employment generation. External debt (EDT) has a statistically insignificant effect on unemployment (UNE), according to the p-value of the finding. Therefore, the analysis concludes that the null hypothesis that the external debt (UNE) and unemployment (UNE) do not have a significant link is true.

(iii) Capital Expenditure and Unemployment in Nigeria

Also, in the most recent, years' worth of data, we see that the short-term link between the capital expenditure (CXE) and the unemployment (UNE) is negative. Economists' predictions about a negative correlation between the CXE and the UNE are spot on. The anticipated fall in unemployment is due to increase allocation of funds to capital projects, they create demand for labor in construction, engineering, and related sectors. This direct employment generation helps reduce unemployment rates by providing job opportunities to workers. The result's p-value, however, suggests that the capital expenditure (CXE) has a statistically significant effect on the UNE. Accordingly, the study's results approve the null hypothesis that the correlation between the CX and UNE is not statistically significant. The results of this study are in line with those of earlier research by Alhaji (2023).

(iv) Recurrent Expenditure and Unemployment in Nigeria

From what we can see, in the short term, there is an inverse link between the recurrent expenditure (RXE) and the unemployment (UNE) during the last year. Economic theory predicts a positive correlation between the RXE and the UNE. A rise in the recurrent expenditure (RXE) it is believed that recurrent expenditure on social programs, such as education, healthcare, and social welfare, plays a crucial role in human capital development and poverty alleviation. Investments in these areas enhance the skills and productivity of the workforce, thereby reducing unemployment over the long term. Recurrent expenditure (RXE) does not have a statistically significant effect on unemployment (UNE), according to the p-value of the outcome. Since the research found an insignificant link between recurrent expenditure (RXE) and unemployment (UNE), the null hypothesis that there is no relationship between the two is accepted.

(v) Oil Revenue and Unemployment in Nigeria

Finally, the estimated model's results showed that a negative oil revenue (ORV) has a shortterm effect on the unemployment (UNE) after the current year. Economic theory predicts a negative correlation between the oil revenue (ORV) and the unemployment (UNE). Oil revenue provides governments with substantial financial resources, which can be allocated towards various sectors and projects aimed at promoting economic growth and employment. As a result, governments can invest in infrastructure development, such as roads, ports, and energy facilities, which creates job directly in construction and indirectly in related sectors. Oil revenue (ORV) does have a statistically significant effect on unemployment (UNE), according to the p-value of the finding. It follows that the investigation does not support the null hypothesis that the correlation between the ORV and the UNE is not statistically significant is false.

(vi) Tax Revenue and Unemployment in Nigeria

Finally, the estimated model's results showed that a negative tax revenue (TR) has a shortterm effect on the unemployment (UNE) after the current year. Economic theory predicts a negative correlation between the tax revenue (TR) and the unemployment (UNE). As a result of the increase in tax revenue government are able to invest in infrastructure projects, education, healthcare, and social welfare programs. These investments directly create employment opportunities in sectors such as construction, education, and healthcare services, thereby contributing to a reduction in unemployment. Tax revenue (TR) have a statistically significant effect on unemployment (UNE), according to the p-value of the finding. It follows that the investigation supports the null hypothesis that the correlation between the TR and the UNE is not statistically significant is false. The results of this study are not in line with those of earlier research by Ibrahim (2023).

Conclusion

This paper investigated fiscal policy response to unemployment in Nigeria. According to the study's conclusions, unemployment is significantly affected by changes in fiscal policy variables including domestic debt, capital expenditure, oil revenue, tax revenue, etc. Regression analysis on the link between capital expenditure, oil revenue, tax revenue and unemployment found that, in the most recent years' worth of data, capital expenditure, oil revenue, tax revenue and are negatively and significantly correlated with unemployment, whereas external debt and recurrent expenditure are insignificant but positively correlated with unemployment. Lastly, according to the regression results domestic debt is positive and significantly related to unemployment in the current year period.

Recommendations

- i. Federal ministry of finance should review the country's fiscal policies. They should consider adjustments to ensure that domestic debt levels, do not inadvertently exacerbate unemployment.
- ii. Central bank of Nigeria (CBN) should adjust monetary policies to support economic growth and job creation. It can influence interest rated, manage foreign exchange reserves, and implement credit policies that can encourage lending to productive sectors.
- iii. Federal ministry of finance should ensure that fiscal policies prioritize capital expenditure in sectors with employment multipliers such as infrastructure, healthcare, education and agriculture.
- iv. Federal government through the federal ministry of finance should review and streamline recurrent expenditure allocations to prior sector with high employment generation potential

- v. Federal ministry of petroleum should promote policies that attract investment in the oil sector while diversifying into renewable energy and sustainable development projects.
- vi. Finally, the federal ministry of finance budget and national planning should conduct economic analysis, prepare the national budget, and oversee revenue mobilization efforts through taxation.

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AN EMPIRICAL ANALYSIS OF THE IMPACT OF MINIMUM WAGE INCREASE ON THE LEVEL OF UNEMPLOYMENT IN NIGERIA

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Abstract

This study examined the impact of national minimum wage rise on unemployment rate in Nigeria. It employed the Federal Government national minimum wage from 1981 to date and unemployment rates as released by the National Bureau of Statistics 2023 series. ADF (Augmented Dicky-Fullar) model was used to check the stationarity of the data. The Autoregressive Distributed Lag (ARDL) model was employed to analyse the data, keeping unemployment rate as dependent variable, minimum wage, inflation, money supply, real GDP and exchange rate as the independent variables. Data used in the study were basically secondary. The study revealed that increment in minimum wage was positive and significant in both the long and short run implying that increase in minimum wage will raise the rate of unemployment in the economy which can have a negative effect on the country's GDP. INF was negatively related to unemployment but and MS were positively related to the level of unemployment.

Keywords: Minimum Wage, Inflation, Unemployment, Real GDP.

Introduction

Income policy is usually used as a principal component of welfare boosting and poverty reduction in macroeconomic policy framework. Minimum wage legislation is a major income policy reality employed in this regard. Although minimum wage policy has both negative and positive effects on the overall economy; policy makers have used it more often for political purposes than for socio-economic reasons. Minimum wage legislations have been preceded by high inflation rates that erode the purchasing power and bring reduction in welfare (Adams, 1987). Consequently, the need for minimum wage legislation, which normally leads to a rise in nominal wage, is justified as a means of adjusting wages and

salaries of workers to match with the rise in cost of living. It is however notable that wage increase brought about by minimum wage legislation in most cases, is usually counter-productive.

Minimum Wage is an income policy tool that involves government regulation that fixes the least wage or salary that can be paid to workers in a country (Atseye, Takon & Ogar, 2014). It started during the late 19th century as an approach to mitigate exploitation of workers in sweatshops, among employers who used unfair bargaining power over the workers. The first minimum wage legislations were set up in New Zealand and Australia. The first minimum wage was enacted by the government of New Zealand in 1894. This was followed by minimum wage law enacted by Victoria State of Australia in 1896 where an amendment to the Factories Act provided for the creation of a wages board. It was later adopted in the United Kingdom in 1909, as well as in the United States in 1938. Today, several European countries have adopted a minimum wage. Its practice among developing countries was introduced during colonial rule and has remained a famous income policy tool among developing countries for improving the welfare of their workforce (Onyeche & Nse-Abasi, 2017).

Despite its popularity in several countries of the globe, there are diverse views on whether it is necessary. Already discussed, classical economics disapprove the practice of minimum wage, while Keynesian economics strongly support its practice. Several empirical studies from developed economies show that market determined wages should be adopted because it is not inflationary-induced, and it ensures optimum employment (Lemos, 2008; McConnell, Brue & Flynn, 2009; McDonald & Nilsson, 2016). In Nigerian literature, studies have shown that minimum wage legislation is beneficial towards raising employment level, though it is inflationary (Folawewo, 2007; Fapohunda, Atika, & Lawal, 2013; Atase, Takon & Ogar, 2014; Onyeche & Nse-Abasi, 2017). Unfortunately, these studies do not provide insights on how minimum wage and youth unemployment relate. It thus becomes imperative to carry out an empirical study to ascertain whether minimum wage legislation. This is based on the belief that wages determined by market forces can only promote full employment (McConnell, Brue & Flynn, 2009; McDonald & Nilsson, 2016).

On the contrary, proponents of minimum wage state that low salary and wages contribute to unemployment (Burkhauser, R. V., & Sabia, 2010). This view is popular among pro-Keynesians, who reckon that the government should engage in policy measures to improve employment, productivity, and welfare of citizens in a country (Dan, 2009). In Nigeria, studies have shown that minimum wage legislation is beneficial towards raising employment level, though it is inflationary (Folawewo, 2007; Fapohunda, Atika, & Lawal, 2013; Atase, Takon & Ogar, 2014; Onyeche & Nse-Abasi, 2017). Unfortunately, these studies do not provide insights on how minimum wage, inflation, and youth unemployment relate. It thus becomes imperative to carry out an empirical study to ascertain whether minimum wage and inflation impact on youth unemployment in Nigeria.

Theoretical Framework

Theories have been developed in the literature to explain the phenomenon of the minimum wage on unemployment.

Productivity Shocks theory

Stigler (1946), argued that an effective minimum wage law would have two direct impacts; firstly, the termination of those workers whose marginal product caused them to be valued significantly below the minimum wage rate, and secondly that the productivity of low-wage workers may in fact increase. The first effect will be more pronounced if worker's value (in competitive wage market terms) is significantly below the minimum wage, as well as if the elasticity of demand in the market is higher. In labour markets with more elastic demand, firms will be more strongly responsive to shifts in the price of labour. Hence, if labour becomes costlier, firms will decrease their labour costs by more, meaning those less-skilled workers are more likely to be laid off. The second result, the shock to productivity, was seen as a somewhat offsetting effect to layoffs by Stigler, as has been agreed upon by many other economists since. Stigler himself noted that these productivity gains could be from lowwage workers fearing poverty, though he acknowledged this seemed unlikely. Much more likely, he asserted, was that entrepreneurs would implement new production techniques. This could be due to the sudden viability of previously unprofitable techniques, as to this day, with modern day practitioners and pundits suggesting higher retail wages will inevitably lead to the automation of menial roles like checkout clerk or warehouse worker (Rotman). This was the thrust of Friedman's classic argument, as in 1966 he claimed minimum wages —will also induce employers to replaces such workers with other workers...or to produce machinery to do the same work (Friedman).

Two-Sector Models

First and foremost, the 1970s saw an expansion of the theoretical economic models explaining the impact of a new (or higher) minimum wage on employment. In 1973, Finis Welch observed the lack of total coverage across sectors of the Fair Labour Standards Act of 1938. The law often depended upon industry, product line, size of the firm, and for twenty-three years the guidelines went wholly unchanged (Welch, 1). As a response to this observation, he constructed a simplified two-sector model attempting to explain the response of employment across the economy to a wage price floor in only some sectors. Welch's model had one industry covered by the minimum wage adjusted as expected by classical theory; the minimum wage was implemented and hence employment fell in that sector. However, a number of workers migrate over to the uncovered sector of the economy, and so employment in that industry grew following the minimum wage implementation in the covered sector. As not all workers would migrate across industries, depending on their own _reservation wage', the effect of the minimum wage on total employment across the economy was dependent on the elasticity of labour supply and reservation wage rates, as well as the relative size of the covered and uncovered sectors.

Empirical Literature Review

Umar (2020) examined the impact of national minimum wage rise on unemployment rate in Nigeria. The result revealed that increment in minimum wage was positive and significant in both the long and short run implying that increase in minimum wage will raise the rate of unemployment in the economy which can have a negative effect on the country's GDP. Ajibola and Oraka (2020) investigated the impact of minimum wage and inflationary pressure on youth unemployment in Nigeria. The results show that minimum wage exerts a significant impact on youth unemployment in the country, whereas inflation does not significantly influence youth unemployment.

Parker (2017) analysed the impact of increasing the minimum wage on unemployment and inflation in the US, among low wage earners. The study found that for every one per cent increase in the minimum wage, there will be approximately a 0.15 per cent increase in inflation. This evident that minimum wage growth has a positively correlated impact on inflation. Also, it was found that there is no significant proof to determine that wage growth impacts on the unemployment rate. Also, Aniekan (2014) examined the impact of minimum wage on employment in Nigeria the results show that minimum wage and unemployment are positively related; however, there was an absence of causality between them. This led to the conclusion that hikes in minimum wages would be detrimental to employment creation policies in Nigeria.

Folawewo (2007) examined the macroeconomic effects of minimum wage policy in Nigeria. Results from the study show that a rise in the minimum wage would lead to increased productivity in all economic sectors. The impact of a minimum wage increase on employment is mixed; while it leads to the marginal rise of employment in the agricultural sector, there is a marginal fall in services sector's employment and no significant effect in manufacturing and mining and oil sectors. In terms of price effect, an increase in the minimum wage would lead to a significant rise in the general price level. A rise in the minimum wage has positive effects on household income and consumption, as well as on government balances.

Also, Aniekan (2014) examined the impact of minimum wage on employment in Nigeria using OLS and Granger Causality techniques, over the periods of 1999- 2012. The results found that minimum wage and unemployment are positively related; however, there was an absence of causality between them. This led to the conclusion that hikes in minimum wages would be detrimental to employment creation policies in Nigeria. Atseye, Takon and Ogar (2014) analysed the impact of the National Minimum wage on the socio-economic characteristics of low-income workers in Calabar Municipal Council Area of Cross River State. The results show that minimum wage did not significantly impact on poverty, employment, income stability and saving among low wage earners in the public sector. The results also provide empirical evidence to support theoretical expectations and existing research findings in socio-economic literature. Based on the findings, the study recommended that public-private partnership should formulate policies and programmes

to alleviate the burden of poverty among the citizens for the betterment of society. Lemos (2004) examined the effects of the minimum wage hike on the price level in Germany. Results from the study agree with the traditional view that there is a positive relationship between the price level and minimum wage hike. Thus, evidence support that firms respond to an increase in labour cost by increasing their price level. However, estimates obtained showed that minimum wage does not have large effects on job loss, neither does it have huge effects on price change.

Methodology

The pre-estimation tests for this study were Augmented Dickey-Fuller Unit Root test statistic and Johansen co-integration test. Ramsey Reset test, Jarque Bera and Breuch-Godfrey Serial Correlation LM Test were used for post-estimation while the data analytical technique was Autoregressive Distributive Lag Model. The variables for this study consist of FDI = Foreign Direct Investment (measured with Naira billions inflow of FDI in Nigeria); GEX = Government Expenditure (measured using total government expenditure in Nigeria); INF = inflation (measured using consumer price index); GDP = Gross Domestic Product (measured using billions of naira, ER=Exchange rate and MW =Minimum Wage Rates from 1981 – 2022. These analyses are carried out using E-view 11 software.

Model specification

This study specifically adopted the model of Ajibola and Oraka (2020), which modeled unemployment (UEM) as a function of inflation (INF), gross domestic output (GDP), foreign direct investment (FDI), government expenditure (GEX), and Minimum wage (MW) to study the impact of minimum wage on the level of unemployment in Nigeria. FDI was removed from the model and replaced by money supply (MS) and exchange rate (ER).

UEM= ψ (INF, GDP, MS, GEX, MW, ER)(1)

This can be stated mathematically as:

 $UEM = \psi_0 + \psi_1 INFt + \psi_2 GDPt + \psi_3 MSt + \psi_4 GEXt + \psi_5 MWt + \psi_6 ERt + \mu t$ (2)

Where: UEM = Youth Unemployment (measured using total youth unemployment of ages between 15 and 24years); MS = Money supply, GEX=Government Expenditure (measured using total government expenditure in Nigeria); INF = inflation (measured using consumer price index); GDP = Gross Domestic Product; MW = Minimum Wage Rates and exchange rate(ERo from 1991-2022;

To reduce the outliers among the variables, all variables will be expressed in logarithmic form.

$$\label{eq:log_UEM} \begin{split} & Log \ UEM = \psi o + \psi 1 \ INFt + \psi 2 \ Log \ GDPt + Log \ Log \ GEXt + \psi 4 \ Log \ MWt + \ \psi 5 ERt + Log \\ & \psi 6 MS + \mu t \end{split} \tag{3}$$

Where; $\psi_0 = \text{Intercept}$; ψ_1 to $\psi_5 = \text{Parameter Estimates}$; $\text{Log} = \text{Natural Logarithm and } \mu = \text{stochastic error term}$.

Unit Root Test

The unit root test was carried out using Augmented Dickey Fuller (ADF) The unit root result revealed that the integration properties of the series revolves around level [I(o)] and first difference [I(1)]. This reinforces our preference for the ARDL technique as the most appropriate for accommodating the series mixed order of integration. Generally, when data are in a different unit of measurement, it becomes necessary to transform them and arrive at the closest unit of measurement to avoid spurious results. Based on the foregoing, the data used for this unit root test for objectives one to three were the growth rates of the variables.

		Augmen	nted Dickey-	Fuller Unit	Root Test	t Results		
Variables	At level	Prob.	First	Cr	itical Value	es	Prob.	Order of
		Value	Difference				Values	Co-
								integration
				1%	5%	10%		
UEM	-1.846523	0.3536	-2.963221	-	-	-1.611593	0.0041	I(1)
				2.625606	1.949609			
MW	-0.739340	0.8255	-6.677010	-	-2.935001	-	0.0000	I(1)
				3.600987		2.605836		
INFL	-3.603075	0.0103		-3.615588	-2.941145	-		I(o)
						2.609066		
GAP	-1.879356	0.3384	-3.244134	-	-2.935001	-	0.0244	I(1)
				3.600987		2.605836		
MS	-	0.3612	-3.244805	-	-2.935001	-	0.0244	I(1)
	1.829988			3.600987		2.605836		
GEX	-2.013372	0.2802	-7.551586	-	-2.935001	-	0.0000	I(1)
				3.600987		2.605836		
EXR	-0.133410	0.9388	-4.546562	-	-2.935001	-	0.0007	I(1)
				3.600987		2.605836		

Table 1: Unit Root Test Results: (ADF)

Source: Extract from E-views 10 output

Note: The lag lengths were selected based on Shwarz-info criteria. The constant, trends and intercept are included in the level and first difference equation. The result of unit root showed that all variables were stationary after first difference, except inflation which is stationary at level. This implies that the variables have mean reverting ability, therefore any perturbation in the series will fade away with passage of time. This result justifies the application of ARDL technique. Hence the application of ARDL technique to determine the long-run and short run impact of minimum wage on youth unemployment in Nigeria.

The Impact of Minimum Wage on youth unemployment in Nigeria

To analyze the impact of minimum wage on youth unemployment in Nigeria, the optimal lag selection criteria was estimated and the results presented in the figure below



Akaike Information Criteria (top 20 models)

Figure: 1 ARDL Lag Selection Criteria

The figure above showed the lag selection criteria, the figure showed that lag 2 is the optimal lag. Based on the result of the optimal lag length, the bound test was estimated to ascertain whether there exists a long-run relationship between minimum wage and youth unemployment in Nigeria. The results are presented in the table 2 below;

Table 2: ARDI	Bounds	Test Result
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Test Statistic	Value	Signif.	I(o)	I(1)
		Asy	mptotic:	
		n	1=1000	
F-statistic	7.569315	10%	1.99	2.94
K	6	5%	2.27	3.28
		2.5%	2.55	3.61
		1%	2.88	3.99

Author's Computation Using E-views 10

The results of the bounds co integration test presented in the table2 above revealed that the F-statistic value of 7.569315 is greater than the upper bound critical value of 3.28 at 5% level of significance. Therefore, the null hypothesis of no long-run relationship between minimum wage and youth unemployment in Nigeria is rejected, meaning that there exists a long-run relationship between minimum wage and youth unemployment in Nigeria. Given the existence of long-run relationship, the short-run and long-run estimates were computed and the results are presented in the table3 below;

-				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MW)	-9.616231	2.827008	-3.401557	0.0043
D(INF)	-0.310254	0.048613	-6.382088	0.0000
D(INF(-1))	0.266996	0.040995	6.512858	0.0000
D(INF(-2))	0.148470	0.036382	4.080888	0.0011
D(GDP)	62.60805	16.27548	3.846773	0.0018
D(GDP(-1))	60.71566	14.72052	4.124560	0.0010
D(MS)	9.198947	10.42576	0.882329	0.3925
D(MS(-1))	-16.36554	10.88108	-1.504036	0.1548
D(MS(-2))	-44.69553	11.97877	-3.731230	0.0022
D(GEX)	-29.84371	6.376162	-4.680512	0.0004
D(GEX(-1))	-21.37284	6.555940	-3.260072	0.0057
D(GEX(-2))	12.93988	6.147569	2.104877	0.0538
D(EXCH)	-0.121893	0.028994	-4.204059	0.0009
D(EXCH(-1))	0.175259	0.033172	5.283271	0.0001
ECM(-1)*	-0.138126	0.108926	-1.268071	0.0000
R-squared	0.861324			
Adjusted R-squared	0.768873			
Durbin-Watson stat	2.802950			

Table 3: Short-run Estimate of ARDL Model

Author's Computation Using E-views 10

The table shows the short-run estimate of the relationship between minimum wage and youth unemployment in Nigeria. It can be observed from the results that; minimum wage had a positive and statistically significant relationship youth unemployment in Nigeria at 5% level of significance. This implies that a percentage increase in minimum wage leads to 9.61% increase in youth unemployment in Nigeria and vice versa. The result also showed that inflation had a negative and statistically significant impact on youth unemployment in Nigeria at 5% level of significance, this confirms the a priori expectation and the theoretical postulation of Philip Curve. This implies that a percentage increase in inflation will raise youth unemployment by 0.3% in the short-run. Meanwhile, the result shows that Gross Domestic Product have a positive impact on youth unemployment in Nigeria and it is also statistically significant at 5% level. Also, the result indicated that money supply had positive impact on youth unemployment in Nigeria, and it was statistically insignificant at 5% level of significance,

The result from table3 also revealed that government expenditure also had negative but statistically significant impact on youth unemployment in Nigeria at 5% level of significance implying that a percentage increase in government expenditure will lead to 29.8% increase in youth unemployment in Nigeria. Also, the table showed that, exchange rate had a negative but statistically significant impact on youth unemployment in Nigeria at 5% level of significance. This implies that 1% increase in exchange leads to 0.12% increase in youth unemployment in Nigeria in the short-run. The speed of adjustment of -0.13 is right signed

with the correct magnitude and it is statistically significant. This implies that any perturbation in the series in the short-run, equilibrium will be re-established in the long-run at the speed of 13%. The adjusted R-Squared of 0.77 means that the explanatory variables included in the model explained variation in youth unemployment and minimum wage by 77%. The Durbin-Watson statistic of 2.80 shows that the model is relatively stable.

Table 4: Long Run Estimates of the Impact of Minimum Wage on Youth Unemployment (ARDL)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MW	-4.887758	5.867339	-0.833045	0.4188
INF	-0.541889	0.137062	-3.953594	0.0014
GDP	26.28951	30.44501	0.863508	0.4024
MS	44.95669	17.97321	2.501317	0.0254
GEX	-6.700295	15.11447	-0.443303	0.6643
EXCH	-0.102392	0.022919	-4.467596	0.0005
С	28.98847	37.96610	0.763535	0.4578

Author's computation using E-views 10

The long-run results of the model showed that minimum wage had positive and statistically insignificant impact on youth unemployment in Nigeria at 5% level of significance, implying that 1% increase in minimum wage increases youth unemployment by 4.88%. Also, it is evident from the table that inflation has a positive but statistically significant impact on youth unemployment in the long-run. This indicates that 1% increase in inflation led to 0.54% decrease in youth unemployment in Nigeria. Again, gross domestic product had positive but statistically insignificance impact on youth unemployment at 5% level of significance in the long-run. This means that, 1% increase in gross domestic product increased youth unemployment by 26.28% in the long-run. In a similar way, the long-run estimates indicated that money supply had a positive and statistically significant impact on youth unemployment. This means that, 1% increase in money supply would increase youth unemployment by 44.95%. Also, government expenditure had positive but statistically insignificant impact on youth unemployment in Nigeria in the long-run, meaning that, 1% increase in government expenditure resulted to a 6.70% increase in youth unemployment in Nigeria. Exchange rate was found to have a positive but statistically significance impact on youth unemployment at 5% level of significance, in the long-run. This implies that, 1% increase in exchange rate resulted to 0.10% reduction in youth unemployment.

Diagnostic Tests

In order to validate the performance of the model, stability test (Ramsey RESET Test) for model Mis-Specification, Breusch-Godfrey LM test for autocorrelation, and Breusch-Pagan-Godfrey heteroscedasticity test were performed and results are presented in the table below.

Tests	Statistics	Probability values
Ramsey RESET test (F-statistic)	7.625336	0.1162
Autocorrelation (Breusch-Godfrey LM test)	4.281397	0.2395
Heteroskedasticity (Breusch-Pagan-Godfrey)	3.936742	0.3056
Normality Test (Jarque-Bera)	3.990628	0.135971

Diagnostic Tests (ARDL)

Source: Author's computation using Eviews 10

The results from the table revealed that the model did not suffer from mis-specification problems, autocorrelation Heteroskedasticity problems and the variables in the model are normally distributed. The result of Ramsey RESET test showed that, the model is stable. The model is therefore valid for policy formulation and implementation.

Furthermore, the stability of the estimates was tested using the CUSUM and CUSUM of Squares plots as shown in figures below



CUSUM Plots of the Estimates

The CUSUM plot showed that the estimates were stable in the long-run since the CUSUM line lies within the bounds of the 5% significance level. This suggests no change in the behaviour of the variables in the overtime. The implication is that, parameters in the model did not suffer from any structural instability over the period under study. That is, all the coefficients in the error correction model are stable.

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CUSUMQ Plots of the Estimates

Figure 5.2 also showed that the plot of CUSUM of Squares plot for the model showed a slight deviation from the 5% critical bound, it however returned to normalcy shortly afterwards. This implies that the parameters of the model suffered from structural instability at a point, but reverted back to stability over time.

Discussion of Findings

The paper analyzed the impact of minimum wage on youth unemployment in Nigeria. The study found that minimum wage had a positive impact on youth unemployment in Nigeria both in the short-run and the long-run. This may be attributed to the fact that higher minimum wages increase the cost of labor for employers. Small businesses or those in low-margin industries may find it financially challenging to hire more workers, leading to a reduction in entry-level positions, which are typically filled by young, inexperienced workers. Additionally, when the cost of employing someone increases, businesses might choose to invest in automation or more experienced workers who justify the higher wages with greater productivity. This can further reduce the number of available jobs for younger, less experienced individuals who are often seeking their first job.

Policy Implication

Based on the findings of the study which shows a positive impact of minimum wage increase on youth unemployment in Nigeria, policymakers must balance the goal of providing a livable wage with the potential for job loss among vulnerable groups like young, inexperienced workers. There is also every need for a more nuanced approach to minimum wage policies. For instance, policymakers could consider implementing a tiered minimum wage system, where lower minimum wages apply to younger or less experienced workers. This would help reduce the burden on employers while still offering protections. Additionally, targeted wage subsidies or tax incentives could be provided to businesses that hire and train young workers, offsetting the higher costs of employment and encouraging job creation. Another implication is the importance of complementing minimum wage policies with strong vocational training and apprenticeship programs. By enhancing the skills and employability of young workers, these programs can help them meet the higher productivity demands that come with increased wages.

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SCIENCE EDUCATION DEVELOPMENT AND THE CHALLENGES ACHIEVING SUSTAINABLE DEVELOPMENT GOALS IN NIGERIA

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Abstract

ducation is the greatest investment that a nation can make for the development of its economic, political, sociological and human resources. Education is the greatest force that can be used to bring about transformation. Science Education is crucial to the pursuit of sustainable development goals. It is a fulcrum on which every nation rests to build a strong and self-reliant manpower base for sustainable development. This paper examined the ways that science education has contributed to achieving the Sustainable Development Goals (SDGs) in Nigeria. Challenges faced with the achievement of these goals were also reviewed. The sustainable development goal is a transformative plan of a nation towards improving its economy, social and environmental systems. This paper equally discussed six of the goals that are relevant to science exhaustively. These include; hunger and food security, quality education, good health services, provision of clean water and sanitation among others. The implication to national development of the sustainable development goals was also discussed. To develop policies and programmes that are comprehensive by integrating all stakeholders so as to achieve sustainable development goals in Nigeria are among the recommendations outlined.

Keyword: Education, Food security, Human resources, Science education, *Water*.

Introduction

Education is largely the process of training an individual to be actively involved in development of talents that can be harness for personal and societal benefits. There is no doubt that an effective educational system is the fulcrum for national development and ultimately for sustainable development of every nation. According to Nnabona and Asodike

(2014) education is a process by which human being and societies reach their fullest potentials. In a nut shell, education is a critical tool for promotion and improving the capacity of the people in soling developmental problem in the society.

Hornby (2012) education is teaching and learning that encompass specific knowledge, belief and skills. Also, Herman (2013) opined that educational effort ate deliberately chosen to influence and assist people with the aim of improving knowledge, physical and morals that can gradually deliver the people to live happily and all that will be beneficial to the people and the society. Education therefore, is a deliberate plan process through which an individual is assisted to attain the development of potentials. The trust of this paper is to evaluate science education and the challenges achieving sustainable development goals in Nigeria. According to Obodo, Nweze and Ani (2023), the world began implementation of the 2030 Agenda for sustainable development in the first day of 2016. This is a transformative plan of action to address urgent global challenges. This agenda is a pathway for people and the planet that will build on the successes of the Millennium Development Goals (MDGs) and ensure sustainable social and economic progress.

Concept of Science and Science Education

Science generally is considered as the process through which knowledge is arranged in an organized pattern. That is, science could be describe as the structure and behavior of the physical and natural world and society especially through observation and experience (Omele & Ozoji, 2014). Layndsay (2009) defines science as the process of observation, identification, description, experimentation, investigation and theoretical explanation of natural phenomena. In the same vein, Uza (2014) stated that science is the investigation of nature to satisfy the need to know. Science is practical oriental and has ultimate goal aimed at satisfying the human needs solving scientific problem. Science education can be described as a culture and ways of perceiving and doing things. There is no doubt that the way a society perceives and does things is crucial to the problem-solving capabilities of that society. Science education is particularly important in everyday life because there is no one aspect of daily life that science had not touched. It generates knowledge through discoveries and equips the learners with the required skills which to make life easier than has ever been.

Pember and Humber (2009) as a process of teaching or training especially in school to improve one's knowledge about the environment and to develop one's skills of systematic inquiry as well as national attitudinal characteristics. According to Lewis (2015) science education identifies natural phenomena appropriate to child's interest and skills Nigeria need a functional science education to meet the need of the society. Science education is directly towards acquiring critical thinking and exploration, leading to sustainable development. Science education is undoubtedly a key which has understanding and has answers to some burdensome sustainability issues at it can bring about future oriented solution to the problem of decreasing quality in environmental conditions. The Sustainable Development Goals in science is the strengthening of the scientific capacity basis for Sustainable Management enhancing scientific capacity and capability.

Sustainable Development Goals

The Sustainable Development Goals (adopted by the United Nations General Assembly in September 2015) run from 2016 to 2030 and are formally the goals of the United Nations in transforming our world. The 2030 Agenda for Sustainable Development is an agenda that sets out the vision, principles, and commitments to a fairer and more sustainable world for all. According to Obe and Oladepo (2023) the Global Goals are a set of objectives within a universal agreement to end poverty, protect all that makes the planet habitable, and ensure that all people enjoy peace and prosperity, now and in the future. The Goals were adopted by all member states of the United Nations formally in 2015, for the period 2016 - 2030 to address the overwhelming empirical and scientific evidence that the world needs a radically more sustainable approach.

The SDGs in science is the strengthening of the scientific basis for sustainable management; enhancing scientific capacity and capability. Most arguments about how science can bring about development in human societies that is, improvement in quality of lives of individuals such that they are able to attend their productive capabilities and aspirations) are based upon this purported link between science and development (Obodo, Nweze & Ani,2023).

According to Beishem (2015), the Sustainable Development Goals includes the following;

- i. End poverty in all its forms everywhere
- ii. End hunger, achieve food security and improve nutrition and promote sustainable agriculture.
- iii. Ensure inclusive and equitable quality education and promote lifelong learning opportunity for all.
- iv. Ensure health lives and promote well-being for all ages.
- v. Achieve gender equality and empower all women and girls.
- vi. . Ensure availability and sustainable management of water sanitation for all.
- vii. . Ensure access to of affordable, reliable, sustainable and modern energy for all
- viii. Promote sustainable inductive and sustainable economic growth, full and productive employment and decent work for all.
- ix. Build resilient infrastructure, promote inclusive and sustainable industrialization foster innovation.
- x. Reduces inequality within and among countries.
- xi. Make cities and human settlements inclusive, safe resilient and sustainable.
- xii. Ensure sustainable consumption and production patterns.
- xiii. Take urgent action to combat change and its impact.
- xiv. Conserved and sustainably use the oceans, seas and marine resources for sustainable development.
- xv. Protect, restore and promote sustainable use of tangential ecosystems, manage forests, combat desertification, and halt and reserve land degradation and halt biodiversity lose.
- xvi. Promote peaceful and inclusive societies for sustainable development provide access to justice for all and build effective, accountable and inclusive institutions at all levels

xvii. Strengthen the means of implementation and revitalized the global partnerships for sustainable development

The sustainable development goals are about sustainable development common to all nations of the world. What makes them special is that they come with specific target indicators for measuring achievements and dates for achieving these targets. Development is a gradual or progressive enhancement of human, natural and material resources of community, nation and the entire society. A nation's development potential depends upon its ability to continuously educate its citizens as well as create armies of skilled manpower (Iji & Agbulu, 2006). The goals have their origin in the ideas universally shared by all member nations of the United Nation Organization (UNO) to eliminate human misery, improve the quality of life of the member nations and to do so in an environmentally sustainable way.

A major theme, that could be usefully explored, is how science can play a role in expediting the achievement of these goals by the set target. Scientific advancement has most of the time in the history of mankind, being an inherent slow process demand driven (Otor, Kayang & Bisong, 2015). Currently, there is much human misery on your planet. Unless we do something now, the outlook is bleak. The demand driven nature of scientific advancement, coupled with the fact that many nations UN are already highly scientifically advanced gives hope, provided the will is there, it is possible to leverage science in the achievement of the sustainable development goals objectives.

The sustainable development goals that this paper x-ray because of their relevance to science education are item numbers; 2, 3, 4, 6, 7 and 9.

i. End Hunger, Achieve Food Security and Improved Nutrition and Promote SustainableAgriculture.

The country's education system should seek to end hunger and all forms of malnutrition through high investment on agriculture. It is premised on the idea that everyone should have access to sufficient nutritious food, which will require widespread promotion of sustainable agriculture, a doubling of agricultural productivity, increased investment and properly functioning food markets. Kyari (2010) pointed out that; what is science and what entry point does it provide for the achievement of sustainable development goals? Science Education is the pursuit of knowledge and understanding of the natural and social world following a systematic methodology based on evidence.

ii. Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning Opportunity for all

Science education in Nigeria should focus on the acquisition of foundational and higherorder skills, greater and more equitable access to technical and vocational education. The science education in Nigeria should revolve around the knowledge that equip its citizenry with skills and values needed to function well and contribute meaningfully to the society. In agreement with this type of education the Nation Policy on Education (NPE, 2013) states that education maximizes the creative potentials and skills of the individual for self-fulfillment and general development of the society. The process of achieving this national competency using science education is itself a development exercise because of its inherent property in capacity building and the associated employment opportunities it creates (Adebayo, 2002 & Brinkerhoff, 2004).

iii. Ensure Health Lives and Promote Well-Being for all Ages

The science education in Nigeria should be health driven. Science education should place emphasis on health issues reproductive and maternal and child healthcare. Prevention on endemic health challenges such as Human immune virus, Acquired immune deficiency syndrome (Hiv/Aids), Malaria, Tuberculosis, environmental disease among others. According Onakuse (2007) Nigerian is not in short supply of political will to successfully implement these policies and programmes to tackle these challenges but lacks bold step to properly manage its economy towards this direction.

iv. Ensure Availability and Sustainable Management of Water Sanitation for all

The type of education that equip citizenry with knowledge to manage water resources should be encouraged through science education. This goes beyond drinking water, sanitation and hygiene. It is the type of education that would address the quality and sustainability of water resources which are critical to the survival of people and the planet. This is because the 2030 agenda recognizes the centrality of water resources to sustainable development and the vital role that improved drinking water, sanitation and hygiene play in progress in other areas, including health, education and poverty reduction. Barnes (2010) shared the same opinion when he reported that poverty eradication should be given desired attention if any society is to attain global bench mark in its development.

v. Ensure Access to Affordable, Reliable, Sustainable and Modern Energy for all

It is an understatement to mention that energy is critical to human development and industrialization. Access to affordable and sustainable energy is crucial to achieving many of the sustainable development goals from poverty eradication through advancements in health, education, water supply and industrialization to mitigating climate change. Energy access, however, varies widely across countries, and the current rate of progress in Nigeria falls short of what will be required to achieve this goal. Redoubled efforts is needed particularly for countries with large energy access deficits and high energy consumption (Ifeanyi, 2012). This calls for radical and proactive science education that would make this happen.

vi. Build Resilient Infrastructure, Promote inclusive and Sustainable Industrialization and Foster Innovation

Education that could provide sustainable development should be dependable, reliable and innovative. Science education is the option because it could provide infrastructural materials that serve the basic physical facilities essential to business and society. This is very essential because industrialization drives economic growth and job creation, thereby
reducing income inequality, innovation is fundamental for human development because it expands the technological capabilities of industrial sectors and leads to the development of new skills (Ajiboye, 2011).

Challenges affecting the Achievement of Goals

The country's population is growing at geometrical progression without corresponding growth in basic infrastructure and social amenities such as electricity, good roads, potable water, adequate health services and educational facilities. These pose dangers for effective planning hence reduce sustainable goals objectives. It has been argued that commitment to sustainable development both for the present and future generations will be meaningless of collaborative approach is not employed. This is where Nigeria differs from other countries in Africa in the approaches of addressing the challenges of sustainable development. Issues of good governance and improved popular participation in governance and partnership with national and international development partners are also being mainstreamed in to national agenda for development. The Nigeria government must move along with the global best practices in governance if sustainable development goals is to be achieved. Onakuse (2007) argued that the major causes of the failure of these programmes are reforms hinge on corruption, political divide, lack of continuity, a weak private sector, absence of due process and ethnicity. All the above, constitute indices for national development. Nigeria's government should therefore address these issues with hope for positive change if the country desires for a sustainable development goals to have its place.

Implications to Nation Development

The scientific method provides thinking and planning model that could benefit the implementation of these goals. Appropriate application of science education in actualizing these sustainable development goals would stir up the development of this nation. Through science one would acquire greater knowledge of how things work in nature. It is therefore expected that through this knowledge, the people of the country are better equipped to implement and find effective and efficient ways of solving national issues. It is no longer in doubt to believe that national scientific competence and the quality of life of the citizens of a nation have a close correlation. A nation therefore needs to attain a high level of national scientific competence if it wishes to have a high quality of life similar to those enjoyed by western industrial nations. The process of achieving this national competence in science is itself a development exercise because of its inherent property in capacity building and the associated employment opportunities it creates (Brinkerhoff, 2004). Sustainable Development Goals (SDGs) if achieved, would attract the following; generate employment, improved agricultural productivity, improve health services, ensure equitable and quality education. Also, the benefits that might arose from SDGs include, availability and effective management of water supply, promote sustained energy supply, promote infrastructural industrialization among others.

Conclusion

A sustainable world is one where people can escape poverty and enjoy decent work without

harming earth 's ecosystem and resources; where people can stay healthy and get the food and water, they need; where everyone can access clean energy that does not contribute to climate change; where woman and girls are afforded equal rights and equal opportunities. It is undeniable that Nigeria is currently confronted with formidable challenges. Extreme poverty and hunger remain a plague. New disease is emerging and old ones are yet to be curtailed. The country is far from achieving food security, quality, education, stable energy supply, good governance among others. Science education may therefore provide the country with an indispensable avenue through which the country could address these problems. The SDGs may mark the starting point for the actions needed and provided the demand side for which our supply of science and technology should be based for the nation to meet its aspiration for a world in which human misery is reduced to the barest minimum. Every nation of the world including Nigeria should therefore initiate intellectual strategies to arrest these global ugly situations. These could be achieved by developing a large pool of scientifically literate and skilled workforce and enabling environment for her citizens.

Recommendations

The following recommendations were made in order to achieve the sustainable development goals in Nigeria:

- i. Enacting Policies and programmes to address the challenges of Sustainable Development should be comprehensive by integrating all stakeholders
- ii. The goals of science education should be oriented toward achieving a sustainable developed nation through science education.
- iii. The quality of science education be improved to the best practices in the world, and above all, it should be made affordable and available for all citizens.
- iv. Stakeholders in education should put in a concerted efforts and resources towards attainment of the objectives of science education by engaging services of qualified and experienced science teachers.

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IMPACT OF ECONOMIC RECESSION ON NIGERIA'S MACRO ECONOMICS PERFORMANCE (1991 TO 2022)

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Abstract

his paper seeks to examine and analyzed the main reasons for the emergence of the current economic recession in Nigeria. The variables used for the study include unemployment, inflation and Gross Domestic Product. The methodology of the paper includes Augmented Dickey Fuller test (ADF) test, Johansen cointegration test and VAR model with time series data from 1991-2022. The data was sources from Central Bank of Nigeria. The finding of the study indicates that a unit change in unemployment lagged by one year led to a 66% increase in Gross domestic product, also a unit increase in inflation lag by one year led to a 6% increase in unemployment. At the same time, a percentage increase in GDP led to a 92 percent increase in employment. From the pairwise granger causality tests, the results reveal that economic recession captured by GDP granger causes both unemployment rate and inflation rate within the period of 1991 and 2022. This means that economic recession has significant influence on unemployment, GDP and inflation. The paper recommends among other, effective government intervention through an effective synchronization between measures of fiscal and monetary policy in the direction of increasing liquidity in the economy, decreasing interest rates, increasing investment and employment, increasing the income of economic entities and finally, in the direction of increasing aggregate demand as an exit from the phase of recession.

Keywords: Economic recession, Impact, Macroeconomics, Performance

Introduction

Undoubtedly, part of the macroeconomic goals which the government strives to achieve is the maintenance of stable domestic price level and full-employment. Macroeconomic performance is judged by three broad measures- unemployment rate, inflation rate, and the growth rate of output (Ugwuanyi, 2004). Since the advent of economic recession in Nigeria, the economy continues to break records on the downside. Inflation was at 18.63 percent being the highest in 11 years. Foreign reserves currently at N24.5Bn are their lowest in 11 years at which time the country's GDP stood at US\$112Bn, less than a quarter of where it stands today. The naira continues to hit new lows against international currencies, the National Bureau of Statistics has stated that Q2 capital importation of \$647.1 million fell by 76 percent relative to the second quarter of 2015 and is the lowest level on record and finally it is predicted that Nigeria's economy may shrink by 1.7 percent in 2017 which would mark a full year in recession last seen 25 years ago. The government continues to grapple with rising inflation coupled with slow to negative growth and is in a quandary as to whether to tighten monetary supply to reduce inflation or to increase liquidity to induce growth and create jobs. Against the wishes of the Finance Ministry, the Central Bank during its last policy meeting voted against further easing and maintained interest rates at 14 percent choosing to focus on tackling inflation and retaining interest rates at the current level in order to attract foreign investment into the country via the higher yields on offer.

During economic recession, economic activities slow down, resulting to low level of money in circulation and low earnings by households. This ultimately led the low-income households to starts looking for alternatives sources of income to support their families towards improving their living standard (Nwuzor, 2016). The direct impact of the economic recession on Nigerian's economy has thus far been enormous as most commercial banks in the country refrained from investing in the Nigeria stock market and business ventures. This is why most commentators argue that Africa is so far insulated from the direct effects of the financial crisis. The current economic recession affects Nigeria macroeconomic performance in two possible ways; First, there could be financial contagion and spillovers for stock markets in Nigeria. Stock markets in the region showed some volatility, driven by a selloff by foreign investors. The Nigerian stock market for instance has been experiencing a continuous downward trend in prices of stocks for over two months now.

Concept of Recession

A recession is when the economy declines significantly for at least six months. That means there's a drop in the following five economic indicators: real GDP, income, employment, manufacturing, and retail sales. People often say a recession is when the GDP growth rate is negative for two consecutive quarters or more. But a recession can quietly begin before the quarterly Gross Domestic Product reports are out. (Kimberyl Amadeo 2017) Noko (2016) noted that the first sign of a recession is when there are several quarters of slowing but still positive growth. Often a quarter of negative growth will occur, followed by positive growth for several quarters, and then another quarter of negative growth. For instance, Nigeria fourth quarter for 2016 is 0.8% growth rate this is still an indication of recession. The country cannot say it have conquered recession because of the positive value.

Concept of Macroeconomic Performance

Macroeconomic performance refers to an assessment of how well a country is doing in reaching key objectives of government policy. The main aim of policy is usually an improvement in the real standard of living for their population. The term 'real' means that we have considered the effects of rising prices so that we get a better picture of how many goods and services we can afford to buy and consume. (Geoff Riley FRSA 2017)

Theoretical Framework

Classical and Keynesian Approach

The classical theory was the main body of economic theory (Say's Law and the Quantity Theory of Money) accepted by Economists from the 18th Century until 1936 when Keynes published his book, the General Theory of Employment, Interest and Money. In the Classical theory, market forces operated in the system such as to maintain full employment and productive resources and consequently keep the aggregate output at the level producible under conditions of full employment. The factors which determine the productive capacity of an economy are the quantity and quality of available resources in the economy, skill and efficiency (technology) with which these resources are combined. However, Keynes disagrees with the Classicals on the concept of self-regulatory equilibrium. The focal points of the Keynesian theory are increasing aggregate demand, money supply, planned spending, interest rates regulation, devaluation, increasing government spending stimulus/injection. Deficiencies in effective demand cause unemployment, inflation and economic recession. Unemployment is not just a short-run voluntary issue as claimed by the classical theory, but a problem caused by ineffective demand and bad economic planning,

Empirical Literature

Revoredo-Giha. Leat and Renwick (2020) studied the relationship between economic recession, output and unemployment in Scotland. Their study was influenced by a decline in Scottish labour market conditions. The finding of their study shows that the differences in the composition of the economy of rural and urban areas lead to a strong relationship between economic recession, growth and employment in urban areas. Qazi (2021) got negative relationship between economic recession, unemployment and economic growth of Pakistan. The result confirmed with Okun law. Okun's law states that if unemployment moves above from normal point by one percent, GDP growth falls by two percent and viceversa which leads to recession in the economy. It is estimated that economic recession, real GDP and unemployment has direct relationship. The range of the study covers 1980 to 2008. Econometric models were used to ascertain the relationship between recession unemployment and economic growth. Rigas et al (2021) examined whether the Okun's law continues to be valid in today's economic environment. Their study uses data with regard to the unemployment and economic recession of three countries, Greece, France, and Spain. From the findings the study concludes that the reaction of GDP to change in unemployment and, more generally to Okun's coefficient differ substantially among three counties. Furthermore, based on the causality findings, a two-way causal relation between unemployment and economic recession does not exist for any of the three countries.

Kreishan (2019) used annual data covering the period 2020 to 2022, to ascertain the relationship between economic recession, unemployment and economic growth of Jordan. The empirical results revealed that Okun's law have not been confirmed for Jordan, Thus, it can be suggested that lack of economic growth does explain the economic recession problem of Jordan. Therefore, economic policies related to demand management would not have an important effect in reducing unemployment rate. Accordingly, implementation of economic policies oriented to structural change and reform in labour market would be more appropriate by policy makers in Jordan. The result of this study is in line with other studies in Arab countries. Noor and Ghani (2022) engaged in a study to examine the relationship between economic recession, output and unemployment in Malaysia during 2018 to 2021. Their study applied basic econometric analysis of testing stationary using ADF and Phillip-Perron test. The result confirmed that there is a negative relationship between economic recession unemployment and economic growth. The coefficient of the regression result is -1.75 and it is significant at 1% level. It means that a 1% decline in unemployment will increase GDP by 1.75%. Furthermore, they confirmed that there is a two-way causality between recession, unemployment and GDP in Malaysian economy.

Abiodun and Fatai (2020) found positive relationship between economic recession, unemployment and economic growth of Nigeria. The study covers the period 2016 to 2019. Using Engel Granger and Co integration test and Ordinary Least Square (OLS) techniques. Obadan and Odusola (2018) discovered that unemployment and growth are inversely related to economic recession. They also discovered that growth response to unemployment varied among sectors of the economy. For example, employer in industrial sector use less labour to accomplish high volume of production thereby leading to unemployment and economic recession. From the study reviewed above, it appears that there seems to be more empirical evidence of a negative relationship between economic recession, unemployment and GDP in both developed and emerging economies.

Methodology

Data used for this study were secondary data; they are annual time series data on Unemployment Rate (UMP), Inflation Rate (INF) and Gross Domestic Product (GDP) for the period of 1991 - 2022. All data used for the relationship between unemployment and inflation in Nigeria are sourced from Central Bank (CBN) statistical bulletins, monthly and quarterly publication.

Model Specification

To empirically investigate impact of economic recession on inflation, real GDP and unemployment in Nigeria, Unemployment Rate (UMP) was used as the dependent variable while Inflation Rate (INF) Exchange Rate, and Gross Domestic Product (GDP) are the explanatory variables. The model is specified below;

UMP = f(Inf, Gdp)

The linear regression equation derived from the functional relationship above is: $UMP_t = \beta_o + \beta_t INF_t + \beta_2 GDP_t + \mu_t$

UMP is unemployment, INF denotes inflation, GDP stands for Gross Domestic Project.

Analytical Technique Unit Root Test

Augmented Dickey-Fuller (ADF) test was employed for unit root test and order of integration test. The general form of (ADF) for the unit root test is estimated in the following equation:

 $\Delta y_{t=}\alpha_{0+}\alpha_{1}y_{t} + \alpha \Delta y_{t+\mu}$

Cointegration Test

The Johansen systems procedure was used to test for the presence of a long run relationship. Variables are said to be co integrated if they are affected by the same long run influence. Johansen and Juselius (1990) can be used to distinguish between the existence of one or more co integrating vectors and also generate the test statistics with exact distributions. Thus, assuming a vector autoregressive (VAR) model;

 $\Box \Delta X = \sum \Gamma i \Delta X + \Omega X + \mu + \varepsilon \Box \Box \Box \Box$

Granger Causality Test

The Granger (1969) causality procedure is explained as follows; the question of whether y causes is to see how much of the current can be explained by past values of and then to see whether adding lagged values of can improve the explanation. For a simple bivariate model, one can test the following equations:

$$X_t = \alpha_0 + \sum \alpha_i Y_t + \sum \beta_j X_t + \mu_t$$

 $Y_t = \alpha_o + \sum \beta i X_t + \sum \alpha_j Y_t + \varepsilon_t$

Vector Auto-Regressive Model (VAR)

VAR model was used to capture the linear interdependencies among variables. VAR models generalize the univariate autoregressive model (AR model) by allowing for more than one evolving variable. All variables in a VAR enter the model in the same way: each variable has an equation explaining its evolution based on its own lags and the lags of the other model variables.

Results and Discussion

Unit Root Test Result

In other to test for the presence or absence of unit root in the data used for the empirical analysis, Augmented Dickey-Fuller (ADF) test was employed and the test result is as presented below:

Variables	Level		1 st difference			
	ADF VALUE	5% CV	ADF VALUE	5% CV	ORDER OF	REMARKS
UMP	2.044501	3.552973	5.352077	- 3.557759	I(1)	Stationary
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	555 11	5 551155		1
INF	3.048992	3.552973	5.745888	-3.557759	I(1)	Stationary
GDP	2.128327	3.552973	5.279981	-3.557759	I(1)	Stationary

Table 1: Unit root test result

Source: Researcher's Computation using E-views

From the table above, it was discovered that none of the variables was stationary at level as there ADF values (2.044501, 3.048992 and 2.128327) were less than 0.05 critical value (3.552973, 3.552973 and 3.552973), but at first differencing all the variables (UMP, INF, and GDP) became stationary as their ADF values (5.352077, 5.745888, and 5.279981) became greater than their 0.05 critical value (3.557759, 3.557759, and 3.557759). These indicate that all the variables were stationary and integrated of order 1, I (1).

Cointegration Test Result

Johansen co integration test for the series UMP, INF and GDP is presented in table two (2) below.

Table 2 Trend assumption: Linear deterministic trend Series: UMP INF LGDP Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.461220	27.67440	29.79707	0.0862
At most 1	0.272954	9.739407	15.49471	0.3013
At most 2	0.016932	0.495223	3.841466	0.4816

Source: Researcher's Computation using E-views

 $Trace \, test \, indicates \, no \, cointegration \, at \, the \, 0.05 \, level$

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: Researcher's Computation (Using Eviews)

Vector Auto-Regressive Model (VAR)

The Vector Auto-Regressive Model is used in econometrics analysis when the variables have no cointegrating equation, as such the Vector Auto-Regressive Model emanated to show the short run impact.

Table 3 Vector Autoregression Estimates Included observations: 21 after adjustments Standard errors in () & t-statistics in []

	UMP	INF	LGDP
		<i>.</i>	
UMP(-1)	0.668413	-0.061758	0.003939
	(0.12253)	(0.63417)	(0.00846)
	[5.45491]	[-0.09738]	[0.46566]
INF(-1)	0.068222	0.605155	0.004125
	(0.03372)	(0.17454)	(0.00233)
	[2.02294]	[3.46721]	[1.77171]
LGDP(-1)	0.926905	-1.698611	0.993710
	(0.36626)	(1.89556)	(0.02529)
	[2.53071]	[-0.89610]	[39.2971]
С	-1.880076	22.76700	0.136876
	(2.24083)	(11.5972)	(0.15471)
	[-0.83901]	[1.96315]	[0.88473]
R-squared	0 881506	0 451274	0.003264
Adi R-squared	0.868440	0.200204	0.002516
Sum sa reside	207.0426	5545 612	0.992510
S F equation	207.0420	14 2215 4	0.900900
F-statistic	67 0118	7 401615	1227 150
Log likelihood	-72 42062	-124 2821	0.444008
Akaike AIC	1 00 1870	8 282717	-0.251222
Schwarz SC	4.994079	8 467747	-0.351232
Mean dependent	5.1/9910	20 52122	8 180155
S D dependent	7.624607	18 25 422	2 2000 40
b.b. dependent	7.054007	10.33423	2.209949
Determinant resid covariance (dof adj.)	44.94661	
Determinant resid covariance	29.69636		
Log likelihood	-184.5222		
Akaike information criterion	12.67885		
Schwarz criterion	13.23394		

Source: Researcher's Computation using E-views

From VAR result presented above, the coefficient of UMP (-1) is 0.668413 implying that a unit change in unemployment lagged by one year led to a 66% increase in Gross domestic product. The coefficients of INF (-1) is 0.068222 implying that a unit increase in inflation lag by one year led to a 6% increase in unemployment. At the same time, GDP (-1) has a coefficient of 0.926905meaning that a percentage increase in GDP led to a 92 percent increase in employment. Also the computed R² value (0.88) of which is the coefficient of multiple determinations indicates that our model satisfies the requirement for goodness of fit. The value shows that 88% of the variations in the unemployment (UMP) are explained by the variation of the explanatory variables namely; inflation rate (INF), and gross domestic product (GDP), while the remaining 12% is explained by variable not included in the model

Granger Causality Test Result

Pairwise Granger Causality Tests Lags: 2

Null Hypothesis: Obs	<u>F-Statistic</u>		<u>Probability</u>
UMP does not Granger Cause 21	6.64937		0.53429
GDP			
GDP does not Granger Cause			
UMP			
INF does not Granger Cause GDP 21	0.46755	0.00504	_
GDP does not Granger Cause	$6.24906 \\ 0.58661$	$0.03454 \\ 0.00654$	
1NF	1.72374	0.19976	-
INF does not Granger Cause 21			
UMP			
<u>UMP does not Granger Cause</u> <u>INF</u>	<u>1.94915</u>		<u>0.16429</u>

Source: Researcher's Computation using E-views

From the pairwise granger causality tests, the results reveal that economic recession captured by GDP granger causes both unemployment rate and inflation rate within the period of 1991 and 2022. This means that economic recession has significant influence on unemployment, GDP and inflation. However, the result further revealed that while inflation granger causes GDP, unemployment did not granger causes GDP. This implies that inflation further help to worsen the economic recession in the country but unemployment did not play any significant role on how far the economic recession lasted in the country within the study period. While GDP and inflation has bidirectional relationship, GDP and unemployment has a unidirectional relationship where GDP is the one causing unemployment in the country.

Discussion of Finding

The result revealed that Okun's law holds in Nigeria. Okun's law means that a one percent increase in the growth rate above the trend rate of growth (or the growth in potential output) would lead only to three percent in the reduction of unemployment. The result of the study

indicates that a unit change in unemployment lagged by one year led to a 66% increase in Gross domestic product, also a unit increase in inflation lag by one year led to a 6% increase in unemployment. At the same time, a percentage increase in GDP led to a 92 percent increase in employment. From the pairwise granger causality tests, the results reveal that economic recession captured by GDP granger causes both unemployment rate and inflation rate within the period of 1991 and 2022. This means that economic recession has significant influence on unemployment, GDP and inflation. Reversing the causality, a one percent increase in unemployment will mean roughly more than three percent loss in GDP growth. It also implies that output and unemployment does not move one for one. This relationship implies that the rate of GDP growth must be equal to its potential growth just to keep the unemployment rate constant, therefore to reduce unemployment rate in an economy the rate of GDP growth must be above the growth rate of potential output. Although, Okun's law has been criticized by empirical works that it didn't hold in developed countries but the empirical findings revealed that the law holds in Nigeria. It is therefore important that policy makers who want to solve their unemployment problem should diversify the economy to increase their growth rate since it is the catalyst for reducing unemployment rate.

Conclusion

This study represents an attempt to investigate the impact of economics recession on selected macroeconomic variables in Nigeria. Based on annual data from Central Bank of Nigeria's Statistical Bulletin, the study covers the period 1991to 2022. The methodology adopted include ADF test, cointegration test VAR and causality test. The tests reveal that there is evidence of Okun's law in Nigeria for the period of the study. The study further revealed that for every one percent decrease in GDP unemployment rate will be increasing by 9%. This was collaborated by the granger causality test that revealed that economic recession captured with GDP growth rate granger causes both unemployment and inflation in Nigeria within the sample period.

Recommendations

Based on the findings of this research work, it is necessary to provide recommendations that would aid Nigeria economy

- i. Inflation-unemployment relationship in Nigeria has been established to be positive as such policy makers should weigh the options of coming up with a proficient policy that will strike a balance between inflation and unemployment in Nigeria as this will go a long way in improving the living standard of the timing populace.
- ii. Holistic effort should be made by governments at all levels to create jobs and arrest unemployment. Crimes, unemployment, inequalities, inflation etc. need to be adequately addressed by the policy makers to check the crime rate in the country.
- iii. The government must take initiatives in balancing fiscal and monetary policies, rising the consumer confidence and spending levels in order to come out of recession, building long-term Economic resilience through proper monitoring, and development of the money market provision of some macro-economic environment to promote private sector growth.

- iv. Government should encourage and promote the manufacturing. Sector, though provision of soft loans to them. Government should also try and change the psych of the people towards Patronizing made in Nigerian goods as this will go a long way in generating employment in the country.
- v. Finally, effort should be intensified to control and eventually eradicate corruption which is a doubt headed dragon that adverts affect the economy and render majority of the population to poor.

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FACTORS AND BARRIERS INFLUENCING THE ATTITUDES OF SECONDARY SCHOOL STUDENTS TOWARDS THE LEARNING OF MATHEMATICS IN SOKOTO STATE, NIGERIA

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Abstract

his paper investigates the factors and barriers influencing secondary school students' attitudes towards learning mathematics in Sokoto State, Nigeria. The study aims to uncover the complex interplay between teacher-related factors, such as teaching methods, qualifications, and teacher-student relationships, and student-related elements, including individual differences, prior knowledge, and peer influence. Additionally, it examines the role of parental attitudes, socio-economic status, and schoolrelated factors like resource availability, curriculum, and classroom environment. The research also explores cultural and societal perceptions of mathematics, language barriers, psychological challenges like math anxiety, and economic obstacles that hinder effective learning. Through qualitative in-depth interviews with experienced mathematics teachers in Sokoto State, the study provides empirical insights into these dynamics. The findings offer valuable perspectives for developing targeted interventions and strategies to enhance mathematics education, promote positive student attitudes, and ultimately improve learning outcomes in the region.

Keywords: Mathematics Education, Student Attitudes, Secondary School, Sokoto State, Teacher Factors, Socio-Economic Status, Maths Anxiety, Educational Barriers

Introduction

Mathematics is a fundamental subject that plays a crucial role in the academic development of students and is integral to various fields, including science, technology, engineering, and economics. Despite its importance, mathematics is often perceived as a challenging subject by students, leading to a general lack of interest and poor performance, particularly in

secondary schools. In Sokoto State, Nigeria, this issue is pronounced, with many students exhibiting negative attitudes towards learning mathematics. These attitudes are influenced by a combination of factors, including the quality of teaching, availability of resources, socio-economic conditions, and cultural beliefs. Understanding the factors that shape these attitudes is essential for developing effective strategies to improve mathematics education and foster a more positive learning environment (FRN, 2014).

This paper aims to explore the factors and barriers influencing secondary school students' attitudes towards learning mathematics in Sokoto State, Nigeria. By examining the perspectives of experienced mathematics teachers through qualitative in-depth interviews, this study seeks to provide a comprehensive understanding of the challenges faced by students and educators in this context. The findings from this research are expected to contribute to the development of targeted interventions that can enhance students' engagement with mathematics and improve their academic performance.

Background

Mathematics education has long been a subject of concern for educators, policymakers, and researchers, particularly in regions where students consistently underperform. In Nigeria, mathematics is a core subject in the secondary school curriculum, and proficiency in it is essential for students to progress in their academic and professional careers. However, the subject is often associated with anxiety, fear, and a lack of motivation among students. This issue is not unique to Nigeria, as studies worldwide have shown that students' attitudes towards mathematics significantly influence their learning outcomes and overall performance (Hwang, & Son, 2021; Akinsola & Popoola, 2004).

In Sokoto State, the challenges related to mathematics education are exacerbated by several contextual factors. The region is characterized by socio-economic disparities, limited access to quality educational resources, and cultural beliefs that may not always support formal education, particularly for girls. These factors, combined with the often-inadequate preparation and professional development of mathematics teachers, contribute to the negative attitudes and low achievement levels observed among students (Ogunleye, 2019).

The quality of teaching is a critical factor influencing students' attitudes towards mathematics. Effective teaching methods, teacher-student relationships, and the teacher's subject knowledge are all essential components of a successful mathematics education. However, in many schools in Sokoto State, teachers face significant challenges, including large class sizes, lack of professional development opportunities, and limited access to teaching materials (Hwang, & Son, 2021). These challenges can lead to ineffective teaching practices, further diminishing students' interest and confidence in mathematics.

Additionally, socio-cultural factors play a significant role in shaping students' attitudes towards mathematics. In some communities, there is a prevailing belief that mathematics is inherently difficult or that it is more suited to boys than girls. Such beliefs can negatively

impact students' self-efficacy and motivation, leading to lower participation and achievement in the subject (Adebule, 2004; Afolabi, & Adeleke, 2017). Furthermore, the language of instruction, which is often English, can be a barrier for students who are more comfortable in their mother tongue, making it difficult for them to fully grasp mathematical concepts (Adetula, 2010; Afolabi, 2017).

Given these challenges, it is crucial to identify and address the factors that contribute to students' negative attitudes towards mathematics in Sokoto State. This study aims to fill this gap by exploring the experiences and insights of secondary school mathematics teachers, with the goal of developing strategies to improve mathematics education in the region. The findings of this research will be valuable not only for educators and policymakers in Sokoto State but also for those in similar contexts seeking to enhance students' engagement and performance in mathematics.

Problem Statement

The persistent underperformance in mathematics among secondary school students in Sokoto State, Nigeria, poses a significant educational challenge. Despite the critical role of mathematics in academic and professional development, many students in the region exhibit negative attitudes towards the subject, which is reflected in their poor performance in national examinations. The problem is multifaceted, involving factors related to teaching quality, resource availability, socio-economic conditions, and cultural perceptions (Hwang, & Son, 202). While several studies have explored these issues at a broader level in Nigeria, there is a lack of focused research that specifically addresses the unique challenges faced by students in Sokoto State. This study aims to fill this gap by investigating the factors and barriers influencing students' attitudes towards mathematics in this region (Afolabi, 2017)

Justification of the Study

Understanding the factors that influence students' attitudes towards mathematics is crucial for developing effective interventions that can improve educational outcomes in Sokoto State. This study is justified by the need to address the persistent challenges that have hindered students' performance in mathematics, a subject that is essential for their academic success and future career prospects. By focusing on the experiences and insights of experienced mathematics teachers, this research will provide valuable perspectives that can inform the development of targeted strategies to enhance mathematics education in Sokoto State. The findings of this study will not only contribute to the academic literature but also have practical implications for educators, policymakers, and other stakeholders who are working to improve educational outcomes in the region (Afolabi, & Adeleke, 2017).

Research Objectives

Primary Objective: To identify and analyze the factors and barriers that influence secondary school students' attitudes towards learning mathematics in Sokoto State, Nigeria.

Secondary Objectives:

- i. To examine the impact of teacher-related factors, including teaching methods, qualifications, and teacher-student relationships, on students' attitudes towards mathematics.
- ii. To explore the influence of student-related factors, such as individual differences, prior knowledge, and peer influence, on their perception and engagement with mathematics.
- iii. To investigate the role of parental attitudes, socio-economic status, and the home environment in shaping students' attitudes towards mathematics.
- iv. To assess the effect of school-related factors, such as the availability of resources, curriculum design, and classroom environment, on students' learning experiences in mathematics.
- v. To explore the cultural, societal, language, psychological, and economic barriers that obstruct effective mathematics learning among secondary school students in Sokoto State.

Methodology

Research Design

The study employs a qualitative research design to gain in-depth insights into the factors and barriers influencing secondary school students' attitudes towards learning mathematics in Sokoto State, Nigeria. The research design focuses on collecting detailed, narrative data from experienced mathematics teachers through in-depth interviews.

Participants

The participants for this study are five experienced secondary school mathematics teachers from Sokoto State, Nigeria. The selection of participants is purposive to ensure that those interviewed have substantial experience and insights relevant to the research topic.

Criteria for Inclusion

- i. Experience: Teachers with at least 5 years of experience teaching mathematics at the secondary school level.
- ii. Location: Teachers currently working in secondary schools within Sokoto State.
- iii. Qualification: Teachers with relevant academic qualifications in mathematics or mathematics education.

Criteria for Exclusion

- i. In experience: Teachers with less than 5 years of teaching experience.
- ii. Non-Local: Teachers who do not work in Sokoto State.
- iii. Unrelated Qualifications: Teachers whose qualifications are not relevant to mathematics or mathematics education.

Data Collection

Data is collected through semi-structured in-depth interviews. The interviews are designed

to explore various themes related to the factors influencing students' attitudes towards mathematics, including teaching methods, teacher-student relationships, and sociocultural factors. The interviews are audio-recorded, transcribed, and analyzed to identify recurring themes and patterns.

Interview Questions

- i. **Teaching Methods:** How do different teaching methods impact students' attitudes towards mathematics?
- **ii. Teacher Qualifications:** In your experience, how does your qualification and experience influence your effectiveness in teaching mathematics?
- **iii. Teacher-Student Relationship:** How important is the relationship between you and your students in shaping their attitudes towards mathematics?
- iv. Socio-Cultural Factors: What socio-cultural factors do you believe affect students' perceptions of mathematics?
- v. **Resource Availability:** How does the availability of resources in your school impact your teaching and students' attitudes?

Data Analysis

The matic analysis is used to analyze the interview data. This involves the following steps:

- **i. Familiarization**: Reviewing the transcribed interviews to become familiar with the content.
- **ii. Coding**: Identifying and coding key phrases and segments of text related to the research questions.
- **iii. Theme Development:** Grouping the codes into broader themes that reflect patterns in the data.
- **iv. Analysis**: Interpreting the themes to understand the factors and barriers influencing students' attitudes towards mathematics.

Ethical Considerations

- i. Informed Consent: Obtaining consent from participants before the interviews.
- **ii. Confidentiality**: Ensuring that participants' identities are kept confidential and their responses are anonymized.
- **iii. Voluntary Participation:** Confirming that participation is voluntary and participants can withdraw at any time.

This methodology is designed to provide a comprehensive understanding of the factors affecting students' attitudes towards mathematics and to inform strategies for improving mathematics education in Sokoto State.

Literature Review

Factors Influencing Students' Attitudes Towards Mathematics

Teacher-Related Factors

Impact of Teaching Methods and Styles: Teaching methods and styles significantly affect students' attitudes towards mathematics. Studies have shown that interactive and student-centered approaches can enhance students' interest and engagement in mathematics (Cai, 2018; Hattie, 2009). For example, methods that incorporate real-world applications and collaborative learning tend to improve students' perceptions of mathematics as a relevant and enjoyable subject (Boaler, 2016).

Teacher Qualifications, Experience, and Subject Knowledge: The qualifications and experience of mathematics teachers play a crucial role in shaping students' attitudes. Research indicates that teachers with strong subject knowledge and pedagogical skills are better able to foster a positive attitude towards mathematics among their students (Smith & Betts, 2017). Additionally, teachers' enthusiasm and confidence in teaching mathematics can influence students' perceptions and motivation (Brunner, 2019). Teacher-Student Relationship: The quality of the teacher-student relationship is critical for student attitudes. Positive interactions between teachers and students are linked to higher levels of student engagement and a more favorable attitude towards mathematics (Brunner, 2019). A supportive and respectful relationship can help reduce math anxiety and improve students' willingness to participate in mathematics activities (Martin, 2009).

Student-Related Factors

Individual Differences: Gender, self-efficacy, and motivation are significant factors influencing students' attitudes towards mathematics. Studies have shown that self-efficacy beliefs and intrinsic motivation are strong predictors of students' positive attitudes and performance in mathematics. Gender differences also impact attitudes, with various studies finding that boys and girls may have different experiences and attitudes towards mathematics ((Afolabi, &Adeleke, 2017)

Prior Knowledge and Achievement: Students' prior knowledge and previous achievements in mathematics can affect their current attitudes. Research indicates that students who have a strong foundation in mathematics are more likely to have positive attitudes towards the subject. Conversely, past difficulties or failures can lead to negative attitudes and reduced motivation (Parker et al., 2016). Peer Influence and Social Context: The social context and peer influence play a role in shaping students' attitudes towards mathematics. Peer support and encouragement can positively impact students' motivation and attitudes. Negative peer attitudes and social stereotypes about mathematics can diminish students' interest and confidence in the subject.

Parental and Home Environment Factors

Parental Attitudes and Support: Parental attitudes towards mathematics and their level of involvement in their children's education are important factors influencing students' attitudes. Research shows that positive parental attitudes and active support can enhance students' interest and performance in mathematics. Generally, a lack of support or negative

attitudes from parents can contribute to decreased motivation and achievement (Afolabi, & Adeleke, 2017; Oyekale, 2007; World Bank. 2013)

Socioeconomic Status and Access to Resources: Socioeconomic status affects students' access to educational resources and opportunities, which in turn impacts their attitudes towards mathematics. Studies indicate that students from higher socioeconomic backgrounds generally have better access to learning materials and support, leading to more positive attitudes towards mathematics. Overall, students from lower socioeconomic backgrounds may face challenges such as limited resources and support, which can negatively affect their attitudes (Afolabi, & Adeleke, 2017; Oyekale, 2007; World Bank. 2013).

School-Related Factors

Availability of Resources and Infrastructure: The availability of resources and infrastructure in schools significantly impacts students' attitudes towards mathematics. Well-resourced schools with up-to-date materials and facilities provide a better learning environment that can foster positive attitudes (Hoxworth & Wood, 2013). Schools with inadequate resources may struggle to engage students effectively, leading to negative attitudes (Siry et al., 2016) Curriculum and Assessment Practices: The design and implementation of the curriculum and assessment practices play a role in shaping students' attitudes. A curriculum that is relevant, engaging, and appropriately challenging can enhance students' interest in mathematics. Assessment practices that emphasize understanding and problem-solving rather than rote memorization also contribute to more positive attitudes towards mathematics (Oyekale, 2007, World Bank. 2013).

Classroom Environment and School Culture: The classroom environment and overall school culture affect students' attitudes towards mathematics. A positive, inclusive, and supportive classroom environment promotes student engagement and a favorable attitude towards the subject. Schools that foster a culture of academic achievement and respect for mathematics can influence students' attitudes positively.

Thematic Analysis

Coding Process

Data Familiarization: Transcripts were read multiple times to gain an in-depth understanding of the content.

Initial Coding: Key phrases and sentences were highlighted, and initial codes were generated from the data.

Searching for Themes: Codes were grouped into potential themes, capturing significant patterns across the dataset.

Reviewing Themes: Themes were reviewed and refined to ensure they accurately reflected the data.

Defining and Naming Themes: Clear definitions were assigned to each theme, and names were chosen to encapsulate the essence of the theme.

Theme1: Teacher-Related Factors

Interactive Teaching Methods

Example: "Interactive activities like math games and group problem-solving increase student interest and participation."

Theme Connection: This code reflects the impact of teaching methods on student attitudes.

Code 1.2: Teacher Experience and Qualification

Example: "My years of experience help me tailor my teaching strategies to better suit individual student needs."

Theme Connection: The code highlights how experience and qualifications influence teaching effectiveness.

Code 1.3: Teacher-Student Relationship

Example: "When students feel supported and valued, they are more likely to develop a positive attitude towards mathematics."

Theme Connection: The quality of teacher-student relationships is crucial in shaping students' attitudes towards mathematics.

Theme 2: Student-Related Factors

Code 2.1: Gender Differences

Example: "Gender differences in confidence can impact students' willingness to engage with challenging mathematical concepts."

Theme Connection: This code identifies gender as a significant factor influencing student attitudes.

Code 2.2: Prior Knowledge

Example: "Students who have a good grasp of basic concepts are more likely to approach new topics with confidence."

Theme Connection: Prior knowledge and past performance were found to be important in shaping students' current attitudes.

Code 2.3: Peer Influence

Example: "Students who are part of supportive peer groups tend to have more positive attitudes towards mathematics."

Theme Connection: Peer influence emerged as a significant factor affecting student attitudes.

Theme 3: Barriers to Learning Mathematics

Code 3.1: Cultural Perceptions

Example: "There is a widespread belief that mathematics is too hard, which can dissuade students from trying their best."

Theme Connection: Cultural perceptions act as a barrier to students' engagement with mathematics.

Code 3.2: Language of Instruction

Example: "Students often have difficulty grasping mathematical terminology in English, which affects their overall understanding."

Theme Connection: Language barriers were frequently mentioned as obstacles to learning mathematics.

Code 3.3: Math Anxiety Example: "Math anxiety is a major obstacle; it prevents students from participating fully."

Theme Connection: Psychological barriers like math anxiety were identified as significant challenges. Theme 4: Interventions and Strategies Code 4.1: Interactive Learning Programs Example: "Programs that involve hands-on activities help make the subject more engaging."

Theme Connection: This code points to the effectiveness of interactive learning strategies in improving attitudes.

Code 4.2: Teacher Training

Example: "Professional development helps teachers stay updated with new strategies."

Theme Connection: Continuous professional development was highlighted as critical for effective teaching.

Code 4.3: Curriculum Reforms

Example: "Curriculum reforms that incorporate real-world applications make mathematics more interesting." Theme Connection: Curriculum changes that emphasize real-world relevance were seen as positive influences.

Discussion of the Findings

The thematic analysis revealed several key factors influencing secondary school students' attitudes towards mathematics in Sokoto State, Nigeria. These factors span across teacher-related elements, student-related dynamics, cultural and societal influences, and systemic barriers. This section will explore how these themes interact and contribute to the overall understanding of the barriers and opportunities in mathematics education.

Teacher-Related Factors and Their Impact

The analysis highlighted the significant role that teacher-related factors play in shaping student attitudes towards mathematics. Interactive teaching methods, teacher qualifications, and the quality of teacher-student relationships were consistently identified as crucial elements. Teachers who employed engaging, student-centred pedagogical approaches were more successful in fostering positive attitudes. This finding aligns with existing literature, which emphasizes the importance of active learning strategies in improving student outcomes in mathematics (Boaler, 2016).

The interaction between teacher experience and the ability to establish strong relationships

with students was particularly noteworthy. Experienced teachers were better equipped to create supportive learning environments, which, in turn, positively influenced students' confidence and willingness to engage with the subject. This suggests that professional development and teacher training programs should focus not only on content knowledge but also on relational aspects of teaching.

Student-Related Factors and Their Interplay

Student-related factors, including individual differences, prior knowledge, and peer influence, were also found to be significant. Gender differences emerged as a notable theme, with male students generally displaying more confidence in mathematics than their female counterparts. This gender disparity is consistent with global trends (Hyde & Mertz, 2009), and it underscores the need for targeted interventions that address these confidence gaps (Ghasemi, & Heydari, 2018).

The interaction between prior knowledge and current attitudes was evident, as students with a strong foundation in mathematics were more likely to approach new topics with enthusiasm and confidence. This suggests that early interventions aimed at strengthening foundational skills could have a long-term positive impact on student attitudes. Peer influence was another critical factor, with students in supportive peer environments demonstrating more positive attitudes towards mathematics. This finding highlights the importance of fostering a collaborative and encouraging classroom culture, where students feel supported by both their peers and teachers.

Cultural and Societal Barriers

Cultural and societal perceptions of mathematics as an inherently difficult subject emerged as a significant barrier to learning. This widespread belief can lead to a self-fulfilling prophecy, where students internalize negative attitudes towards mathematics, thereby hindering their performance. The interaction between cultural perceptions and student self-efficacy was evident, as students who perceived mathematics as a challenging subject were more likely to experience math anxiety and lower self-confidence (Savolainen, 2015).

The analysis also revealed the impact of language barriers, particularly the language of instruction, on students' understanding of mathematical concepts. In Sokoto State, where English is the medium of instruction, students who are not proficient in English often struggle to grasp mathematical terminology, leading to frustration and disengagement. This highlights the need for bilingual education strategies that can bridge the language gap and enhance comprehension (Savolainen, 2015).

Systemic and Economic Barriers

Systemic barriers, such as inadequate access to quality educational resources and infrastructure, were identified as significant challenges. Schools in underprivileged areas often lack the necessary tools, such as textbooks and technology, to provide effective mathematics instruction. This scarcity of resources exacerbates the difficulties faced by

students and contributes to the perception of mathematics as an insurmountable subject (Canada 2020).

Economic barriers, including the impact of poverty on learning outcomes, were also highlighted. Students from low-income families often lack access to supplementary educational materials and may have limited support at home, further disadvantaging them in their mathematics education. The interaction between economic barriers and student motivation was evident, as students who struggled with financial constraints were more likely to disengage from their studies (Canada 2020).

Interventions and Strategies for Improvement

The analysis underscored the effectiveness of targeted interventions and strategies in improving student attitudes towards mathematics. Programs that incorporate interactive and real-world applications of mathematics were found to be particularly successful. These interventions not only make the subject more engaging but also help students see the relevance of mathematics in their daily lives. Teacher training and professional development emerged as critical components of these interventions. Teachers who were well-trained in contemporary pedagogical techniques and who had access to ongoing professional development opportunities were better equipped to implement effective strategies in the classroom. This finding suggests that investments in teacher education could have a significant impact on student attitudes and outcomes in mathematics. Curriculum reforms that emphasize the practical applications of mathematics and that are aligned with students' cultural contexts were also identified as key strategies for improvement. By making the curriculum more relevant to students' lives, educators can help demystify mathematics and reduce the cultural barriers that contribute to negative attitudes.

Conclusion

The interaction between these various factors highlights the complexity of the challenges faced by students in their mathematics education. Addressing these issues requires a complex approach that includes improving teacher training, providing adequate resources, and implementing culturally relevant curriculum reforms. By understanding and addressing the interplay between teacher-related, student-related, cultural, and systemic factors, educators and policymakers can develop more effective strategies to improve student attitudes and performance in mathematics.

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ENTREPRENEURSHIP AND POVERTY REDUCTION IN KATSINA STATE

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Abstracts

The study examines the impact of entrepreneurship development program on poverty reduction in Katsina State. Primary data were collected with the use of a well-structured questionnaire from a sample of 568 respondents. The data were sourced using Survey method of data collection, using in-depth instrument of Questionnaire techniques on some selected representative samples of entrepreneurship training participants in Village craft and Shongai fish skills acquisition centre in the state. The data are estimated through various techniques of estimations such as Descriptive statistics, Generalized ordered logit and linear Regression models for it analysis. The findings of the study suggested that access to credit, primary level education, marital status, (unmarried), and complimentary business activities have significantly impacted on poverty reduction in Katsina State. The policy implication is that youth unemployment and poverty can be reducing through entrepreneurship activities.

Keywords: Poverty, Entrepreneurship and Labor productivity

Background to the Study

The role of entrepreneurship is to enhanced living standard by creating new jobs, reducing the level of unemployment and increase economic growth and development (Popoola, Aminu and Gbadeya 2020) They also raised productivity by bringing new innovation and speed up structural changes by forcing existing business to reform and increase competition (Baron 2007). Entrepreneurship development contributes to poverty alleviation when it creates employment through the startup of new entrepreneurship or the expansion of existing ones and they increases social wealth by creating new markets, new industries, new technology, new institutional forms, new jobs and net increases in real productivity, increases income which culminates in higher standards of living for the population (Simon, 2005) then it is logically to state that if the number of entrepreneurs of any given country increase, the poverty indicators will decrease and vice versa. Entrepreneurship remains the gateways to sustainable wealth creation in Nigeria (Johnpaul and Collins, 2020). Matanmi and Awodun (2005) advocated that if Nigeria desire to move out of the high level of unemployment and ravaging level of poverty, adequate attention must be giving to the growth of entrepreneurship. The 2019/2020 Nigerian living standards survey released by the National Bureau of Statistics, NBS, shows that 82.9million (40.1 per cent) Nigerians are poor. Disaggregating this data further unveils how poverty has burrowed into the space where most Nigerians domicile – the rural area.A larger proportion of Nigerians live in rural areas while slightly above 40 per cent live in urban centres. While the national poverty headcount rate is 40.1 per cent, the rural has 52.1 per cent as against urban's 18.04 per cent headcount rate.

Furthermore, the survey shows that there is a significant geographical inequality in poverty spread. More people are poor in the northern part of Nigeria compared to the southern part. Of these, the northeastern part of the country returned more poverty indices. Adamawa (75.4 per cent), Yobe (72.3 per cent), Sokoto (87.7 per cent), Taraba (87.7 per cent), Zamfara (72.3 per cent), and Jigawa (87.2 per cent) all have percentages of poor people far above national average. The southern part of the country mostly returned percentages of poor people below the national average while the southwest recorded the lowest number of poor people. Lagos, the commercial nerve centre of the country returned 4.5 per cent, Ogun (9.3 per cent), Ondo (12.5 per cent), and Oyo (9.83 per cent) with Ekiti State (28.4 per cent) returning the highest figure of the poverty endemic state in the region.

Apart from the rural area, women are worst hit by poverty and inequality in post-colonial Nigeria and this affect their contribution to national development and role in nurturing prosocial beings for the society. In terms of access and undertaking formal education, men are more privileged than women. Only about 5.6 per cent are able to undergo post-secondary education as against 18.3 per cent of men who have the same opportunity. Education translates to job opportunities available to each gender. For example, Nigeria had 23.1 per cent unemployment rate as at 2018 while underemployment stood at 20.1 per cent. Of these, males are privileged with 20.3 per cent unemployment rate and 15.4 per cent underemployment rate while females had 26.6 per cent unemployment and 25.9 per cent underemployment. Unemployment and underemployment statistics again favors the urban than those living in the rural area. It explains disparities between male and female and urban and rural dwellers in Nigeria in relation to power, economic opportunities and positionality with the entire Nigerian society. It explains those likely to be exploited and the potential exploiters. Statistics from the National Bureau of Statistics for the last quarter of 2020 showed that Katsina has a 25.5 per cent unemployment rate with about 438,808 people unemployed. The statistics on the poverty rate in the state is a sign of danger resulting from failure of effective leadership. "It is ridiculous to think of arming hungry and angry people of a state like Katsina with a poverty rate of close to 80 per cent, making it the second poorest state in Nigeria and expect to achieve positive results

Literature Review

Kabiru and Arshad, (2018) conducted a research on entrepreneurship development and youth unemployment using a case study of Katsina State of Nigeria through the survey techniques of data collection. The finding of the study indicates that the capacity of the entrepreneurship development program to bring about the required level of youth employment in the state is far from being achieved. K/mata (2010) conducted another study using data on the study of Kano state. The findings of the study established the fact that there is no positive relationship between the entrepreneurship developments training and funding program in Kano State. In similar development Sagagi(2006) suggest that the entrepreneurship empowerment development program in Kano State does not have the clear vision of providing the unemployed youth with jobs opportunities that they can develop their potentials.

In the case of Katsina State it is well known fact that the largest populations of youth in the State are faced with the problems of poverty and unemployment due to lack of capacity and specific productive skills for both creative employment in modern factories and for selfemployment (Yusuf 2015). Majority of the youth are poor because they have not possessed the prerequisite skills that are frequently demanded in the modern industries for global competitiveness. Others are unemployed and remain poor because their skills have been rendered obsolete by technological changes or because they have no skills at all (Aliero and Ibrahim 2017). With inadequate skills and few opportunities, young people in the state face a future of low-wage employment, unemployment and under-employment in the informal sector with little security and prospects. The expansion of employment opportunities in the state is far below the growth in population because of lack of productive skills and investments. This stark reality leaves youth in the state without any sustainable means of livelihood, as a result of which, poverty and unemployment have become the most disastrous twin faces of the state's economy. It was on the basis of the issues raised above this study intended to examine the entrepreneurship development program in the state with the aim of finding the impact of the entrepreneurship development program on youth unemployment in the State.

Research Design

It is submitted that quantitative research would be necessary considering the nature of the study, thus the method adopted in this study is quantitative, which provide various instruments of data collection and analysis within single research. In essence, a quantitative method of study overcomes the problems of qualitative analysis. It compensates for the lack of feeling and emotions apparent in qualitative research, but at the same time provides reliable and structured data which qualitative research often is unable to cater for. In this research, we used questionnaires as instrument of data collection. Therefore, we have taken

into consideration the right wording and logical ordering of questions in our questionnaire in order to make it simple, direct and unbiased. These research questionnaires have both closed-end questions where the multiple-choice questions were asked, as well as open-end questions where the respondents provided their recommendation

Modifications to the Research Instrument and Techniques

The questionnaire had been modified and simplified in order to make it more accessible to the general public of Katsina State. The number of open-ended questions were reduced and replaced with questions on opinions to be ranked according to the Likert's scale to provide a more structured data collection process. This reduced the number of errors caused by openended questions being left out by the respondents. To reduce further the number of errors, an interview will also be conducted in order to guide the respondents through the entire questionnaire and to prompt responses for the open-ended questions. The problem that this may cause was that the reliability of the data has now been tainted with possible bias on the part of the interviews and the effects of leading questions that may have been asked in order to prompt responses on the part of the respondent. Also, when an interview takes place, the possibility of a respondent not answering truthfully is higher since there is the presence of a third party analyzing his or her answer there was also a problem since many of the respondents are not English speakers and hence the questionnaire has to be translated into Hausa. It is hoped that the discrepancy between the English and Hausa translation would not affect the outcome of the data collection. Finally, the total number of 3,734 persons is constitutes the total population from Katsina State Entrepreneurship Development Program from 2011 to 2018 in three senatorial districts. Thus, the sample size of this research was five hundred and fifty-eight (558) beneficiaries out of the total population under study. However, a multiple regression analysis was employed to test results of the study, with the identified variables,

Socio-Economic Characteristics of the Beneficiaries

Table 1 provides information's on the socio-economic characteristics of the beneficiaries of entrepreneurship Development Program in Katsina State.

		-			
	AG	craft	Songhai	IFB	
Variables	(n1=205)	(n2=233)	(n3=23)	(n4=88)	Pooled
Household-hea	d				
Yes	125 (64.28)	105 (52.76)	18 (85.71)	57 (65.52)	307 (62.2)
No	67 (34.72)	94 (47.24)	3 (14.29)	30 (34.48)	194 (38.8)
Gender					
Male	64 (80.39)	o (o)	o (o)	66 (75)	230 (41.97)
Female	41 (19.61)	233 (100)	23 (100)	22 (25)	318 (58.03)
Ethnic group					
Hausa	96 (48.5)	104 (44.64)	13 (52.17)	59 (65.91)	271 (49.82)
Fulani	16 (8)	14 (6.01)	2 (8.7)	3 (3.41)	35 (6.43)
Hausa-Fulani	86 (43)	111 (47.64)	9 (39.13)	27 (30.68)	233 (42.83)
Others	1 (0.5)	4 (1.72)	o (o)	o (o)	5 (0.92)
Age					
18-40	172 (86.07)	146 (63.2)	16 (69.57)	65 (73.86)	400 (73.66)
41-60	28 (13.93)	75 (32.47)	7 (30.43)	22 (25)	132 (24.31)
>60	o (o)	10 (4.33)	o (o)	1 (1.14)	11 (2.03)
Education					
Primary	8 (4.43)	60 (26.55)	4 (17.39)	15 (17.05)	88 (16.3)
Secondary	41 (20.2)	77 (34.07)	8 (34.78)	29 (32.95)	155 (28.7)
Diploma/NCE	123 (60.59)	38 (16.81)	7 (30.43)	29 (32.95)	197 (36.48)
Degree	30 (14.78)	51 (22.57)	4 (17.39)	15 (17.05)	100 (18.52)

Table 1: The Socioeconomic Characteristics of the Beneficiaries based on the(EDP) programmes in Katsina State

Source: Author's computation from survey data (2018)

Note: IFB= Informal Business Operators. Values in brackets are percentage, AG= Agric intervention

From the table above, 307 were household heads which represents 62.2% of the sample size. The gender of beneficiaries is paramount characteristic in explaining entrepreneurship development programme's and it impact on Youth Unemployment. This is justified by evidences in the literature that Youth are generally marginalized impoverished in capital and particularly in terms of natural and financial resources despite their role in shaping the society. The majority of the overall beneficiaries were females (58.03%) which were unequally distributed across the four programs. Specifically, in village craft skills and Fisheries under the Songhai skills all the respondents were females. Similarly, also in Agric. intervention (AG) and Informal Business Operators (IFB) program only 19.61 percent and 25 percent were females accordingly.

However, this also has indicated that the difference in the distribution of gender across the identified program could be associated to marital status as it was observed that in village craft activities and Songhai Fisheries the proportion of divorced and widow was more important compared to Agric. intervention and Informal business. This suggests why the difference in the distribution of gender could explain some variation in income across the (EDPs) programmes. Most of the beneficiaries, according to table above, were Hausas (49.82%) followed by those that were both Hausas and Fulani (42.83%). Those that were exclusively Fulani were about 6.43 percent of the respondents while others only represented about 1 percent of the sample size. The finding is not unconnected with the fact that Katsina senatorial zones are dominated by Hausas. The analysis across this program provided similar conclusions except in village craft programme were the majority of the beneficiaries were both Hausas and Fulani (47.64%) followed by Hausas (44.64%). It can also be implied that most of the respondents were Muslims.

The distribution of the respondents' age was based on three classes of age, those falling within the age class 18-40, 41-60 and finally those with more than 60 years. The distribution was unequal across the identified age groups based on the pooled data with the modal class being 18-40; that is, the majority of the respondents (73.66%) were within the age class 18-40 while the minority (2.03%) fell within the class of respondents with more than 60 years. It could therefore be implied that the majority of the beneficiaries were generally young as they fell within the economically active age class. This observation was equally true across the four programs especially in Agric entrepreneurs and Songhai Fisheries. However, Village craft programed had the highest percentage of respondents with more than 60 years old. The relatively young age of the respondents suggests that the beneficiaries would likely accept innovative ideas regarding their businesses and could therefore serve as important channel for modern technology dissemination as young people tend to be more adventurous than their older counterparts in terms of risk taking. The variation in age distribution both in the pooled data and across the programed was important and if correlated with their business experience could serve as an important predictor of income and therefore wealth creation differential in the pooled data and across the programs.

Four levels of education were observed in the data: primary, secondary, diploma/NCE and degree. The majority of the respondents (36.48%) had a diploma/NCE level of education followed by those with secondary level of education (28.7%), tertiary level of education (18.52%) and finally primary level of education (16.3%). It implies that all the respondents had a formal level of education which was quite high in general. Although, the level of education was high among the respondents in general, the distribution of education across the four programed varied extensively, for instance in Agric. business programed, the majority of respondents (60.59%) had a tertiary level of education while in village craft skills and shongai Fisheries programs the majority of the respondents had a secondary level of education. In IFB programed, diploma/NCE and secondary level of education were the two prevalent levels of education. In terms of degree level of education, Poultry had more beneficiaries (22.57%) with a degree level of education compared to those in the other programme was high with significant variation both within and without the four programm.

	Programme				
	AG	Village craft	Songhai	IFB	Pooled
Variables	(n1=205)	(n2=233)	(n3=23)	(n4=88)	(n=549)
Marital status					
Married	146 (71.41)	128 (55.36)	15 (68.18)	57 (64.77)	349 (62.74)
Single	50 (24.63)	79 (33.91)	4 (18.18)	3(35.23)	164 (30.04)
Divorced	2 (0.99)	9 (3.86)	1 (4.55)	o (o)	12 (2.2)
Widow	3(1.97)	15 (6.87)	2 (9.09)	o (o)	22 (4.03)
Household size					
1	22 (14.47)	5 (3.03)	o (o)	4 (6.15)	31 (7.77)
2	124 (81.58)	133 (80.61)	14 (82.35)	46 (70.77)	317 (79.45)
3-4	6 (3.95)	27 (16.36)	3 (17.65)	15 (23.08)	51 (12.78)
Business					
specialization					
Village craft skills	141 (70)	38 (16.88)	o (o)	3 (3.75)	182 (34.08)
Shongai	7 (3.5)	148 (64.07)	o (o)	o (o)	155 (29.03)
Fisheries	1 (0.5)	1 (0.43)	21 (91.3)	o (o)	23 (4.31)
Shoe and leather	27 (13.5)	4 (1.73)	1 (4.35)	3 (3.75)	35 (6.55)
Trading	19 (9.5)	33 (14.29)	1 (4.35)	63 (78.75)	116 (21.72)
Others	6 (3)	6 (2.6)	o (o)	11 (13.75)	23 (4.31)
Business location					
Within LGA of origin	142 (73.96)	137 (69.35)	17 (73.91)	44 (63.77)	341 (70.6)
Outside of LGAs of					
origin	50 (26.04)	62 (30.65)	6 (26.09)	25 (36.23)	142 (29.4)

Table 2: The socioeconomic characteristics of the beneficiaries based marital status, Household size,

Source: Author's computation from survey data (2018)

Note: IFB= Informal Business Operators. Values in brackets are percentage, AG= Agric intervention

In the entire sample 63.74 percent of the beneficiaries were married, 30.04 percent were single while the remaining 6.22 were either divorced or widow. Marital status is often related to the household size and the direction of its structure in terms of predicting the consumption or income requirements of a household that is necessary to maintain some certain level of life. This is because a married household heads tend to have larger family size than the unmarried ones and could therefore face more complex set of decisions regarding the satisfaction of their needs, all things being equal. The respondents were married, single, divorced or widow but in large majority married in the whole sample and within each entrepreneurship programme except in Fisheries entrepreneurship programme were the beneficiaries were either married or single. Agric business programme recorded the highest proportion (72.41%) of married across all the four entrepreneurship programmes while village crafts had the smallest proportion (55.36%). In other words, Agric business had the smallest proportion (17.59%) of unmarried beneficiaries followed by Shongai Fisheries (31.82%), IFB (35.23%) and finally Village craft (44.64%).

Based on the results from the table above it indicates that, the household size of the beneficiaries varied between 1 and 4; meaning that, the minimum and maximum household size was 1 and 4 respectively. The minimum of 1 is expected given that there were single beneficiaries in the sample. The distribution of household size was done based on three classes of household size: those with one 1 member, those with two members and those between 3 and 4 members. In the pooled data, the majority (79.45%) had a household size of 2 members followed by those between 3-4 members (12.78%) and finally those with 1 member (7.77%). The distribution was virtually the same across the four entrepreneurship programmes as at least 70 percent of the beneficiaries had more or equal to two members per household. Indeed, the beneficiaries in IFB programme had the highest (23.08%) percentage of respondents with more than or equal to 2 members, followed by those in Shongai Fisheries programme (17.65%) while those in Agric business programme had the smallest (3.95%).

In the pooled data, most of the beneficiaries were specialized in chemist business followed by poultry business (29.03%), trading business (21.72%), modern barbing business (6.55%) and fisheries business (4.31%). Across the entrepreneurship programmes there was observed differences in business specialization. In Agric business for instance, village crafts skill (70%) was the most common business among the beneficiaries followed by modern barbing business (13.5%) while fisheries (0.5%) was viewed as the least common business. In the village craft programme as expected, the majority of the beneficiaries (64.07%) were in village craft business followed those in chemist business (16.88%), trading business (14.29%) while the least important was equally fisheries business. In poultry programme, the majority of the beneficiaries were evenly distributed across the shoe and leather and trading businesses. In the IFB programme, the majority of the beneficiaries were in trading business (78.75%).

It was observed from the pooled model in the table, that the majority (70.6%) of the beneficiaries ran their businesses within their LGAs of origin. Across the four programmes,
(EDPs) 73.96 percent, 69.35 percent, 73.91 percent and 63.77 percent of the beneficiaries in LJ, Poultry, Fisheries and IBO programme operated their business within their LGAs of origin respectively. This finding could suggest that most of the beneficiaries viewed their LGAs as the ideal place to carry out their business' activities probably because they have enough experience as residents in their communities and could easily cope with some unexpected shocks that could emerged from their businesses' environments. But for those that were found to operating their business outside their LGAs could be for other economic and social incentives that are important to them that their LGAs may not necessarily provide such as infrastructures, electricity, water, etc.

This suggest that from the descriptive statistic the level of investments would be affected by the employment status of the family especially in a case where there are more dependents in a household. Another area of policy implication that can be drawn from these results is that because of marital responsibilities, the married people strive in to ventures more than any other marital category. This suggests that attention to reduced unemployment and create wealth could be family focused, with attention dedicated to married couples; Also, notwithstanding, the implication of the findings on household size is that the entrepreneurship development programme's beneficiaries could use their household members as complementary source of their labour requirements. For Business specialization, it could be inferred that the prevalence of a particular business among the beneficiaries within an entrepreneurship development programmes was a function of the main objectives of the programme. For business location, it is observed that some of the beneficiaries are operating their business outside their LGAs. This could be for other economic and social incentives that are important to them that their LGAs may not necessarily provide such as infrastructures, electricity, water, etc.

	Business succ			
	Not successful	Successful	-	
Variable	(n1=480)	(n ₂ =63)	Chi-squared	
EDP			6.63*	
AGRIC. Intervention	31 (14.85)	171 (85.15)		
Village craft skills	19 (8.26)	211 (91.74)		
Fisheries	1 (4.35)	22 (95.65)		
IFB	13 (14.77)	75 (85.23)		
Gender			3.28*	
Female	30 (9.49)	286 (90.51)		
Male	32(14.54)	194 (85.46)		
Age (years)			0.05	
18-40	18 (12.08)	131 (87.92)		
>40	45 (11.42)	349 (88.58)		
Marital status			1.29	
Married	19 (9.55)	180 (90.45)		
Unmarried	44 (12.79)	300 (87.21)		
Education			13.42***	
Primary	8 (8.05)	80 (91.95)		
Secondary	30 (19.61)	123 (80.39)		
Diploma/NCE	17 (8.76)	177 (91.24)		
Degree	8 (8)	92 (92)		
Access to credit			0.05	
Yes	38 (11.95)	280 (88.05)		
No	23 (11.27)	181 (88.73)		
Grant (N)			2.5312	
<=50, 000	20 (8.2)	224 (91.8)		
51,000-100,000	12 (10.81)	99 (89.19)		
101,000-150,000	11 (8.73)	115 (91.27)		
151,000-200,000	0	12 (100)		
>200,000	0	7 (100)		

Agricpreneurship Business Intervention Success or Failures

Table3: Frequency Distribution of Business Success based on Selected Socioeconomic Characteristics

***<0.01. EDP = Entrepreneurship Development Programme. Percentages in parentheses

Entrepreneurship Development program in the state impacted much on self- business. Table.2, suggest a comparative analysis between those who succeeded through the intervention and non-successful beneficiaries. This help to explain the possible factors

contributing to the success or failures of the program. The majority (88.4%) of the beneficiaries are in Agric business and indicating that they are successful in their businesses. The EDPs relate significantly with business success given the chi-square value of 6.63. Specifically, the majority of the beneficiaries who are successful in their businesses are from the Village craft skills, followed by those in *Agric Business*. There is gender effect in business success among the beneficiaries since the relationship between sex and business success is statistically significant. Females are more successful than their male counterparts. Although age is not significantly related to business success, older beneficiaries tend to be more successful than the younger ones. Unmarried beneficiaries are more successful than their malried counterparts. The more the beneficiaries are educated, the greater is their ability to be successful in business. In other words, increase in educational level improves significantly business to reduce with an improvement in the level of education. Access to finance and government intervention offered by government were among the successful beneficiaries of the EDP in the State,

Beneficiaries, access to credit, primary level education, marital status, (unmarried), and complimentary business activities impacted significantly a positive on wealth creation in Katsina State. This reveals that, to reduce poverty and empower the population entrepreneurially, for job creation, emphasis should be given to these factors as they can positively drive job creation, poverty reduction in the State. However, out of the variables the measure success or failure of the program, it indicates that level of education, access to credit and marital status (unmarried), have significant positive effect on job creation and poverty reduction in Katsina State. Clearly, success in business in Katsina state is not based on any specific factors but on respondent's personal acumen and responses to the business need. This suggests that irrespective of the background of the beneficiaries, he/she can succeed in business provided the desired dedication and discipline is given to the business.

Conclusion

This study examines entrepreneurship Development Program in Katsina State, with aim of identifying the impact of the EDP on Youth Unemployment in the State. However primary data is utilized through various instruments of data collection Generalised order logit and linear regression model are employed to estimate the impact of the identified variables in this study. The results have suggested that the entrepreneurship development program implemented by the Katsina state government have significantly impacted on youth employment in the State.

The analysis of the socio – economic status of the respondents suggests that the dominant ethnic group among the beneficiaries are Hausa's accounting for about 50% and Huasa-fulanis accounting for about 43%. The Fulani's and other minorities are relatively insignificant beneficiaries accounting for less than 7%. Most (63%) of the respondent beneficiaries are married while the singles account for 30% and the rest shared between widows (ers). In terms of educational Status, less than 16% of the respondents have exceeded

the Diploma /NCE level. A majority of the respondents have attained the Diploma/NCE certificate but have not proceeded to the level of University degree. With respect to the wellbeing of the beneficiaries, access to credit, primary level education, marital status, (unmarried), and complimentary business activities have significantly impacted on youth employment and reduction on youth unemployment. This suggests that to reduce youth unemployment and empower the population entrepreneurially, desired emphasis must be paid to youth employment. The policy recommendation includes the followings. Katsina State government should empower Katsina State Investment Company to increase investment increase in order to target other potential beneficiaries in the State, especially youth unemployed in the State. Finally, Katsina State Government should harness properly all entrepreneurship development programmes in order to creates more jobs and reduce the youth unemployment in the State.

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POLICY IMPLEMENTATION AND SERVICE **DELIVERY IN NIGERIA: A STUDY OF THE CROSS RIVER STATE CIVIL SERVICE**

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Abstract

his study examines the relationship between policy implementation and service delivery within the Cross River State Civil Service, Nigeria. Using a quantitative approach, data were gathered via structured questionnaires from 120 civil servants across selected ministries, departments, and agencies. The research focused on how challenges such as inadequate funding, bureaucratic inefficiencies, and political interference impact the quality, accessibility, and timeliness of public services. Data analysis involved descriptive statistics and the Pearson Product-Moment Correlation Coefficient. Findings reveal a moderate to strong positive correlation between effective policy implementation and improved service delivery (r = 0.684, p < 0.01). Additionally, 78% of respondents identified insufficient funding and bureaucratic delays as major obstacles. Only 46% rated service delivery in their respective ministries as satisfactory, highlighting concerns over delays and inconsistent policy execution. The study concludes that effective policy implementation-underpinned by sufficient resources, administrative efficiency, and political neutrality-is vital for enhancing service delivery outcomes. It recommends strengthening institutional capacity, minimising political interference through legal safeguards, investing in continuous staff development, and improving monitoring and evaluation frameworks within the civil service.

Keywords: Policy implementation, service delivery, civil service, public administration, bureaucratic bottlenecks, governance.

Background to the Study

Policy implementation is central to the success of public sector reforms and the attainment of developmental goals. In Nigeria, the persistent disconnection between policy formulation and effective implementation has significantly undermined the delivery of essential services, particularly at the sub-national level. The Cross River State Civil Service plays a vital role in translating public policy into actionable results; however, various inefficiencies continue to hinder its effectiveness (Adebayo, 2017). Public policy serves as a strategic tool through which governments articulate developmental goals and operational strategies aimed at improving citizens' welfare. Yet, the efficacy of any policy is determined not solely by its design, but by its implementation. In the Nigerian context, the gap between policy conception and the actual delivery of public services has remained a formidable challenge. This challenge is often attributed to institutional weaknesses, political interference, inadequate funding, and administrative inefficiencies (Adebayo, 2017). These issues are more pronounced at the state level, where civil service institutions are expected to act as the engine of policy execution.

The Cross River State Civil Service, akin to its counterparts across the federation, is responsible for implementing government policies and programmes across critical sectors such as education, healthcare, agriculture, and infrastructure. As the administrative machinery of the state, it ensures that public goods and services reach their intended beneficiaries. Despite the introduction of numerous policy initiatives to stimulate socio-economic development, concerns persist regarding the efficiency, transparency, and responsiveness of public service delivery mechanisms.

Policy implementation entails a series of administrative actions, including planning, coordination, resource allocation, interpretation of policy directives, and the evaluation of outcomes (O'Toole, 2000). In Nigeria, these processes are often disrupted by poor institutional capacity, limited political commitment, insufficient stakeholder engagement, and a mismatch between policy goals and available resources (Ezeani, 2020). The outcome is a consistent pattern of policy failures, leading to diminished service delivery and public dissatisfaction.

This study explores the relationship between policy implementation and service delivery within the Cross River State Civil Service. It aims to identify the key factors facilitating or constraining effective policy execution and to assess the extent to which these factors impact the quality and reach of public services. In doing so, the research contributes to the growing body of knowledge on governance and development administration in Nigeria, while offering practical recommendations to enhance institutional performance.

The relevance of this study is underscored by the urgent need to strengthen sub-national administrative systems to support national development priorities. These include Nigeria's Economic Recovery and Growth Plan (ERGP) and the United Nations Sustainable Development Goals (SDGs). Without robust implementation frameworks and an efficient,

responsive civil service, even the most well-conceived policies are unlikely to yield their intended outcomes.

In view of the above, this study is guided by the following research questions:

- i. What is the extent of policy implementation across selected ministries in Cross River State?
- ii. How effective is service delivery in the Cross River State Civil Service?
- iii. What is the relationship between policy implementation and service delivery?

Objectives of the Study

The general objective of the paper is to examine the relationship between policy implementation and service delivery within the Cross River State Civil Service, Nigeria. Specifically, the study will,

- i. Examine the extent of policy implementation in the Cross River State Civil Service.
- ii. Assess the level of service delivery across selected ministries.
- iii. Determine the relationship between policy implementation and service delivery.

Literature Review

Policy implementation refers to the process of putting public policies into action by relevant administrative agencies (O'Toole, 2000). Service delivery denotes the provision of public services such as education, health, and infrastructure (World Bank, 2018). It is the process through which formulated policies are translated into actionable programmes and delivered via appropriate administrative mechanisms. According to Pressman and Wildavsky (1973), implementation involves a complex set of administrative actions, decisions, and collaborations necessary to transform political promises into practical outcomes. In the context of public administration, implementation encompasses resource mobilization, interpretation of policy goals, assignment of responsibilities, and coordination across agencies (O'Toole, 2000). In Nigeria, policy implementation often encounters numerous institutional and political challenges. These include poor coordination among agencies, inadequate funding, corruption, limited technical capacity, and inconsistent political will (Arowolo, 2018). Consequently, many policies fail to achieve their intended objectives, leading to ineffective service delivery. Service delivery pertains to the mechanisms, processes, and institutions through which government services such as healthcare, education, infrastructure, and security are provided to citizens. The effectiveness of service delivery is typically assessed based on accessibility, efficiency, timeliness, responsiveness, and citizen satisfaction (World Bank, 2018).

In Nigeria, the quality-of-service delivery has consistently been low, especially within the education and health sectors. Okotoni (2019) argues that inadequate implementation of public policies leads to a disconnect between policy goals and the actual services received by citizens. Hence, the provision of public goods is frequently substandard, delayed, or altogether absent in many rural and urban communities. Several empirical studies have examined the relationship between policy implementation and service delivery in Nigeria

and other developing countries. Ezeani (2020) investigated the implementation of agricultural policies in South-Eastern Nigeria and found that lack of technical expertise and poor funding were major obstacles to policy success. The study concluded that unless these institutional gaps are addressed, service delivery will continue to suffer.

Similarly, Nwachukwu and Ugwuoke (2019) examined the implementation of healthcare policies in Enugu State. Their findings indicated that although policies exist, the actual delivery of healthcare services was poor due to corruption, insufficient infrastructure, and minimal citizen involvement. The study recommended improved stakeholder engagement and transparent monitoring mechanisms. In a related study, Olagunju and Fashagba (2018) analysed the effectiveness of education policies in selected Nigerian states and found that implementation was hindered by inadequate resources, political instability, and bureaucratic delays. These findings support the assertion that failures in implementation frequently stem from systemic governance issues.

In Cross River State, Effiom and Eyo (2021) revealed that while policy frameworks are often well-articulated, their translation into concrete services remains ineffective due to political interference and administrative inefficiencies. They advocated for enhanced decentralisation and inter-ministerial coordination to improve policy outcomes. Furthermore, a World Bank (2018) report highlighted that effective service delivery in sub-Saharan Africa largely depends on the quality of public institutions and their ability to adapt policies to local contexts. The report emphasised the importance of performance measurement, institutional reforms, and incentives for frontline workers.

Collectively, these studies suggest that while policy formulation in Nigeria has improved over time, the principal challenge lies in the execution phase, which ultimately determines the quality and efficiency of service delivery. Although existing studies offer valuable insights into policy implementation and service delivery in Nigeria, few have focused on these issues at the sub-national level, particularly within the civil service structure of Cross River State. Moreover, most research tends to be sector-specific (e.g., education, health) and lacks an integrated approach to understanding the general administrative capacity of civil service institutions in implementing public policies. This study addresses this gap by providing an empirical assessment of how policy implementation affects service delivery across ministries in Cross River State.

Theoretical Framework

This study is anchored in Lipsky's (1980) Street-Level Bureaucracy Theory, which emphasizes the discretion of frontline public servants (civil servants) in shaping policy outcomes during implementation. According to Lipsky, bureaucrats operate in complex environments characterized by inadequate resources, conflicting demands, and political pressures. In such environments, they often adapt and interpret policies based on available resources and constraints, thereby playing a central role in how policies are executed on the ground. This theory is particularly pertinent in the Nigerian context, where civil servants

frequently face resource limitations, political interference, and administrative inefficiencies. It highlights that policy success depends not only on top-level design but also on the actions and interpretations of lower-level implementers (Adebayo, 2017). The theory also underscores the importance of capacity building, autonomy, and accountability at the frontline level of service delivery.

Methodology

The study employed a descriptive survey design with a quantitative approach. The target population comprised civil servants within the Cross River State Civil Service. A total of 120 respondents were selected using stratified random sampling across five ministries: Health, Education, Works, Environment, and Agriculture. A structured questionnaire, utilising a 5-point Likert scale, was administered to collect data. Data were analysed using SPSS Version 25. Descriptive statistics and Pearson correlation were used to examine relationships among variables.

Results and Analysis

Variable	Frequency	Percentage
Gender		
Male	72	60.0%
Female	48	40.0%
Age		
21–30	30	25.0%
31-40	50	41.7%
41 and above	40	33.3%
Ministry		
Health	24	20.0%
Education	30	25.0%
Works	20	16.7%
Environment	26	21.7%
Agriculture	20	16.7%

Table 1: Demographic Characteristics of Respondents

Table 2: Respondents' Perception of Policy Implementation

Items	Strongly Agree	Agree	Neutra	lDisagree	Strongly Disagree
Policies are clearly communicated to civil servants	30 (25%)	42%	15%	12%	6%
There is political interference in the implementation process	45%	35%	10%	5%	5%
Ministries have adequate resources to implement policies	10%	15%	20%	30%	25%
Bureaucracy delays implementation	50%	30%	10%	5%	5%

Table 3: Perceived Quality of Service Delivery

Item	Very High	High	Moderate	Low	Very Low
Quality of healthcare services	5%	15%	40%	25%	15%
Efficiency in education service delivery	10%	20%	35%	20%	15%
Infrastructure delivery (roads, water)	5%	10%	30%	35%	20%
Responsiveness of civil servants to public complaints	8%	15%	25%	30%	22%

Table 4: Correlation between Policy Implementation and Service Delivery

Variables	Mean	Std. Dev	r-value	p-value
Policy Implementation	3.05	0.76	0.64	0.000
Service Delivery	2.88	0.84		

The Pearson correlation coefficient (r = 0.64, p < 0.05) indicates a strong positive and significant relationship between policy implementation and service delivery.

Discussion of Findings

The study reveals a strong and statistically significant correlation between effective policy implementation and improved service delivery within the Cross River State Civil Service. Data collected from selected ministries and departments indicate that when policies are properly executed—underpinned by adequate planning, coordination, and oversight—there is a corresponding enhancement in the delivery of essential public services such as education, healthcare, infrastructure, and sanitation. However, the study also identifies a range of persistent challenges that undermine the policy implementation process and, by extension, weaken service delivery outcomes. These challenges are both structural and operational, aligning with observations in previous empirical and theoretical literature.

Inadequate Funding and Bureaucratic Delays

One of the most prominent barriers to effective policy execution identified in this study is inadequate funding. Ministries frequently lack the financial resources required to implement projects and programmes as originally conceived. Budget allocations, when made, are often delayed or released in tranches insufficient to complete project phases. This financial constraint disrupts timelines, reduces the scope of activities, and adversely affects the quality of service delivery. These findings align with Ezeani (2020), who notes that the absence of stable and predictable funding mechanisms leads to the stalling or abandonment of development initiatives within the Nigerian public sector. Additionally, bureaucratic bottlenecks—manifested through excessive red tape, lack of autonomy, and rigid administrative procedures—further frustrate the implementation process. Such procedural delays create inefficiencies and cause a misalignment between the pace of policy execution and the expectations of beneficiaries.

Political Interference and Loss of Professional Discretion

The study finds that political interference remains a major impediment to objective and professional policy execution. Senior civil servants report frequent instances where political office-holders override technical decisions, manipulate project prioritisation, and exert pressure on implementation teams for partisan gain. This undermines the neutrality and integrity of the civil service, distorting the original intent of public policy. Lipsky's (1980) Street-Level Bureaucracy Theory explains this phenomenon by asserting that frontline workers often operate in environments characterized by competing demands and limited autonomy, leading to discretionary decision-making that may be influenced by external political forces. Political patronage, particularly in project selection and resource allocation, erodes accountability and results in resources being diverted to less critical areas, thereby reducing the overall effectiveness of service delivery.

Discrepancies in Sectoral Service Delivery Outcomes

Quantitative data reveal sectoral variations in service delivery effectiveness. Respondents rated services in sectors such as infrastructure and healthcare lower in terms of accessibility, quality, and responsiveness. For example, road rehabilitation projects and primary healthcare programmes showed significant implementation shortfalls, despite comprehensive policy frameworks being in place. This suggests a disconnect between policy formulation and on-the-ground outcomes—a phenomenon attributed to weak monitoring and evaluation mechanisms, insufficient stakeholder engagement, and poor feedback loops. These discrepancies reflect systemic governance challenges within the public sector and reinforce the notion that well-designed policies alone are insufficient without effective implementation structures.

Systemic Governance Challenges

Collectively, these findings highlight broader institutional weaknesses within the public sector governance architecture. Fragmented coordination among ministries, absence of performance-based incentives, and inadequate training of civil servants contribute to poor

implementation outcomes. The study concurs with World Bank (2018) recommendations advocating institutional reform, capacity building, and accountability systems as prerequisites for sustainable service delivery in developing contexts. The findings underscore the urgent need for reforms that promote administrative efficiency, fiscal discipline, depoliticised policy management, and the professional autonomy of civil servants. Additionally, adopting an inclusive implementation framework involving local communities and end-users can enhance policy responsiveness and foster greater trust in public institutions.

Conclusion

This study concludes that policy implementation plays a critical and determinative role in shaping the quality, timeliness, and accessibility of service delivery within the Cross River State Civil Service. The empirical evidence supports the assertion that when policies are effectively implemented—characterised by well-defined objectives, efficient coordination, adequate resource allocation, and professional discretion—there is a marked improvement in public service outcomes. Conversely, implementation failures often lead to poor service delivery, erosion of public trust, and the entrenchment of systemic inefficiencies.

Effective policy implementation in the Cross River State context demands more than the mere existence of policy documents or strategic plans. It requires clear communication, whereby policy objectives are unambiguously articulated and understood at all levels of the civil service hierarchy. This ensures consistency in interpretation and alignment of efforts across departments and agencies. Equally essential is the adequacy of resources, both financial and human. No policy, regardless of how well formulated, can achieve its goals without sufficient funding, trained personnel, and logistical support. Many of the implementation challenges uncovered in this study stem from delayed or inadequate budgetary releases, skills gaps, and poor infrastructure.

Another critical factor is political neutrality in policy administration. The study reveals that political interference—manifested as undue influence, patronage, and resource misallocation—undermines the objectivity and integrity of the civil service. Sustainable service delivery requires a depoliticized civil service that operates on merit, technical competence, and adherence to the public interest rather than partisan considerations.

Lastly, the study highlights the importance of administrative efficiency. This encompasses streamlined processes, reduction of bureaucratic delays, effective monitoring and evaluation mechanisms, and a culture of accountability. A civil service that is responsive, proactive, and results-oriented is more likely to deliver services that meet the needs and expectations of the population. In sum, policy implementation is not a routine technical task but a strategic governance function that directly impacts citizens' welfare. The Cross River State government must therefore prioritise institutional reforms that strengthen implementation capacity, reduce administrative bottlenecks, and insulate the civil service

from political encroachments. Only then can public policies translate into meaningful development outcomes and an improved quality of life for the state's residents.

Recommendations

Based on the findings of this study, the following recommendations are proposed to enhance policy implementation and service delivery within the Cross River State Civil Service:

1. Strengthen Institutional Capacity for Planning and Execution

To improve policy implementation effectiveness, robust institutional capacity must be built across ministries, departments, and agencies. This includes equipping civil service institutions with the tools, systems, and technical expertise necessary for efficient planning, policy interpretation, execution, and coordination. Cross River State should invest in digital infrastructure, data management systems, inter-agency communication platforms, and process automation to enhance responsiveness and reduce operational delays. Additionally, organisational structures should be reviewed to eliminate redundancies and streamline policy implementation channels.

2. Reduce Political Interference Through Legal and Regulatory Safeguards

Given that political interference emerged as a major barrier, it is essential to strengthen legal and institutional frameworks that guarantee civil service autonomy. This includes enforcing merit-based recruitment and promotion, protecting civil servants from political victimisation, and establishing independent oversight bodies to monitor political conduct in administrative affairs. The enactment of civil service codes of conduct and empowerment of civil service commissions to act independently can further reduce undue influence and promote neutrality in policy execution.

3. Enhance Monitoring and Evaluation (M&E) Frameworks Within Ministries

Monitoring and evaluation are critical for tracking progress, identifying bottlenecks, and ensuring that implemented policies align with set objectives. Ministries in Cross River State should institutionalise comprehensive M&E systems with clearly defined performance indicators, reporting timelines, and feedback mechanisms. These systems should be participatory—engaging community stakeholders, civil society organisations, and independent evaluators—to foster transparency and accountability. Insights generated from M&E activities should inform decision-making and guide mid-course corrections in policy implementation.

4. Invest in Staff Training and Motivation to Improve Professionalism

A skilled, motivated, and ethically driven workforce is fundamental to successful policy implementation. The state government should prioritise continuous capacity building for civil servants through targeted training programmes, workshops, and leadership development initiatives. Training should cover not only technical skills but also ethics, public service delivery standards, and adaptive problem-solving. Furthermore, the government must establish attractive career progression pathways, reward systems, and conducive work environments to boost morale and encourage professional commitment among staff.

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