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THE IMPACT OF COVID 19 PREVENTION MEASURES ON WORKERS IN THE INFORMAL ECONOMY IN SENEGAL

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ABSTRACT: *The informal sector, or informal economy, is a real employment niche and a godsend for young people facing the harsh reality of unemployment and underemployment. However, in senegal, with the covid-19 crisis, this sector, known for its vulnerability, has been further weakened by certain government measures to combat the covid-19 pandemic (introduction of a curfew, closure of schools, markets and other places of business, ban on inter-city transport, etc.). This article, therefore, proposes to analyse the impact of these measures on informal sector enterprises and workers in senegal, particularly in dakar. The results we have obtained, thanks to an exclusively qualitative methodology, show that the application of such measures during the covid revealed an accentuated precariousness of informal work. In addition to having favoured the decline in turnover of informal enterprises, which are also confronted with the problem of indebtedness, they have contributed significantly to the unemployment of employees and other self-employed workers in this sector.*

KEYWORDS: Covid-19, Informal Economy, Informal Sector, Informal Worker.



RESUME: *Véritable niche d'emplois, le secteur informel, ou économie informelle, constitue une aubaine pour les jeunes confrontés à la dure réalité du chômage et du sous emploi. Toutefois, au Sénégal avec la crise de Covid-19, ce secteur connu par sa vulnérabilité a été davantage fragilisé par certaines mesures gouvernementales de lutte contre la pandémie de covid-19 (instauration d'un couvre-feu, fermeture des écoles, des marchés et autres lieux de commerce, interdiction du transport interurbain, etc.). Cet article se propose donc d'analyser l'impact de ces mesures sur les entreprises et les travailleurs du secteur informel au Sénégal et particulièrement à Dakar. Les résultats auxquels nous sommes parvenus, grâce à une méthodologie exclusivement qualitative, démontrent que l'application de telles mesures a été, durant la covid, révélatrice d'une précarité accentuée du travail informel. En plus d'avoir favorisé la baisse du chiffre d'affaire des entreprises informelles, également confrontées à la problématique de l'endettement, elles ont contribué de manière significative à la mise au chômage des salariés et autres indépendants de ce secteur.*

Mots-clés: Covid-19, Economie Informelle, Secteur Informel, Travailleur Informel.



INTRODUCTION

In senegal, the response to the covid-19 pandemic (introduction of a curfew, closure of schools, markets and other places of business, ban on intercity transport, etc.) Has put a strain on the local economy and exposed companies to the crisis and many workers to unemployment. With no legal or social protection [destremau (2013)] and a greater risk of unemployment and poverty [chen et al (2005), fao¹ (2020)], informal sector workers, who constitute more than half of the employed labour force (ansd², 2013), have been the most vulnerable category to this situation.

This study takes place in the context of the implementation of these measures (march to june 2020), and provides a sociological perspective on the impact of senegal's response to covid-19 on informal sector workers. It analyses the problems arising from the application of these measures and their consequences for these categories of workers who are already on the margins of social and legal protection. The aim is, therefore, to offer a scientific view, free of any "spontaneous sociology" (bourdieu, chamboredon and passeron, 1983), of the effects of senegal's measures to contain the covid-19 in a context marked by a series of demonstrations against them³.

The methodology used is exclusively qualitative. It is based on testimonies collected through individual interviews, from around twenty informal workers in dakar.

The article is structured in two parts. The first part presents a brief review of the literature on the informal sector. The second part sets out the context and the research problem. The third part describes the methodological approach. The fourth part analyses the problems generated by the application of covid-19 prevention measures among informal sector actors in senegal, which include a drop in business turnover, unemployment among employees and the self-employed, not to mention the anguish caused by the impossibility of repaying contracted loans. In the end, a discussion of the results is proposed in light of the concept of model transfer.

LITERATURE REVIEW

Since the beginning of the 1970s, when the ILO⁴ first began to work on the issue, the informal sector has undergone rapid development in the social and economic sciences. Among the debates that have fuelled thinking on the subject, the question of its definition and characterisation, as well as that of its impact on the economy of developing countries, seem to be those that most interest researchers. In addition to these issues, there is the question of the working and living conditions of workers in this sector.

¹ Food and Agriculture Organisation.

² Agence Nationale de la Statistique et de la Démographie.

³ In June, several cities in Senegal, including Dakar, were the scene of several nights of demonstrations against the curfew and for the lifting of the ban on intercity transport. These demonstrations were preceded by a strike called by transporters to demand the resumption of intercity transport.

⁴ International Labour Office.



Definition, Characterisation et Challenges of the Informal Sector

The evolution of the concept of the informal sector has followed the evolution of the sector itself. As Kanté (2002) recalls, in the 1970s the concept was used to designate small-scale activities, essentially intended to provide a subsistence income for new urban dwellers, the product of a particularly large rural exodus. Subsequently, he points out, the concept was extended to all small-scale activities which, because of their traditional origin or their recent or spontaneous nature, have multiplied and consolidated in relation to the endemic unemployment which is constantly increasing in the various African countries faced with the economic crisis and the social consequences of structural adjustment programmes.

For its part, the definition proposed by the ILO (1993) presents the informal sector as a set of units producing goods and services with the main purpose of creating jobs and income for the people concerned. These units, having a low level of organisation, operate on a small scale and in a specific way with little or no division between labour and capital as factors of production. This definition gives rise to a dual conception of the informal sector, associating, on the one hand, marginal activities (on the streets or in makeshift establishments) and production and service crafts and, on the other hand, small-scale trade.

Nevertheless, the informal sector does not only cover informal enterprises, but also a double dimension: that of non-salaried employment in micro-enterprises and that of informal salaried employment (Destremau, 2013). Ultimately, it refers to "all activities of trade, production of goods and services with a market value (...) That partially or totally escape the legislation and standards that govern the fields of activities and practices of the same categories" (Niang, 1996: 57).

It consists of informal own-account worker enterprises (family enterprises) employing family helpers or casual workers and informal employer enterprises (micro-enterprises) that may employ a small number of permanent workers (less than 5 or 10 depending on the country) (Babou and Adair, 2016). Labour relations in this sector, where they exist, are based primarily on casual employment, kinship or personal and social relationships rather than on contractual arrangements with formal guarantees (ILO, 1993).

In the ILO characterisation (cited by Droh, 2013), the informal sector encompasses seven criteria: ease of access (1), use of local resources (2), labour-intensive technology (3), family ownership of the enterprise (4), small scale of production operations (5), a market open to unregulated competition (6), and qualification acquired outside the school system (7). For Bodson, Roy and Hentic (1995), the small size of the enterprise (employing at most five people), the low level of income, the non-registration and the absence of separate accounting or the ease of access are the main characteristics of this sector.

According to Amara et al. (2018), informal sector activities in Africa have the following characteristics: they are traditional, small-scale family production units; they present a certain harmony with local mentalities and cultures; much of their functioning is integrated into dominant social processes; their almost systematic involvement in networks (composed of other informal sector enterprises) naturally pushes them towards collective entrepreneurship; a central dimension in contexts (such as Senegal) where resources are scarce and difficult to access; finally, they have diverse relationships with the formal sector, which can be seen as a factor of integration into the national economy and a source of collective learning.



However, far from still being able to be considered as a residue of "primitive" pre-capitalist, domestic or agricultural economies, the informal sector appears to be constitutive of the development modes of global capitalism. In fact, it encompasses an important development issue in that it is now the most common form of labour market integration in developing countries (Bacchetta, Ernst & Bustamante, 2010).

Because of the number of enterprises that make up the informal sector and their contribution to job creation and GDP⁵, the informal sector constitutes a real safety valve. For example, in Senegal, the creation of small production and/or service units operating in the informal sector is a godsend for young and often poorly qualified people. The employment opportunities offered by this sector allow the reintegration of young people. In total, it generates more than 90% of jobs. 83% of the active population aged 15 and over in Dakar work in the informal private sector, compared to only 10% in the modern private sector (Amara et al, 2018).

Nowadays, the informal sector, also referred to as the "underground economy" or "marginal economy" (Ndébi and Dama, 2020), has spread to almost all economic activities and involves all socio-professional categories, either as promoters or as consumers. Despite this, and as several studies show, informality generally rhymes with precariousness and is often associated with notions of poverty, vulnerability, survival, underemployment, etc.

The Vulnerability of Actors in the Informal Economy

Situated on the margins of labour regulation and designated among the poorest workers, informal sector workers, whether employees or self-employed, are the categories most exposed to the risk of loss of employment and income and to work-related social risks. Their employment is not guaranteed by any contract and they are generally not entitled to any social benefits. Nor do they usually have organisations representing them on a seasonal, casual or temporary basis (FAO, 2020). This type of employment is therefore characterised by the absence of legal or social protection, recourse to informal institutional mechanisms marked by exploitation, generally unstable employment, and low and irregular income.

For all these reasons, non-formal employment is rightly considered unprotected employment as opposed to formal employment. Indeed, "whether they are street or market sellers, domestic workers, seasonal agricultural workers, family helpers, day labourers, hired construction workers, or others, there are either no or virtually no practical arrangements for them to contribute to social insurance, or the amount of contributions is higher than they can afford (especially since employers do not contribute), or the irregularity of their income prevents them from making regular contributions to existing schemes; or the institutions collecting these contributions inspire too little confidence in them to entrust them a priori with part of their income" (Destremau, 2013 : 3). In addition to these problems, there is the lack of health insurance because the health facilities affiliated to the insurance schemes for the poor and vulnerable are too far away, difficult to access, of low quality, under-equipped and constantly understaffed (Lund, 2012).

The working conditions of these workers are poor and are more or less identified with job insecurity, discrimination, non-standard working hours, low levels of training and income, job insecurity and lack of social protection. They are also victims of abuse of power in the absence

⁵ Gross Domestic Product.



of any regulation governing their activities (WCL⁶, 2002), not to mention the fact that they do not benefit from the advantages of social security schemes against accidents at work and occupational diseases, or the fact that informal workplaces are not covered by health and safety at work.

Context and Problem

As the literature presented above shows, informal sector actors are the most vulnerable category of workers. The shock caused by the Covid-19 pandemic should, therefore, not leave them on the sidelines if they are not the most exposed.

In Senegal, the response to Covid has been marked by the gradual implementation of several measures. Indeed, following the closure of borders, schools and places of worship and the banning of gatherings, the President of the Republic introduced a State of emergency with a curfew (the hours of which varied gradually over time), as well as a ban on intercity travel and the closure of markets. These measures have obviously contributed to slowing down economic activity, exposing businesses to a drop in revenue with the consequent effect of reducing staff numbers. The informal sector, known for its actors' vulnerability, is not susceptible to this crisis.

This is what the present study seeks to demonstrate, by subscribing to the hypothesis of aggravated vulnerability and analysing the forms of vulnerability induced by the application of Covid-19 prevention measures among workers in the informal sector in Senegal. In concrete terms, this article seeks to answer the question: what is the impact of the application of government measures to prevent the Covid-19 pandemic on workers in the informal economy (or informal sector) in Senegal and particularly in Dakar?

Such a perspective obviously places our article within the classic approach that apprehends the informal sector in terms of the resourcefulness and vulnerability of its actors. However, it is more ambitious because it aims to highlight the risks associated with the transfer of models, especially when we know that the prevention model promoted in Senegal is an attempt to appropriate measures applied in a foreign context.

MATERIALS AND METHODS

This study is based on a qualitative research methodology based on individual interviews with some twenty-five employees and company managers in the informal economy operating in Dakar. A non-probability sampling of the accidental type was used for this purpose. The survey sample is therefore made up of units of the population encountered at random (Depelteau, 2010). Nevertheless, an effort was made to diversify the sample (employees and heads of informal enterprises) and to seek empirical saturation.

For each category of informal actor, employees and self-employed on the one hand and company managers on the other, a specific interview guide was designed to analyse the constraints relating to the application of anti-Covid measures. The survey was carried out in June 2020 in full application of the restrictive measures mentioned above.

⁶ World Confederation of Labour (WCL).



RESULTATS

The results of our study show that informal sector agents have been confronted with several obstacles resulting from the application of the restrictive measures in the context of Covid 19. In particular, businesses have suffered from a drastic fall in turnover, while employees and other self-employed people have been forced into unemployment. In addition, many actors were faced with the impossibility of repaying loans taken out by individuals or banking institutions.

Companies Facing a drastic Fall in Turnover

For four months (March to June), informal sector enterprises were confronted with the harsh reality of the evils of Covid-19. Policy measures aimed at limiting its spread caused significant harm to informal sector entrepreneurs. Indeed, the closure of markets, particularly in Dakar, has forced many economic units to close. Prior to this measure, the closure of borders and the ban on intercity transport had disrupted the distribution of goods. This led to disruptions in supply and thus to a problem of stock availability. The consequence of this state of affairs was, of course, a reduction in the activities of informal businesses and therefore a drop in their turnover.

Like Mbéry, who runs a shop selling second-hand clothes in Colobane, entrepreneurs in the informal sector have had a hard time coping with this situation:

"We are trying to get our heads above water but it is impossible because everything is hard. The authorities have taken decisions that do not account for the people of the informal sector. Yet we contribute to the country's progress because we give jobs to young people and we contribute to taxes by paying the licence and other fees to the town hall. Every day I came down to 30,000 to 40,000 francs. In a month, my activity brought in at least 500,000, without forgetting the young people who came to take my goods to sell and collect commissions. I paid all my expenses and I made a lot of profit but now it is difficult to earn 100,000 francs a month".

On the corniche, the same is true. Babacar (carpenter, cabinetmaker and upholsterer) has been producing and selling furniture for over 10 years. But he is experiencing a similar situation for the first time:

"I have been here for more than 10 years. It has never happened to me to stay one or two weeks without producing or selling. But with the crisis, I have been without producing a single table for over a month. (...) My stock is still not sold and it is difficult to get wood because the whole circuit is closed. The suppliers who have it are few and far between and they have driven up the prices. (...) If I at least had ordered, I would try to buy to earn the minimum but the problem is that we don't see any customers anymore. I earn almost nothing and I struggle to pay my rent".

Babacar's case shows that, in addition to the difficulties in obtaining supplies, some entrepreneurs in the sector are struggling to sell their already available products because of the lack of customers. The latter seem to have changed their priorities because they have also suffered the economic impact of the crisis. They, therefore, prefer to focus on the purchase of basic necessities. This seems to justify the fact that among the informal entrepreneurs least affected by the crisis are the neighbourhood shopkeepers who sell foodstuffs. However, although they are less exposed than their peers, they have suffered a drop in turnover due to



stock-outs, the drop in customers' purchasing power and the rise in prices.

The testimony of Mamadou (shopkeeper in Fass) is, in this respect, very illustrative:

"Yes, I think we are doing better than others, but we are also suffering the effects of the disease. Personally, I earn less than half of what I used to. Many clients don't have the purchasing power they used to have. In some families, the person who used to pay for the ration no longer works. Some people ask me to give them credit, but I rarely accept because having goods to sell has become more difficult and I don't want to run the risk of seeing my stock run out without having enough to renew it".

Other entrepreneurs we met agree with those whose testimonies are reported here.

These various observations allow us to say that businesses in the informal sector have suffered the full impact of the crisis caused by the Covid-19 pandemic.

The reduction in the purchasing power of customers, disruptions in the supply chain and price increases have had an impact on the activity and turnover of informal entrepreneurs. In addition, the closure of markets has forced others to stop their activities and simply remain inactive. This situation has been aggravated by the fact that, according to the entrepreneurs interviewed, they have not benefited from the subsidies granted to the private sector by the State.

Unemployment among Employees and Self-Employed

The damage suffered by informal enterprises affected their employees as well as the intermediaries who were in the production and/or marketing chain. The informal entrepreneurs we met who, at times, continued their activities in this context of Covid-19 were obliged to release all or part of their staff to ensure the minimum of viable activities. This is certainly a pragmatic solution to minimise costs and cope with the drop in revenue. But the consequence of such an option is the unemployment of workers formerly employed by these companies.

This unemployment also affects informal day labourers recruited by formal enterprises. Indeed, faced with the drop in their turnover, these companies were obliged to release some of their employees, particularly informal workers; the latter were not taken into account by the obligation for companies benefiting from the extension of the VAT⁷ payment deadline and the State⁸ subsidy to pay part of the salary (70%) of the employee made technically unemployed because of Covid-19. This is the case of Antoine (ex. Day labourer in a local factory):

"I was working as a day labourer in a factory. I don't have a contract and I was paid on a daily basis. With Covid-19, they let us know that they didn't need us anymore because there was less work and they wanted to avoid the rallies, but they kept some who had contracts. Even the others who had contracts and were temporarily released were given their salaries. But we were not given anything. This is a double standard".

The case of this day labourer shows that the lack of social protection makes informal sector actors more vulnerable than other categories of workers; a vulnerability that has, therefore, increased with Covid-19. Intermediaries who acted as touts for formal and informal businesses

⁷ Value Added Tax.

⁸ These measures were taken by the President of the Republic to support companies and encourage them to keep their staff.



and who received commissions were also adversely affected by the pandemic.

In the commercial sector, touts like Mor were simply thrown out of the loop:

"I work at the HLM market but I have stopped because of the disease. I work at the HLM market, but i've stopped because of illness. My role there was to identify customers and direct them to shops that sell the products they needed. Sometimes I would collect the goods to sell them in the aisles and then I would pay the manager who would give me my share at the end (...). There are many people in the markets of Dakar who only do this because it pays. You can earn 3,000 to 5,000 francs a day without any charges. It is because of the illness that the shops no longer call on us because some have closed and others no longer have many customers".

The same is true in other areas such as transport. Here, the ban on intercity travel has meant a real loss of income for intercity drivers (and their apprentices) who have been forced to park their vehicles for several months. Similarly, some brokers⁹ who participated in the transport service offered were forced to withdraw from the circuit for lack of commission. In addition to these categories of newly unemployed, there are also self-employed people such as the managers of gargotes and food sellers (peanuts and doughnuts) who used to operate in front of schools, markets and on the street.

The words of Binta (a breakfast seller in front of a high school in Dakar) reflect this economic damage:

"My main activity was selling breakfast. I can no longer sell because the pupils are my customers and the schools are currently closed. It is with this activity that I managed to provide for my family. Now I don't do anything. It is difficult".

The comments quoted in the illustration highlight the fragility of workers in the informal sector as well as that of their households. In addition to economic vulnerability, they highlight a social or even psychological vulnerability that can be seen in the psycho-emotional burden resulting from the impossibility of meeting household needs due to the cessation of informal activities.

A Concern about Unpaid Loans

In addition to the above-mentioned prejudices, some workers in the informal sector lived with the anxiety of not being able to honour their commitments to their creditors (banks, microfinance institutions and individuals).

This situation seems to particularly affect Maimouna (owner of a multiservice business set up opposite a school) who fears being sued by her creditor:

"I had obtained a credit of 600,000 fr from a banking institution to buy equipment. I have to pay 40,000 fr per month but after 3 months of repayment, the crisis came. The bank is putting pressure on me, it has even offered me flexibility, but even with that, I am not able to repay because my business is no longer working. I am afraid that they will seize my equipment or that they will file a complaint against me".

The anxiety experienced by this woman is similar to that experienced by other entrepreneurs and self-employed workers who, despite their goodwill, find it difficult to honour their

⁹ Discounters operating at vehicle stops and bus stations.



commitments. This is the case of Binta (a breakfast seller) who owes three months' rent to her landlord:

"What bothers me in all this is the fact that I have not paid my rent for a few months. I have a landlord who is very sympathetic and knows that my business is not working since the coronavirus spread. He tried to reassure me but I'm not the kind of person to beg for mercy. I have trouble sleeping because I don't want to be disrespected one day. This situation really worries me".

It is therefore clear, that in addition to the economic loss, many workers in the informal sector experience the torment of not being able to honour their commitments. At a time when some fear legal proceedings, others seem to feel morally embarrassed by their creditors and/or lessors.

For others, this situation is accompanied by a feeling of injustice and contempt when it is known that informal sector agents feel that they do not benefit from the support measures initiated by the Senegalese authorities.

The feeling conveyed by Modou (a tailor at the Colobane market) is representative of the perceptions of many of the actors we met:

"The State has taken the measure of subsidising businesses to help them keep their employees, but as far as I know no worker in the informal sector has benefited from this. I have heard that the State has asked the banks to postpone the repayment of loans to businesses, but we are not taken into account. We create jobs, and we pay taxes but we are left to our own devices. It's all very well to think about health, but if the State had thought about the people in the informal sector, it wouldn't have rushed to block everything and impose a halt to our activities".

However, measures to support informal sector workers have been announced by the public authorities, but it seems that the actions promised to this effect have not yet benefited the people we spoke to.

DISCUSSION OF THE RESULTS

The Covid-19 pandemic, beyond its uncertainty, has put the modes of public regulation to the test. This study shows that in the Senegalese context, the application of restrictive measures against a backdrop of public policy transfer seems to have led to a problem of adaptability. Olivier De Sardan (2021) put forward the idea of revenge in the context to analyse the perverse effects of the transfer of the model. The traveller model of travel restriction has thus contributed to further weakening the actors of the informal economy in Senegal. The work of Saunier (2014) has also discussed the complexity of taking on ideas and practices from outside a local context.

Obviously, the restrictive measures applied in Senegal followed the examples of China and California (in the USA), which were sold, rightly or wrongly, as a way of popularising a model that had been tested elsewhere since the early months of Covid in Senegal. This article, therefore, confirms the risks associated with the dissemination of copy-paste models despite the efforts of persuasion or socialisation (Debonneville & Diaz, 2013) that have been undertaken. In so doing, it confirms the need to think and act locally in order to implement



public measures even in a crisis context.

CONCLUSION

The covid-19 pandemic, a global health crisis, has had enormous consequences, particularly for the informal sector in senegal. The data collected in this article show that the application of the response measures to this pandemic (introduction of a curfew, closure of schools, markets and other places of business, prohibition of inter-city transport, etc.) Has led to a fall in the turnover of entrepreneurs in the sector and forced employees into unemployment. This has made them even more vulnerable.

In addition to adding to the scientific literature on labour and particularly on the informal sector, this article highlights one of the many incongruities of senegal's strategy for responding to covid-19. It thus constitutes a significant contribution to the reflection on covid-19, which has become, in addition to a political and health emergency, a fairly transversal scientific subject. However, the non-exhaustive nature of the study and its limited time frame (march to june 2020) reduce its generalisability and its capacity to question the long-term impact of the measures in question.

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E-ADMINISTRATION USAGE FOR SERVICE DELIVERY IN UNIVERSITIES: HIGHLIGHTS OF SELECTED SURVEY FINDINGS

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ABSTRACT: e-Administration, or electronic administration, is an Information and Communication Technology (ICT) tool that is aimed at improving performance and productivity at the workplace through the conversion of the traditional office, paper-based processes into electronic processes, to establish a paperless one. As a new and evolving mechanism, the e-Administration aids a seamless service-oriented and real-time information exchange between citizens and government, students and school authorities, etc. The study, therefore, focused on the utilisation of ICT in delivering services in universities. The review focused primarily on secondary data from journals, textbooks, and internet sources. Findings from the study indicate that most university students benefit more from the use of ICT in carrying out their academic activities and other personal endeavours. The study also adopted the Technology Acceptance Model (TAM) which stresses that when teachers and learners are given a modern and new technology like the ICT instruments, two (2) factors persuade their decisions on when and how they would use “Perceived Usefulness and Perceived Ease of Use”. Findings from the study also indicate that e-Administration as it is used in universities has certain drawbacks ranging from poor connectivity, unstable power supply, and lack of skill/training amongst others. The study found that access to the internet is directly related/proportionate to students’ performance as students with access to quality internet performed better compared to others who had limited access. There were further pieces of evidence of the existence of ICT instruments since the early 2000s in many universities but mostly revolve around telephones and basic computer software such as Microsoft word, as well as other internet connectivity-based communication systems like e-mail. It is, therefore, necessary for governments and university administrations to come up with a policy that addresses the issues/challenges hampering the full utilisation of ICT in universities.

KEYWORDS: E-Administration, Service Delivery, ICT, Traditional Office



INTRODUCTION

Among the wonders of this century is the prevalence of Information and Communications Technology (ICT), which is a modern electronic system that has the capacity of storing, retrieving, transmitting and receiving information within and outside organisations. UNESCO made integrating ICT into education part of its effort to ensure equity and access because it has the potential to contribute to universal access and delivery of quality education and learning, equity in education, educators' professional development, and efficient administration, management and governance of education.

The adoption of this ICT in governance is referred to as "e-Governance", and subsequent application in administration is termed "e-Administration", which is being done through involving the utilisation of communications between people, units and sections within and outside an organisation, with very fast delivery of information. In building transparent, reliable and efficient administration, the system of e-Administration came in as a new strategy introduced to replace traditional administration. This is considered an innovative system, through the rapid development of ICT with the ultimate goal of improving productivity and performance.

Across the world, in recent years, governments have made use of e-government initiatives in order to deliver services or information to citizens almost every day, seven days a week, to the extent that almost every national government, majority of sub-national or state governments, and many governments at the local level have set up web presence through which they deliver e-government services (Norris & Lloyd, 2006). The services are provided to residents or constituents, workers of public and private bodies, as well as other bodies at different levels.

Universities' transition to ICT implementation has undoubtedly put forth an overwhelming impact on the administrative culture of academic institutions, with universities adjusting to more challenging, innovative and modern techniques of administration offered by cyber technology. These adoptions of electronic systems have been embraced by many universities worldwide in delivering information and services, record keeping, and communication transactions.

E-Administration

By definition, e-Administration is a web-based initiative that proposes a paperless communication and interaction software application which includes management of workflow for introducing accountability and transparency, addressing corruption, establishing a level playing field and lessening poverty among the citizens (Kris, 2007). Going by this definition, e-Administration is a platform for e-Governance. The instrument mainly helps in removing the lack of transparency and the consequent lack of accountability in government-to-government (G2G) and government-to-citizen (G2C) transactions and communications, and empowers the citizens or constituents with the right to know on a real-time basis, everything pertaining individual and community development or services.

For a government to attain this level of performance that meets citizens' expectations, Poister et al. (2010) and Walker (2013) emphasised that strategic management in form of e-Administration is necessary. In designing the strategic mechanism for the effective functioning of e-Administration, administrators require the establishment and strengthening of the public administration staff's role, involvement of the general populace, and procedural as well as



organisational improvements, and the eventual transformation and adoption of the right environment or background to new circumstances.

As the world moves towards a digital era, only those who take advantage of trends in technology stand the chance of being relevant in the global community. Technology has changed the way organisations and governments conduct their affairs. The administration is undoubtedly inevitable in any organisation formal or informal, private or public. Researchers in the discipline of management and administration have often developed models for the smooth running of organisations. Notable among these models is the Bureaucratic model developed by the German scholar, Max Webber. The model is designed as an administrative tool for accomplishing large-scale administrative duties through the coordination of tasks of many individuals. Excessive delay and red-tapism are some of the drawbacks of the Weberian model and other traditional or manual methods of carrying out day to day activities of organisations.

e-Administration's extensive discussion should prevail over the Webberian sort of thinking, often considered rigid with its focus on an 'ideal-type' sort of organisation. A sound rationale for such is the systemic feature of e-administration which emphasise the total change of public structures' self-centeredness to introduce values for citizens, their needs and adequate participation in government and administration (Matei & Iancu, 2009). Considering this, e-Administration in universities can facilitate the achievement of set goals by management and students in real time. e-Administration has the goal of bringing governance closer to the people. e-Administration turns out to be a necessary system in actualising the target of e-democracy, which has to do with transparency and active citizen participation in decision-making processes. Similarly, the initiative can aid the establishment of a comprehensive database facilitating interphase between students and staff in universities.

THEORETICAL FRAMEWORK

As e-government and e-Administration research is scattered in various disciplines, exploration of in-depth theoretical development is required to help the current and future researchers to better comprehend the knowledge-gaps nature in existing works, and further, explore how those gaps can best be filled. Several theories and models have been proposed and utilised in the context of ICT usage in e-Governance and e-Administration in organisations. Notable among these theories is the Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Diffusion of Innovation (DOI) Theory, Information System Success Model, Unified Theory of Acceptance and Use of Technology (UTAUT), Extended TAM (TAM2), Theory of Planned Behavior (TPB), amongst others. For this study, TAM theory shall be accepted as a basis for the theoretical framework.

Davis (1986) introduced TAM, which is among the commonly accepted models in explaining the behavioural acceptance of users. The model is generally obtained in Social-Psychology, and in particular, the TRA (Fishbein & Azjen, 1975). TRA emphasise that beliefs influences attitude, which leads to intentions and consequently produces behaviour. It has some underlying tenets. The tenets are 'Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude, and Behavioral Intention to Use'. PU and PEOU form the belief of users on



information technology, hence predicting one's attitude in relation to technology, that in turn envisages its acceptability.

Based on Technology Acceptance Model, PU and PEOU are principles that are assumed to persuade attitudes concerning modern technology and serve as the mediator in the relationship linking attitudes, variables and external (Davis et al., 1989). PU is greatly influential on users' attitudes concerning technology and intention (of behavioural) that is persuaded by the attitude concerning the technology used.

PU is the principle that computer or technology usage is advantageous as it enhances performance. Davis (1989) in support of this, stated that the PU is the acceptance that one's performance would be increased if one uses an application. PU principle is capable of providing significant facts on how managers of academia perceive information technology and the way teachers and students continues to use computer or technology. Teachers' and academic managers' beliefs about the relevance of information and communication technology in education are critical for effective technology utilisation.

Perceived Usefulness (PU) makes clear the perception of users that information and communications technology is capable of enhancing performance. The perception of how relevant the ICT is functioning is critical for enhancing efficiency, minimising time spent doing work, and increasing accuracy.

PEOU on the other hand is another critical principle when one is about to introduce information and communication technology in higher institutions of learning as the initiative is effort free. PEOU explicate the perceptual understanding of users of the sum of effort needed to utilise the platform as well as the level to which those using accepts as true that using certain ICT-based tool will be effortless (Davis et al., 1989).

PEOU factor can grant significant facts about people's differences like computer anxiety and resistance to change (i.e. computer self-efficacy); people attributes such as resistance to change or attitudes towards the change.

Top managers, teachers and students' attitudes in relation to technology utilisation in higher institutions of learning are the foremost factors in whether they reject or use ICT. Acceptance of using ICT-based universities is relevant to enabling the utilisation by teachers and students.

This theory is, therefore, apt in this study because students and teachers make use of ICT due to the perceived value and benefits obtainable from it. TAM is significant in this study in that the model shows how users embrace ICT, which can be employed in how teachers and students come to accept and use technology in universities.

Literature has shown that most university staff and students make use of ICT in accomplishing set goals because they perceive it to make work easier and faster. The theory despite its acceptance globally has some limitations.

Ajibade (2018) noted that one of the limitations of the TAM has to do with the variable that has to do with the attitude of utilisers that is unavoidably measured via subjective ways like behavioural intention (BI) such as interpersonal influence (II). Nonetheless, II as a subjective ritual is described to refer to when an individual is persuaded or persuaded through words spit by a friend or colleague. While an influence can come from superior workers that can easily



direct the lower-ranking workers to do a particular task using technology due to the presence of an information technology policy. However, a friend does not have such directive power over other staff who are subjected to a certain line manager.

e-Administration and Service Delivery in Universities

Electronic Administration, otherwise known as e-Administration is an enabler of information flow which challenges traditional norms and capabilities and proposes an electronic system. With e-Administration, accountability is promoted and the amount of red-tapism is diminished with accelerated delivery of organisational services. The system replaces all the barriers to accessing information, especially in the provision of services, reduces operational and managerial costs, minimises corrupt practices and enhances transparency.

e-Administration facilitates the attainment of the organisation's goals and objectives. Through this system, efficiency and effectiveness in administrative functions are guaranteed. e-Administration increases accessibility, inclusivity and flexibility in service delivery. It enables quality service provision with very low-cost delivery options and improved productivity. The system stimulates the use of ICT facilities, encourages innovations and creativity, and improves the performance of universities globally.

Specifically, e-Administration creates a forum for fast access to information or data and keeps storage requirements to a least or minimum. It equally allows information or data to be accessed by many people at the same time. There is improved security in the initiative. Data can be coded and needs few workforce with less staff to strengthen the system. Data can be kept in computer systems without being discounted. It has gadgets to share data in a centralised computerised system and allows various units within the organisation to view information that enhances decision-making and planning processes (Osakede et al, 2017).

With the introduction of e-Administration in universities, staff can be recruited, promoted or appraised online, memos can be distributed via emails, transcripts can be processed and verified online, University tuition fees can be paid using e-Transact or Remita, and students can register for a semester and choose courses using online platforms. Lectures, examinations, seminars and assignments can be administered virtually, and the University's records can be stored, retrieved and transmitted with a high level of accuracy and reliability. In fact, all the 4ms (men, machines, monies, and materials) can be effectively managed with e-Administration. For instance, Osakede et al (2017) posit that an electronic database of personnel in an organisation like a University can be used to calculate workers' output and performance indicators such as labour turnover, lateness to work, absenteeism, quality defects and detection of ghost workers. Thus, e-Administration embodies e-Governance improvement in an entire organisational system with numerous components of e-system incorporating its application, structure and function.

Internet and ICT Usage in Universities' Administration

Poda (2003) researched the utilisation of the internet by staff and students at Burkina Faso's University of Ouagadougou, where he attempted to reveal factors that influence internet use as a driver of information and communication technology facilities. His study revealed that internet usage is basically driven by 7 elements – accessibility to information, technology infrastructure and equipment, personal satisfaction, cost-effectiveness, enhanced learning, skill challenges, and financial challenges.



In research on students' attitudes towards internet use for education at the Sarawak's University of Malaysia, Hong et al (2003) discovered that learners had internet which made students have positive attitudes towards education or learning. The students also had rudimentary skills in operating the internet and considered the University's environment for learning very conducive to internet usage as a learning initiative.

Studies by Ray and Day (1998) at Cape Coast University in Ghana revealed that 83% of students appreciate the use of ICT and the internet. Most of those surveyed considered using electronic resources as an initiative capable of saving them a huge time, promoting efficiency for them, and being relatively easy to use. In the same University, Egberongbe (2011) discovered over 77% of instructors favoured the use of ICT-based resources instead of print ones or hardcopy documents because it's considered less time efficient. Nonetheless, 66% of the same lecturers believe that print resources' importance and relevance can never be diminished as a result of a preference for electronic resources (Kwafoa, Imoro & Afful-Arthur, 2014).

In another study on the utilisation of electronic services and resources at Tirupati's S. V. University, Chandran (2000) discovered that over 56% of staff and students use online platforms to access resources. At Guru Nanak Dev University, Kaur (2005) made a similar study where he revealed that scholars, faculty members and learners used the internet for scientific enquiry and education purposes.

In a research conducted by Gay (2006) at the West Indies University on internet and ICT usage, it was discovered that learners were predisposed to use electronic platforms for assignments typing (92%), distance education from home (68%), e-mailing questions to teachers (90%), and supplementing other teaching activities (72%). However, learners rejected the full replacement of traditional teaching experience by the computer-based learning system. This finding indicates learners' increasing preference for both forms of learning which enables them to interact with their teachers and with ICT facilities.

The Internet and ICT usage by learners of the University of Dares Salaam has been investigated by Luambano and Nawe (2004) who found out that most of the learners could not use the Internet as a result of computer inadequacies with an internet connection, slow speed of the existing computers, and inadequate skills in internet usage. The work further unveiled that most learners that utilise ICT don't utilise it for research and scholarly endeavours.

At the Iranian Institute of Industrial and Scientific Research (IIISR), Tasviri-Ghamsari (1999) studied information technology usage among the staff of the institute and discovered that regular ICT usage was the e-mail interaction and that field of study and university degree were positively correlated with the sum of usage. High levels of positive effects of ICT and internet usage by teachers or lecturers of Iranian universities have also been revealed for study disciplines, teaching experience, age, and a university degree (Sharifi, 2003).

In Iran, a study by Salajagheh (1998) revealed the computer users' attitudes in the Information and Communication Technology Centre of the Medical University of Shiraz and discovered that almost every client had very positive behavioural feelings towards ICT usage in learning and teaching. Salajagheh discovered no difference between sub-groups of clients with unlike teaching experience, study fields and gender. Then again, in different findings on the issues that affect the use of ICT for instruction and research among Iranian members of faculty,



Sarmadi, et al (2010) discovered significant implications on the sum of information and communication usage for positive behavioural feeling toward the merits of ICTs, perceived complexity, perceived evidence of learning and teaching information technology. Sotoodeh (1998) investigated the utilisation of the internet and computers in Shiraz's universities of medical and non-medical sciences. His efforts revealed that the majority of users move towards Information and Communication Technologies for retrieving new ideas and thoughts and that the frequent usage was e-mail and word processors.

Ajuwon (2003) assessed information and Communication Technology uptake by learners of University College Hospital Ibadan. His study found that ICTs usage was inadequate. The reasons were as a result of poor awareness, insufficient training on ICTs, inadequate computer access, and the abnormal cost involved in the delivery of the internet. The Dadzie (2005)'s research on examining the usage of and access to electronic materials at Ashesi University College. Dadzie's work revealed that the general usage of computers and the internet for access to data was high due to the institution's latest Information Technology infrastructure. However, the utilisation of scholarly platforms was discovered to be depleted. This was characterised by inadequate awareness of the presence of library materials.

Agaba, et al (2005) examines the usage of internet materials by lecturers and researchers at the University of Makerere. Their research discovered the inadequacy of functional telephones among some of the foremost obstacles to e-administration by Ugandan libraries. The findings of the study revealed that 82% of the surveyed identified lack of infrastructure, plus low bandwidth as reasons preventing them from retrieving internet-based information and materials.

The examination of the National Survey of Student Engagement 2003 in the United States showed that 2/5 of the surveyed learners spent many hours daily undertaking academic research using the internet. This was revealed in Nelson-Laird and Kuh (2004)'s work, which further indicates the majority of learners have active social media accounts which they use for personal and academic endeavours. Additionally, more than half usually completed academic work by ensuring they interact with other fellow learners using the internet. The learners that engage in such communications with their fellows in learning quests have higher likelihood tendencies to belong to fields which stress higher thinking abilities than those other learners that do not collaborate with fellow students via the internet platforms. Meek et al (2009) discovered even though nearly half of learners of the British university examined utilises Facebook as a social media platform to informally learn, as well as discuss and collaborate about assignments, projects, etc.

ICT and the Internet have been investigated by Asemi (2005) with a focus on Isfahan's University of Medical Sciences, Iran. The findings of the research indicate that the surveyed utilised electronic platforms regularly due to their accessibility and availability in all faculties. The work further showed that scholars in the institution access quality patient care and healthcare-related information via the internet. Over 55% of the responses generated healthcare-related materials online because the library of the institution provides access to online journals as well as other databases to staff and students (Thanuskodi, 2011). Thanuskodi (2011) conducted similar research at Annamalai University, Annamalainagar. The findings revealed that Sciences Researchers are more positive about using the internet and considered it more impactful on their teaching and learning experience. The entire respondents (100%) portrayed positive feelings towards the use of online services and prefer retrieving information



online for personal as well as academic reasons. The study further indicated that nearly 60% of scholars in the Social-Science fields equally agree with the relevance of ICTs' information materials.

In a study on internet diffusion in Saudi universities by Allehaibi (2001) on the form of online services usage by the university staff and their feelings about information technology. His study revealed that the circulation of online-based information facilities and services technology is at the beginning of an explosion level with nearly 75% of the surveyed persons indicating that they were using internet-based information technology and that over 25% of the faculty members were unwilling to use it. Another research on the use of internet-based information technology staff of Sharjah University was carried out by BuMa'rafi (2009). The findings of the research indicated that the 69% surveyed utilise online information technology every day and become conversant with its usage for most of it on their own or with the support of colleagues (89%). They used internet-based information technology mostly for contacting colleagues, e-mail communications and accessing library catalogues.

In another study on the accessibility of online data at the Library of the Abeokuta University of Agriculture, where the researchers discovered that online-based data traverses the entire institution and was considered too extensively, something not difficult to operate with overwhelming satisfaction with its search results. Though there were certain constraints as a lack of enough operational terminals for usage despite the high demand and the lack of adequate electricity supply (Oduwole & Akpati, 2003).

CONCLUSION

From the foregoing, it is evident that the emergence of ICT and its adoption in organisations such as the university paves way for students and staff to carry out activities with ease. As a cost-effective mechanism, ICT makes it possible for administrations both government and private to generate new services and practices, and to minimize the time and cost of the services rendered. This study, therefore, concludes that e-Administration enhances the overall performance of university students and staff members. However, due to limitations and challenges observed much is still left to be desired in the full utilisation of this new technology. The study further notes that as far back as the early 2000s, a lot of universities globally have instituted online information technology practices in the running of their administration and management. Instances of e-mail, telephone, and computer applications like Microsoft word utilisation have been found in certain universities in the early 2000s and kept developing till recent years.

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**DISSECTING THE BITTER TRUTH ABOUT OUR POLITICS AND LEADERSHIP:
A STUDY OF EMEKA NWABUEZE'S A PARLIAMENT OF VULTURES**

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ABSTRACT: *In our contemporary Nigerian society, the mantle of leadership rests wholly in the hands of selfish mediocrities. The elites with positive intentions to redeem the nation are frustrated with politics. The shameless mediocrities in politics are daring and ready to maim in order to achieve their selfish aims hence the masses and unfortunate elites watch without action. Emeka Nwabueze, like other concerned Nigerians, believes that the trend needs to be changed. They believe that the only sure means to fight the malady is through satire and not with guns and matchets. In his A Parliament of Vultures, he vividly X-rayed the activities of the politicians and presented the same in such a way that people's consciousness would be awakened for corrections to be made. The researcher observed that Emeka Nwabueze got the inspiration for the play from society and therefore, in this research, the researcher aims to parse the facts about Nigerian polity as satirised in the play. In doing so, he considers the Realistic Approach as the apt theoretical framework for the work.*

KEYWORDS: Satire, Society, Politics, Play, Parliamentarian



INTRODUCTION

Theoretical Framework

Habib, M.A.R. in his *Literary Criticism from Plato to the Present: an Introduction* has disclosed that Realism, as an approach to literary criticism, came into existence in 1840 and it spread in many parts of Europe and America. According to him, the approach was made popular by Flaubert and Balzac in France, Dostoevsky and Tolstoy in Russia, George Eliot and Charles Dickens in England, as well as William Dean Howells and Henry James in America. He clarifies that the most general aim of realism is to offer a truthful, accurate, and objective representation of the real world, both the external world and the human self. As he puts it,

To achieve this aim, realists resorted to a number of strategies: the use of detail; avoidance of what was imaginary and mythical; adherence to the requirements of probability; inclusion of characters and incidents from all social strata, dealing not merely with rulers and nobility; focusing on contemporary life rather than longing for some idealised past; and using colloquial idioms and everyday speech (169)

Habib emphasises in addition to the points so listed, the direct observation, factuality, and experience since the concept is a direct reaction against the idealisation, historical retrospection and imaginary worlds of Romanticism. Realism is all about the true picture of contemporary life as exemplified by Nwabueze in his *A Parliament of Vultures*. As a satire, Nwabueze has subtly exaggerated some facts but in all, the work is a realistic representation of the contemporary happening in Nigerian politics. A Nigerian reading the play appreciates it as he or she is only being reminded of what he or she is already aware of and a foreigner who reads it is given a real fact about how politics is played in the country.

A Parliament of Vultures as Satire

In his “Political Culture as Product of Social Constructs in Emeka Nwabueze’s *A Parliament of Vultures*,” Emeka Aniago says that through the play, *A Parliament of Vultures*, Nwabueze brings to the public domain the very serious social concerns in a bid to re-ignite the dexterity of their intellect, as a means of spurring their thinking abilities into action (69). Aniagu’s submission here is exactly what satire does – to spur into action for correction to be made. According to Chris Baldick in the *Oxford Concise Dictionary of Literary Terms*, satire denotes a mode of writing that exposes the failings of individuals, institutions, or societies to ridicule and scorn. He makes it vivid that in the classical tradition, an important form of satire is the “formal” or the “direct” satire. Here, the writer directly addresses the reader (or recipient of a verse letter) with a satiric comment. On the other hand, he sees “indirect” satire as the alternative form of satire usually found in plays and novels and which allows us to draw our own conclusions from the actions of the characters. Nwabueze’s *A Parliament of Vultures* falls under this category of satire. In his *A Glossary of Literary Terms*, Abrams, M. H. discloses that indirect satire makes use of fictional characters to ridicule rather than using the personal pronoun “I” as in the case of direct satire. According to him, “The most common indirect form is that of a fictional narrative, in which the objects of the satire are characters who make themselves and their opinions ridiculous or obnoxious by what they think, say, and do, and are sometimes made even more ridiculous by the author’s comments and narrative style (286). Nwabueze’s *A Parliament of Vultures* is a play and through the actions and speeches of the fictional characters, the subject of the ridicule is made obvious. The aim of satire as evidenced



in *A Parliament of Vultures* is to correct impressions. Nigerian politicians are daring and ready to unleash mayhem when corrected or criticised. Concerned Nigerians, therefore, resort to satire as the only best means of attacking the prevailing ills. William Flint Thrall and Hibbard, A. Addison in their *A Handbook to Literature* had made it categorical that the essence of satire is not just to ridicule but to use laughter to correct impressions. They put it succinctly that satire uses humour and wit as tools with the aim that human institutions may be improved. This means that if a work of art only criticises without correcting its impression, such is not satire. In their own words, “If the critic simply abuses he is writing inventive; if he is personal and splenetic he is writing sarcasm; if he is sad and morose over the state of society he is writing irony or mere gloom (386). *A Parliament of Vultures* is, therefore, a political satire with almost all the features of indirect satire well blended by the author. In satirising the ills in our polity, Nwabueze has meticulously X-rayed hyperbolically, the misdemeanours of our politicians.

Women in Politics

In Nigeria and in many other parts of Africa, politics is seen as a dirty game. It is a dirty game, in the sense that decent people with positive intentions for society who are in politics are frustrated by the powers that be. During elections, wolves in human flesh are given tickets to run for various posts even as against the wish of the masses. Dubious men who have nothing to offer society go into politics just for their own selfish interests. In the contemporary era, women in large numbers have begun to join politics. Nothing is wrong with women being in politics. However, in Nigeria, women who join politics are not looked at as responsible wives.

In Nigeria, politics is lucrative and election into any position is usually not based on merit; an average politician believes that one should use what one has to get what one needs. Most times, women who join politics and who aspire to be elected to any post-offer their bodies to their sponsors. They are usually seen in many prominent hotels with affluent and prominent men and they tend to see their husbands as worthless. This is why men bluntly oppose their wives' aspirations to join politics. This picture, Nwabueze vividly painted in the play. He uses Madam Omeaku as representing such Nigerian women in politics. Having joined politics, Madam Omeaku begins to see herself as superior to her husband. Her daughter, Nkechi is amazed by her recent attitude towards her husband. Madam Omeaku rants to her thus “... What do you know about politics?” she exemplifies the fact that she no longer values her husband when she vents, “You have started to tow the path of your father. To have a bushman for a husband is already too much. Yet, you must make me have a bush daughter on top of that” (8). Madam Omeaku never realised all the while that her husband was a bushman until she joined politics. Nwabueze uses Madam Omeaku to make it categorical how wayward most Nigerian women become as soon as they join politics. Madam Omeaku further says to her daughter, “I married your father when my eyes were not yet open” (8). The audience understands perfectly well that politics abysmally corrupt women. Since she joins politics as a member of the parliament, Madam Omeaku no longer has any iota of regard for her husband. She begins to welcome male lecherous politicians to her house with impunity. Bob Brown, a male parliamentarian is one of them. Having visited her in her husband's house the first time, he complains about how difficult it was for him to locate the compound. Madam Omeaku, without regard, tells him that her husband is a bushman.

Nwabueze is of the opinion that women should remember their responsibilities in society and shun politics which in Nigeria in particular, is a major agent of corruption. He believes that most women are too docile and gullible and that when they join politics, they easily get



brainwashed to flirt around with other men. He makes it vivid that as soon as they begin to mingle with the male politicians, they tend to disparage their husbands. Brown visiting her in her house, consolidates the fact. He eulogises her beauty and Madam Omeaku is willing to offer whatever to him not putting into consideration, the fact that she is a married woman. She sees her husband as worthless and when Brown tells her how beautiful she is, she is delighted. Brown understands that she is succumbing to his woos and he says to her, “Your husband is very foolish....” (13). Ordinarily, no woman would delight to have her husband insulted by anybody but Madam Omeaku believes that her eyes had been opened by politics and that she has seen that indeed, her husband is no longer her match. At this point, Mr Omeaku comes in and is surprised to see a male visitor in his house with his wife. He demands to know who the man is and all he receives from his wife is a diatribe. When Mr Omeaku demands to know who the man with his wife is, Madam Omeaku disrespectfully responds to him before her visitor, “Who is who? Isn’t it enough that you disturbed our discussion? And now you ask me “Who’s that”?” (13).

To further remind him that a great disparity now exists between them, she commands her husband to walk into his room and remove his clothes which she describes as his ancient coat. Mr Omeaku reminds her that he is her husband and that she should mind how she talks to him. At this point, Madam Omeaku makes it clear to him that they are no longer equal. Politics has corrupted her and she now sees herself as a first-class citizen far above her husband. She sardonically reminds her husband that they are no longer compactable when she says to him, “Is that how you talk to an Honourable member of parliament?” (13).

Nwabueze is of the view that women should be role models to their children. From inception, women are helpers to men in families and their primary role was to take care of the home and children. However, in contemporary African society, politics has initiated an aberration so that women now rub shoulders with their husbands. Nwabueze believes that when women derail in their responsibilities, things fall apart in their homes. Madam Omeaku becomes a bad influence in the home. Mr Omeaku comes home and sees his daughter dressed shabbily to the delight of her mother. Mr Omeaku frowns at this but his wife dares the daughter not to answer her father. (16). She eulogises her daughter and quickly reminds her husband that she has become the breadwinner of the family. However, Nwabueze is of the opinion that whatever a woman achieves in life is made possible by her husband. This is well demonstrated using Mr Omeaku and his wife. When Madam Omeaku begins to brag, Mr Omeaku quickly says to her, “You built your business on my gratuity. You couldn’t have had the Wayside Hotel if I hadn’t parted ways with my gratuity” (16).

Misappropriation of Public Funds

The reason why every Dick, Tom and Harry jumps into politics and aspires to be elected to political power is not that they want to contribute meaningfully to society but because they want to enrich themselves to the detriment of the masses. Wealthy businessmen become political godfathers to many people whom they sponsor to vie for elected positions. They spend heavily campaigning for them because they know that eventually when their political godsons win the election, they would gain a million folds what they had spent to plant the person. Nigeria is blessed with a lot of resources which when well harnessed, would be enough to elevate the country but selfish rulers amass the wealth among themselves. In *A Parliament of Vultures*, Nwabueze discloses that it is not a fallacy to say that Nigerian lawmakers carry money home with enormous Ghana-must-go bags. They go to the parliament only to discuss



how to amass the country's resources. Brown tells Madam Omeaku that a lot needs to be changed about her now that she is a member of the parliament. In his own words, "Politics is no child's play. You will even do your shopping in London or New York, or even Rome" (12). Nwabueze, like other aggrieved Nigerians, alleges that the lawmakers in Nigeria only converse to talk about frivolities and to squander the public fund. Madam Omeaku makes a motion that the parliamentarians are entitled to an inconvenience allowance. She emphasises that their major responsibility as parliamentarians was to enrich themselves thus, "What are we parliamentarians for?" All the members of the parliament support the motion of Madam Omeaku and the chairman of the parliament immediately approves the whopping sum of two million naira for each parliamentarian as his or her inconvenience allowance (26). To further expose the show of shame of the parliamentarians, the chairman, Habamero passes the motion that they shall authenticate the bill by officially calling for an Emergency meeting of the Political Affairs Committee at the Hilton hotel where more funds shall be squandered (27).

To be able to achieve their selfish aims without any obstacle, the parliamentarians weed off members of the parliament who they see as hindrances. Dr Parkers, an international political guru and Otobo have good intentions in the parliament but they are frustrated when the corrupt parliamentarians discover that their continued membership in the parliament will be a hindrance to their selfish desires. Otobo's dialogue with Dr Parkers clearly consolidates the fact that the parliamentarians only aim to milk the country dry. Otobo says to Parker, "... And when you were spotted during the American tour, you thought you were honestly called to return and serve the nation? But I know what they thought of you. They felt that they needed somebody who would help them to transfer their loot abroad. When you started talking about accountability, they wrote you off..." (35). This is exactly what happens in Nigerian politics. Recently, the selfish and corrupt people in the executive arm of the Nigerian government see the controversial Senator Dino Melaye as a threat to their selfishness. Like the Parliamentarians in Nwabueze's *A Parliament of Vultures* ousted Parkers, Senator Melaye is always been abused, a way of trying to get him frustrated out of the Senate. Melaye has always criticised the maladies in the government and he has, on many occasions, been ignominiously abused.

Neglect of the Teachers:

Teachers are builders of society and an aphorism has it that any society without teachers is in perpetual darkness. Nwabueze observes with dismay, the abysmal neglect of the teachers by the government. Teachers, despite their herculean task to educate and enlighten the citizenry of society to ensure the continued existence of society, are only paid a peanut. In most cases, they are owed for months. Nwabueze through Madam Omeaku vividly gives a pathetic picture of how poorly the Nigerian government treats the teachers. Teachers are supposed to be paid the highest wage for their onerous tasks but the reverse is the case. When Mr Omeaku reminds his wife that she became rich through his thirty-five years of efforts as a teacher, she quickly mocks him by x-raying the poor condition of Nigerian teachers. According to her, "What was such a service worth, Mr Omeaku? Thirty-five years as a teacher in a primary school. What is such service worth in the present age" (17)? She makes it obvious that teachers are worth nothing in the country and that they have no wherewithal to do whatever they want to do because of the meagre salary they are paid. She adds that if she had not brought him out from the village, he couldn't have smelt township life in all his days of life (17). Government neglect of the teachers is further made resounding on page 71. While the parliamentarians are busy devising means of sharing the government resources among themselves, Mr Brown suggests that they make a budget of ten million naira for their flamboyant dresses for thanksgiving. This



amount, the parliamentarians see as being too infinitesimal and Madam Omeaku rejects the estimate as she sardonically says, "... Are we teachers? This parliament cannot afford to be as miserly as teachers. Nonsense!

Members of the parliament squash that the money ought to be used to improve the welfare of the teachers. In order that their ill intentions are actualised, they always evict responsible members of the parliament who would have vehemently opposed their sinister intentions. Having agreed among themselves that they would appear aristocratic at the thanksgiving through their kind of lavish wears, the chairman of the parliament, Habamero says:

You have seen, Honourable Otobo, that ten million naira will not be adequate to take care of this business. The bulk of the money will be disbursed through the payment of inconvenience allowances to members for attending the thanksgiving service. Extra expenses will be accrued through the making of appropriate dresses for members, and hiring the music group. I, therefore, approve the sum of two billion naira for this purpose. Approved? (72)

This lofty arrangement appals Parkers and Otobo who quickly object to the proposal. The two argue that the resources ought to be channelled into something positive in society and the chairman quickly overrules the matter and the members make caricatures of the two responsible persons in the parliament. Madam Omeaku says, laughing heartily, "Do you blame them? They are not used to good things" (73).

Otobo and Parkers who are in the parliament to genuinely work for the masses, opt to abscond than be in the parliament and watch aberrations happen. Madam Omeaku gladly says "Mr Chariman, this will increase our allowance. We're not going to reduce the budget because some people who are allergic to enjoyment have opted out (73). This statement of Madam Omeaku quickly reveals the ill intentions of the parliamentarians; they are not there to represent the people who voted them in but they are there simply to enrich themselves. Concerned Nigerians bemoan the corrupt practices of our elected and political leaders who rather than fight for the interest of the masses that elected them, prefer to milk the society dry. Uche Nnyagu fiercely harangues them in his *To Unknown Destination*. Uche Ogbuagu, a popular opera artist in one of his performances, criticises our elected senators and legislators whom he regards as being wicked and greedy.

Nwabueze agrees completely with Ogbuagu that our elected leaders are wicked and selfish when he makes it vivid in his play that they aim to swindle the nation and subject the people who get them to power to perpetual suffering. Each time there is a transition in the government of the nation, the new government talks of recovering lots of the past administration. The loot is always deposited in foreign banks. It seems to have become the tradition in the nation that once one is elected into an elevated position, the first thing is to loot the nation and transfer the loot to foreign accounts. Nigeria is rich but the wealth goes into the pockets of the few top political and government officials while the masses suffer and wallow in abject penury. Brown laments that Dr Parkers fail to live up to their ill expectations. He tells Madam Omeaku that the reason for bringing Parkers into politics is to help them transfer their loot to foreign banks. He says to her, "Having lived in the United States of America for more than fifteen years, we felt he should have enough connections to help us put money in foreign banks. After all, what was the worth of his campaign (10)? He, at this point, consolidates the fact that election in Nigeria is not based on merit; it is always grossly rigged. He says, "Fortunately, the Returning Officer was my classmate. It wasn't difficult for me to negotiate the right figures for him as I



did in your own case (10). This is a real fact about elections in Nigeria. During elections, many people refuse to vote on the ground that their votes do not count. During the Presidential election that ushered President Mohammad Buhari in as the President of the Federal Government of Nigeria in 2015, it was obvious to all and sundry that the election was grossly rigged. This has been the custom in Nigeria and it is pathetic. That is why Nwabueze is X-raying it here for correction to be taken.

The Role of Women in an Ideal Home

Women are home builders. This is why in Igbo, married women are addressed as *Odozi Aku* or *Ochekwa Aku* – Preservers of Wealth. Men are breadwinners of their various homes and women, no matter how well placed, must be under their husbands. Families are interesting and enjoyable when members of the family live up to their expectations. In modern African society, women, irrespective of their level of civilisation, obey God's injunction and they still humble themselves to their husbands. Ifeoma Okoye vivifies this in her *Behind the Clouds* using the character – Ije Apia. Ije Apia is well educated in an elevated western university. She has lived abroad for many years and when she marries Dozie, she humbles herself and never seeks equality with him.

From creation, according to the book of Genesis, women are created out of man. The scripture records that God took a rib from the first man whom he caused to fall into a deep sleep. With the rib, God created the woman and enjoins her to be a helper to the man and to humble herself before him. As helpers in their various homes, Nwabueze believes that when they derelict from their divine responsibilities, things would fall apart. Things begin to fall apart in the family of Omeaku when Madam Omeaku begins to neglect her duties and aspires to be above her husband. Nwabueze makes it clear to the audience that women tend to exhibit different traits when they assume the responsibilities of men. Madam Omeaku has been living with her husband with little or no qualms. Madam Omeaku joins politics; she becomes a Parliamentarian and she begins to see herself as superior to her husband. The Igbo saying that any society governed by a woman is in a mess is made obvious by Nwabueze on page 16. Madam Omeaku forgets so soon that Mr Omeaku's salary, no matter how meagre as a teacher, has been sustaining the family. She becomes a parliamentarian and she sees herself as a demigod to be worshipped by her husband. She abandons her responsibilities as a woman and takes control of the family. She buys flamboyant wears for her daughter whom she wants to use to attain a height in her political aspiration. Mr Omeaku is amazed to see his daughter wearing skimpy clothes and practices cat walking under the supervision of his wife. Mr Omeaku asks to know what is happening and Madam Omeaku shuns Nkechi, "Shut up, Nkechi. You don't have to answer every question. Don't you know that you're now grown up" (16)? This appals Mr Omeaku. He asks, "Do you mean that my daughter should not answer my question? What's this house turning into?" Mr Omeaku is aware that things begin to fall apart when his wife assumes the responsibility of the man. He understands the meaning of the Igbo aphorism that a dog trained by a woman would always eat eggs hence, he bemoans that "I can't allow you to misuse my daughter as you misused yourself." At this point, Madam Omeaku quickly insults him thus, "You should be ashamed of yourself. I don't blame you, anyway. Go ahead and insult me. If I hadn't fed you these last six years, you couldn't have been alive to call me names (16).

Mr Omeaku absolutely loses the respect and love of his wife to the parliamentarians. He observes that his wife has become a whore, flirting with male parliamentarians. Thus, he meets Dr Parkers and Otobo and vents his anger on the lecherous parliamentarians.



You people are condoning evil in this parliament. You people are elected to pilot the affairs of our land not to destroy families. (*raises his voice*) You people should check the amorous affair between that stupid Mr Brown and my legal wife. Did you hear that? Legal wife! (40)

Nwabueze is of the opinion that when the character of one of the spouses becomes abysmally unbearable, it seriously affects the other. Mr Omeaku has borne the ill behaviour of his wife since she joined politics and he resorts to drinking as a way of coping with the stress. Recall that as a teacher, Omeaku has been a responsible person. That is why he has been able to save from the peanut he was receiving as a salary to maintain his home. We often hear some “innocent” men turned perpetual drunk say that the condition of their home put them in this condition. This fact is consolidated by the action of Mr Omeaku, an erstwhile gentleman whose home was peaceful before his wife became a parliamentarian. What probably aggravates the whole thing is the fact that his cherished daughter, Nkechi is awfully corrupted by his wife. When he can no longer bear the peril, he resorts to drinking. Drinking, no doubt, gives even the taciturn men the courage to speak their minds without fear. Being inebriated, Mr Omeaku goes to the parliament to lash them. When he comes, the parliamentarians are busy as usual, sharing the public fund among themselves.

Nwabueze uses Mr Omeaku to give a true picture of what our parliamentarians do in the parliament as Mr Omeaku, as drunk, staggers all through as he lashes them thus, “So this is what you people are doing?” He calls the ignominious parliamentarians vultures and the parliament, he calls a parliament of vultures for eating the nation to death, leaving nothing for the masses to quench their thirst” (31).

The Problem with the Masses

Nigeria is wealthy. According to Wikipedia.org, Nigeria is referred to as the “Giant of Africa”, owing to its large population and economy”. Nigeria is blessed with lots of mineral resources. The pathetic thing about Nigeria is that management of the affair of the country is in the hands of mediocrities. In his *A Man of the People*, Chinua Achebe vivifies the genesis of the problem of Nigeria to be selfish and irresponsible Nigerians taking over the mantle of leadership. Nigerians, as Achebe has disclosed, are brainwashed to believe in the sweet lies of the selfish politicians who promise the masses heaven and earth just to get their support. The politicians, when they are voted to power, become rather beasts. In Nwabueze’s *A Parliament of Vultures*, corrupt and selfish people are perpetually voted to power by the poor and gullible masses. The people with positive intentions for society are not voted for because they do not share money with the masses. Illiterate, corrupt and selfish individuals who are moneybags, share money with the hungry masses to buy their conscience. The masses praise them and they are willing and ready to vote for them irrespective of the fact that they have got absolutely nothing to offer society. The masses believe that any politician who gives them money during politics is the person they will support during the election. They thus, turn their backs on the genuine politicians who have shared no money with them. During politics, politicians use sinister bickering to demean the sages in the politics. Nwabueze makes this fact very glaring when Ashili brainwashes the masses by casting aspersions at them just to win sentiment. Dr Parkers and Otobo who mean good for society are presented as devils to the too-docile masses. Madam Omeaku, a stack illiterate and avaricious dupe and her cohorts who are ready to milk the society dry are held in high esteem because they have offered the poor masses some money. Ashili tells them to forget Dr Parkers and Otobo because they haven’t given them any money. He says to them, “I tell you, my people, what you eat is what you get from politics” (38).



The masses shout their support for Madam Omeaku and her team. In the play, the setting, Anioma stands for Nigeria. Ashili, as the campaign manager, is encouraged to speak further with vigour,

“My good people of Anioma, what you eat is what you get from politics. Now is the time for a little less talk and a little more action. (*Dips his right hand into his pocket, brings out a wad of currency notes and raises it high for the crowd to see*) This is the courtesy of Madam Omeaku” (39).

The masses shout in one voice that Madam Omeaku is their man. This is a typical example of how politics is played in Nigeria. The powers that be in Nigerian parliament are aware of the incapability of the people they plant to power. But for their own selfish interests, they impose the gullible fools they can always manipulate. Madam Omeaku is known to the parliamentarians as an “ignoramus” as observed by Jossy who says, “My concern is Madam Omeaku’s educational status” (29). Madam Omeaku quickly exposes the fact that parliamentarians in the country are only game payers. She knows that she is not educated and she still vies for the position of secretary. In her argument, she says, “What does the secretary do that anybody cannot do? I shall remember what’s been discussed, put them in the way we members of the inner circle will like it...” By this statement, Nwabueze makes it clear that the people we elected to certain political positions are only interested in what interests them and not those who have elected them to power.

Even the so-called men of God are today deeply involved in politics not just to sanctify it but to enrich their pockets. Because of the lucrative nature of Nigerian politics, many charlatans go by the nomenclature “Men of God” to have open access to politics to amass wealth. The so-called men of God who should act as gadflies to put the excesses of the politicians to check are rather, the people helping to abet evil. Reverend Jossy aided in ousting Dr Parkers, Otobo and other good people from politics. The Parliamentary Secretary is overthrown just because he does not support the sinister plans of the corrupt and illiterate Parliamentarians. Reverend Jossy is in the conspiracy. Brown says, “We can’t consolidate the ruler-ship of this parliament unless we also remove the Parliamentary Secretary. He’s very fond of Dr Parkers.... (28) In her illiteracy, Madam Omeaku is elected the Secretary. Habamero reminds them that having Madam Omeaku as the secretary is in their own interest for as he puts it, “With this method, we can control parliamentary decisions, and deal with Dr Parkers and his group. Idiot. He doesn’t know that the place for academics is in the university. And when we incapacitate him, Mr Otobo, his accomplice, is reduced to nothing (30). With this submission by Habamero, the audience understands that sages are abhorred in the Nigerian parliament. The Parliamentarians are comfortable when all of them are illiterates and they reason alike. The presence of well-meaning people in the parliament is seen by them as an obstacle against their evil intention. During their sittings, Parliamentarians are busy talking about what to do to appease their retinue of girlfriends. At their regular lofty hotel parties, they pay an incredible sum to get call girls to romance their back. Miss Nkechi Omeaku is given the contract for getting young university girls for them. This is where the enormous Nigerian wealth goes into and the country is left undeveloped. Madam Omeaku reminds the Parliamentarians of the need to get a car for her daughter, Nkechi whom they have been using for their selfish interest. Without ado, the request is approved and she is offered a brand-new Honda Accord.

There is no orderliness in the Parliament, the Parliamentarians act without decorum. During their sittings, Habamero acts with impunity and when Dr Parkers calls him to order, without



decorum, he commands him, “Sit down, Dr Parkers” (46). With the support of the chairman, the Parliamentarians who see the presence of Dr Parkers and Otobo as a hindrance to their ills, insult them. Dr Parkers tells them the simple truth that the Parliamentarians should not start the meeting in absence of the Secretary, oblivious to the fact that everything is simply stage-managed, Reverend Jossy and Madam Omeaku harangue him. Instead of calling Jossy and Madam Omeaku to order, the Chairman instead, supports them. It only dawns on Dr Parkers that everything has been preplanned when the Parliamentarians insist that the sitting would hold and they nominate and approve Madam Omeaku as the Secretary of the parliament.

Appointment of Key Posts

A society or an organisation thrives when dynamic, intelligent and resourceful people are given the opportunity to showcase their talents. Many countries are developed today because their leaders are resourceful and focused. Nwabueze gives the major reason why Nigeria has remained backward and underdeveloped to be bad leadership. The play aptly relays the pathetic fact about contemporary Nigeria that only mediocrities are at the helm of leadership of the country. He sees this fact as the reason for the poor state of the nation. The illiterates in the administration of Nigeria are comfortable working with fellow illiterates and they see the presence of elites among them as a threat. This is why they have fought doggedly to frustrate Otobo and Dr Parkers. The mediocrities at the helm of leadership, as is the case in contemporary Nigeria, appoint fellow mediocrities to key posts. The Parliamentarians deliberate the appointment of chairmen of various boards. Dr Parkers nominates a sage and a veteran lawyer who could have served well as the chairman of the board of the Vegetable Oil Company but the parliamentarians vehemently oppose the nomination and rather opt for an illiterate whom they could control. As the name of the proposed candidate sounds, one understands immediately the message of the playwright here. Madam Omeaku suggests Alhaji Sir Barawo Oleh who sells vegetable oil at Gelegele market. The word “Barawo” in the Hausa language means “Thief” and likewise “Ole”, in the Yoruba language. This immediately gives a true picture of who is in the leadership of the nation. The fact that the proposed candidate is a vegetable oil seller, without any trace of educational background, consolidates the fact that illiterates are at the helm of leadership of the nation.

CONCLUSION

It is a fact well acknowledged that for whatever problem to be solved, the cause of the problem needs to be identified. This is the belief of satire, to expose the ills in the society, individual, religion or politics and then proffer solution. The playwright has meticulously selected his diction which coheres with the message he aims to pass across. An average Nigerian reading the play is simply reminded, in a funny way, of what he or she already knew and a non-Nigerian reader is given a true picture of how politics is played in the country.

Nwabueze has been able to identify the problems with Nigeria. He understands that identifying the problems without proffering the solutions to forestall the repeat of the problem is nothing but a futile effort. He, therefore, reminds the prospective politicians that whatever goes up will eventually come down; there is punishment for whatever crime. While the selfish parliamentarians are busy planning how to further ransack the remaining wealth of the nation, the aggrieved hungry masses revolt. The playwright gives vivid illustrations of the plights the



parliamentarians find themselves in. This is made known by the parliament chairman who says, “Are we going to stay here and get roasted alive? They are setting the building on fire!” (113). The play discloses that the parliamentarians try to rush through the door, but it is too late. A group of militant youths rush into the House, singing war songs. They arrest the honourable members and proceed to tie them up with ropes... (113). The playwright, while vivifying that it is better to carry out any responsibility well and be free from any perpetual agony, at last, suggests that revolution is a sure solution to the problem of this nation.

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RENEWABLE ENERGY CONSUMPTION AND ECONOMIC GROWTH IN NIGERIA

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ABSTRACT: *The impact of renewable energy consumption on economic growth in Nigeria is aimed at establishing the relationship between renewable energy consumption and economic growth in Nigeria. The oil price volatility in the international oil market in the last decade has led to a substantial rise in the demand for renewable energy sources. Nevertheless, the provision of energy needed for growth and at the same time mitigating against its hazardous effects on the environment is a major world problem. The paper used secondary data from the World Bank data bank from 1990 to 2020 for its analysis. It used Toda-Yamamoto augmented granger causality test to test for the nature of the relationship between the two variables and Auto Regressive Distributed Lag (ARDL) bounds test to examine the impact of renewable energy consumption on economic growth. The study found a bi-directional relationship between the variables. The regression results also showed a significant positive impact of renewable energy consumption on economic growth. The work concluded that renewable energy consumption enhances economic growth in Nigeria. It therefore recommends that the government should encourage investments in the renewable energy sector by providing a conducive business environment and also create awareness on the importance of the use of renewable energy in the country.*

KEYWORDS: Renewable energy, Fossil fuel, Economic growth, Solar, Climate change, Biomass.



INTRODUCTION

Climate change is one of the world's major challenges today. It is in agreement with this that Imadojemu and Akinlosotu (2018) stated that the energy needed for growth has hazardous effects on the environment; as such, it should be seen as a major world problem. Pollutant emissions cause global temperatures to rise. This constitutes a problem to energy production and usage (Khobai & Le Roux, 2017). According to Okonkwo et al. (2021) and Maji, Sulaiman and Abdul-Rahim (2019), the carbon dioxide produced by burning fossil fuels contaminates the environment and is a major contributor to global warming and acid rain.

It is as a result of this challenge that renewable energy gained prominence. Scientists agree that fossil fuel is a major contributor to climate change and by extension a source of global warming due to its effect on greenhouse emissions. Renewable energy therefore provides a means of eradicating the effects of climate change by reducing the level of greenhouse emissions. Ajibade (2019) argued that increase in the use of energy from clean sources is necessitated by the destructive effect of greenhouse gas emissions on the atmosphere which is the major cause of climate change and also raises other environmental related concerns. According to Bhattacharya, Parameti, Ozturk and Bhattacharya (2016), the increased use of renewable energy globally has helped in providing solutions to climate change.

Renewable energy consumption is also made popular by the improvement in technology which reduced its cost of installation (Bowden & Payne, 2009). Apergies and Payne (2010a & 2010b) also noted that the oil price volatility in the international oil market in the last decade also led to the rise of renewable energy sources significantly. More so, the increased consumption of renewable energy has been made possible through government support making the source of renewable energy cost competitive (International Energy Agency, IEA, 2009).

Energy plays an important role in every sector of an economy. In the 21st century, it is one of the significant factors driving economic development (Okonkwo et al., 2021; Ekone & Amaghionyeodiwe, 2020). It is needed for the provision of certain basic human needs like cooking, lighting, communication, transportation, health care, etc. Renewable energy includes solar power, hydroelectric power, geothermal energy, biomass energy, wind power, and tidal power.

The use of fossil fuels significantly affects the environment through greenhouse gas emission. It is therefore imperative to address the energy needs and environmental consequences trade-offs through an energy source that is clean and sustainable. Besides, energy from clean sources apart from its environmental friendliness could mitigate against future hike of conventional fuels especially in less developed countries through energy portfolio diversification; it could also provide local economic opportunities that can lead to poverty reduction and economic growth. This study, therefore, will examine empirically the effect of renewable energy consumption on economic growth in Nigeria using secondary data from 1990 to 2020.



REVIEW OF RELATED LITERATURE

Conceptual Literature

Renewable Energy

Renewable energy is fast replacing fossil (dirty) fuels in power generation. This is as a result of the need to ameliorate the effect of fossil fuels on the climatic system, as the cost of installation of renewable energy has been reduced considerably due to innovation. Renewable energy is energy sourced from natural processes like water, wind and sunlight. It is either not exhaustible or it is replenishable. According to Shinn (2018), renewable energy which is also referred to as clean energy is a constant replenishable energy from natural sources or processes. For instance, though their availability may depend on time and weather, the sun does not cease to shine nor does the wind cease to blow. In duration, the renewable energy sources could be inexhaustible virtually but the amount of energy available per unit of time is limited.

Renewable energy is sourced from different sources; one of these sources include solar power which is a powerful source of energy that can be used in homes and businesses to provide light and heat. The sun possesses tremendous potential in providing human energy needs; photovoltaic cells made from silicon make it possible to collect this solar power. The sunlight is transformed into electricity by the cells and used to power any gadget. Others include wind power, hydroelectric power, biomass energy, geothermal energy and tidal power.

Economic Growth

The increase in capability and productivity of any country when measured in money terms is referred to as economic growth. Economic growth has been defined as an increased production of economic goods and services from one period of time to another (Chappelow, 2019). Economic growth is commonly measured in terms of the annual increase in aggregate market value of additional goods and services produced, using estimates such as GDP.

As a result of economic growth, more profits are created for businesses leading to rise in stock prices, availability of more capital for reinvestment, increased employment and higher income. There is also increased purchases which drive higher economic growth. This is the reason every country wants positive growth in its economy, making economic growth the most watched and coveted economic indicator.

Theoretical Literature

The Classical Theory of Economic Growth and Stagnation

This theory is a combined work of the 18th century English economists: Adam Smith, David Ricardo and Thomas Malthus during the industrial revolution in Great Britain. Growth in an economy was explained in terms of technological progress and growth in population. Capital accumulation or technical progress will increase for a while, but a fall in profit will prevent further accumulation of capital, and gradually the economy falls into a state of stagnation.

In their opinion, diminishing returns from population growth threaten economic growth due to the constant amount of land, as technological change can only temporarily check diminishing returns (Nafziger, 2016). This can only be resolved through accumulation of more capital. However, minimum profits and interest payments are required to maintain or increase capital



stock. As profits and interests per person decline and rents increase with population growth, there is a diminishing surplus available for the capitalist's capital accumulation (Kenton, 2021). This declining surplus reduces the inducement to accumulate capital. Expansion of the labour force leads to a decline in capital per worker or a decrease in worker productivity and income per capita; this indicates an eventual economic stagnation.

The Neoclassical Growth Theory

This theory was introduced by Robert Solow and Trevor Swan independently in 1956 as a response to the criticisms of classical theory. It is regarded as the neoclassical counter revolution or the Solow-Swan growth model. To them, capital, labor and technology are the driving force to economic growth. According to Banton (2020), the theory opines that equilibrium in the short-run results from labor and capital variation in the production process. As a result, technological change influences the economy significantly, and without which there will be no growth. Hence, labor, capital and technology are the major economic growth drivers.

Capital accumulation as it is used is the main focus of this theory; more so, productivity is determined by how labor and capital are combined. Technology helps boost labor productivity leading to increase in output. Therefore, the production function of the neoclassical growth theory is used to measure the growth and equilibrium of an economy, $Y=Af(K,L)$ where Y is the economy's GDP, K is the share of capital, L describes the amount of unskilled labor in an economy, and A represents a determinant level of technology (Banton, 2020).

The author maintained that because of the relationship between technology and labor, the production function is rewritten as $Y=f(K, AL)$. An increase in any of the inputs will increase GDP and hence, equilibrium of the economy. Conversely, if the three factors are not all equal, the returns of both unskilled labor and capital on an economy diminish, implying that increases in these two inputs have exponentially decreasing returns while technology is boundless in its contribution to growth and the resulting output it can produce.

The Endogenous Growth Theory

This theory was developed in the early 80s by Paul Romer and others in response to the criticisms of the neoclassical growth theory. The theory argues that economic growth depends on factors within the economy. Explicitly, it presumes that human capital development spurs economic growth through development of new technologies. Liberto (2020) claimed that the endogenous growth theory upholds that economic growth is basically the result of internal forces, rather than external ones; it argues that improvement in productivity can be tied directly to faster innovation and more investments in human capital from governments and private sector institutions.

The theory emphasized that economic growth is propelled by internal sources such as human capital development, innovation and capital accumulation rather than external sources. This is a contrasting opinion to the neoclassical view of what causes economic growth. The advocates believe that improvements in productivity can be tied directly to faster innovation and more investment in human capital (Liberto, 2020).



Empirical Review

Gershon and Emekalam (2021) in their paper sought to determine the key factors in renewable energy utilization in Nigeria using Toda-Yamamoto method. Their findings suggested a long-run relationship between renewable energy consumption and its determinants in Nigeria. The paper suggested policy induced increase in renewable energy production and consumption.

On the other hand, Li et al. (2021) aiming to establish the relationship between renewable energy sources and economic growth in South Asia Association for Regional Cooperation (SAARC) countries used data from 1995 to 2018. Applying fixed effects and panel vector error correction model analyzed the data on disintegrated renewable energy sources. The study found that wind, hydropower and geothermal all have a positive and significant effect on economic growth in the selected countries; with hydropower having the most impact.

Ekone and Amaghionyeodiwe (2020) investigated the renewable energy consumption effect on economic growth in Nigeria and also the direction of the causality, if any, between the two variables. They used data from 1990 to 2016. The paper found that there exists no significant positive impact of renewable energy consumption on economic growth in Nigeria. Besides, no causality exists between the variables. It suggested encouraging the use of renewable energy as a means to reduce domestic fossil fuel consumption.

In another study, Ahmed and Shimada (2019) also used a panel study for 30 countries (emerging and developing economies) in five different regions of the world to investigate the relationship between renewable energy consumption and economic growth. The study found a long-run significant relationship between the two variables in the selected South Asia, Asia and most West African countries but found that in Latin America and the Caribbean countries, no such relationship exists. However, economic growth depends on non-renewable energy consumption in these countries. The study proposed policy options for the selected countries.

Maji, Sulaiman and Abdul-Rahim (2019) in their own study used panel dynamic ordinary least squares (DOLS) to estimate the impact renewable energy has on economic growth using data from selected West African countries. Their findings suggested that renewable energy slows down economic growth in the tested countries due to the nature of the source of the renewable energy (wood biomass). The study recommended the adoption of cleaner technologies in West Africa and an increase in the share of other renewable energy components in the renewable energy mix.

Using Nigerian data from 1990 to 2017, Imandojemu and Akinlosotu (2018) examined the nature of the relationship between renewable energy consumption and economic growth. They analyzed the data using OLS, ADF and Philips Perron unit root test. The result suggested that renewable energy consumption exerts a positive and significant impact on economic growth in Nigeria and the existence of a unidirectional relationship from GDP to renewable energy consumption. They suggested increased investment on renewable energy technologies in the country.

Khobai and Le Roux (2017) examined the existence of a causal relationship between renewable energy consumption and economic growth in South Africa. Quarterly data from 1990 to 2014 was used in the analysis. The result showed that in the long run there is a unidirectional relationship from renewable energy consumption to economic growth while the causality



relationship flows from economic growth to renewable energy consumption in the short-run. The paper suggested effective public policy in the long-run.

Bhattacharya, Parameti, Ozturk and Bhattacharya (2016) used 38 most renewable energy consuming countries to analyze the effect of renewable energy consumption effect on economic growth using panel estimation techniques. The result of the study showed that in 57% of the countries tested, renewable energy consumption positively impacts economic growth. Increased investment in renewable energy was suggested by the study to aid low carbon emissions in the countries studied.

Renewable Energy Situation in Nigeria

Nigeria is rich in oil, so it is therefore not surprising that most of its energy needs are provided from non-renewable energy sources, especially crude oil. This overdependence on fossil fuel sources is one of the reasons the Nigerian energy sector is prone to shocks (Akuru & Okoro, 2014). The authors also hypothesized that the energy sector vulnerability is worsened by bad governance, climate change and widespread poverty making the system weak.

However, despite the role oil plays in the energy sector in Nigeria, there is still a high level of energy poverty in the country. Akuru and Okoro (2014) noted that 60% of the Nigerian population, which is about 80 million Nigerian, do not have access to electricity; and of the 40% with electricity access, less than half of them are in rural areas.

Generally, Nigeria electricity consumption per capita stood at about 100kWh which is very poor when compared with countries like China, Brazil and South Africa with 1379kWh, 1934kWh and 4,500kWh respectively (Akuru & Okoro, 2014). Less wonder at the level of poverty in the country as lack of access to electricity is a major cause of poverty in any economy. According to Adegbite (2021), Nigeria's highest electricity generation capacity is 5,300MW while daily power needs are 17,520MW. Citing the 2020 World Bank Doing Business report, the author continued that out of 190 countries Nigeria is ranked 171 in getting electricity which is very significant for the private sector.

Esan, Anthony and Obaseki (2019) postulated that the wellbeing of Nigerians, economic progress and the nation's overall growth is at serious risk due to the current situation of power supply in the country. In order to improve electricity supply and increase access to electricity by the people, the Nigerian Government in 2003 introduced renewable energy into the National Energy Policy and by 2006 it created the Renewable Energy Master Plan (REMP). It is expected that with the successful implementation of the plan, there will be enough solar power: wind, hydroelectricity and solar thermal to provide the equivalent of today's total grid capacity by 2025.

The Table 1 below shows the renewable energy share in primary energy consumption in Nigeria between 2000 to 2018.



Table 1: Share of Renewable Energy in Primary Energy Consumption in Nigeria: 2000-2018.

Year	Share of Renewable Energy in %
2000	80.6
2001	79.7
2002	80
2003	78.7
2004	80.1
2005	78.3
2006	80.5
2007	82.4
2008	81.5
2009	84.3
2010	77.1
2011	73.9
2012	77.3
2013	76.2
2014	74.4
2015	77.2
2016	76.8
2017	77.3
2018	75.4

Source: Jaganmoha (2021)

RESEARCH METHODS

Theoretical Framework

The model for this study is based on the Endogenous Growth Theory. Based on the theoretical framework and reviewed literature, we use the traditional inputs of labor and capital along with renewable energy consumption and foreign direct investment as a control variable to test for the relationship between economic growth and renewable energy consumption. This study did not disintegrate renewable energy into different types for lack of data on the different forms in Nigeria.

The function is stated as follows:

$$Y = f(\text{CAP}, \text{LABF}, \text{REC}, \text{FDI}) \text{ ----- (1)}$$

Where:

Y = Real GDP

CAP = Gross Capital Formation

LABF = Labour force



REC = Renewable Energy Consumption

FDI = Foreign Direct Investment

Model Specification

The econometric function of equation 1 will therefore be specified as

$$Y = \alpha_0 + \alpha_1 CAP + \alpha_2 LABF + \alpha_3 REC + \alpha_4 FDI + \mu \text{ ----- (2)}$$

All the other variables are still as earlier defined, however, α_0 = constant term, α_1 - α_4 are coefficients while μ is the error term.

Applying logarithms to equation 2 in order to standardize it we obtain a new equation:

$$\ln Y = \alpha_0 + \alpha_1 \ln CAP + \alpha_2 \ln LABF + \alpha_3 \ln REC + \alpha_4 \ln FDI + \mu \text{ ----- (3)}$$

Sources of Data

The data used in this study are secondary data sourced from The World Bank data bank (data.worldbank.org).

RESULT PRESENTATION

Result Presentation

Pre-test results are presented in this section, which includes unit root test and cointegration test. Also presented in this section is the Toda-Yamamoto granger causality test.

Table 2: Toda-Yamamoto Granger Causality Test

Dependent variable: GDP

Excluded	Chi-sq	df	Prob.
REC	5.792224	2	0.0452
All	5.792224	2	0.0452

Dependent variable: REC

Excluded	Chi-sq	Df	Prob.
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GDP	5.879281	2	0.0429
-----	----------	---	--------

All	5.879281	2	0.0429
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Source: Author's computation using E-view 9.1

The result in Table 2 shows that there is a bi-directional relationship between GDP and renewable energy consumption (REC) since the Chi-sq is statistically significant at 5% level. This means that GDP granger causes REC and REC granger causes GDP.

Table 3: Augmented Dickey-Fuller (ADF) Unit Root Test

Variable	ADF	Integration	Significant
GDP	-4.729952	I(1)	5%
GCF	-4.016254	I(1)	5%
TLABF	-4.066635	I(0)	5%
FDI	-5.107193	I(1)	5%
REC	-5.838994	I(1)	5%

Source: Author's computation using E-view 9.1

Unit root test hypothesis and decision rule:

H₀: the variables have unit root (not stationary)

H₁: the variables have no unit root (stationary)

Decision rule: reject H₀ if ADF is greater than critical value in absolute terms at chosen level of significance.

From unit root test hypothesis and decision rule, it is obvious that the variables are fractionally stationary at order I(1) and I(0), we therefore reject H₀ across all the variables and conclude that the variables are not purely I(1) or purely I(0) rather stationary of I(1) and I(0). Since the variables are stationary at I(1) and I(0), this study therefore adopts ARDL bounds testing co-integration developed by Pesaran, Shin and Smith (2001).

**Table 4: ARDL Bounds Test (Co-integration)**

Test Statistic	Value	K
F-statistic	2.364151	4
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Source: Author's Compilation with E-view 9.

Since F-statistic (2.36) is less than the lower bounds at all significant levels, we therefore reject H_1 and conclude that the variables are not co-integrated. If two or more variables are not co-integrated, it means that there is no long-run or equilibrium relationship between the variables.

ANALYSIS OF RESULT

The regression result for this study is presented below.

Table 5: Regression Result for the Model

Variable	Coefficient	Std. Error	t- statistics	Prob
C	-46.29569	34.32024	-3.348932	0.1899
LOG (GCF)	-0.127618	0.058845	-2.168716	0.0402
LOG (TLABF)	0.443290	0.186623	2.375326	0.0259
LOG (REC)	0.393531	0.371290	2.159904	0.0297
LOG (FDI)	0.069166	0.590263	2.117178	0.0377
LOG (GDP-1)	-0.494499	0.159208	-3.106005	0.0048

Source: Author's computation using E-view 9

R- Squared 0.626122



Adjusted R- squared 0.506564

F – Statistics 3.564151

Prob (F- statistics) 0.014964

Durbin- Watson Stat 2.29798

Interpretation of the Result

The R^2 which is the coefficient of determination or the measure of goodness of fit shows the degree of variation in the dependent variables. The closer R^2 is to 100%, the better fit of the model. From our regression result, R^2 is 0.63. This implies that the independent variables can explain about 63% of the variation in the dependent variable, leaving the remaining 37% which would be accounted for by other variables outside the model.

The F-statistics measures the overall significance of the explanatory parameter. From the result in Table 5, our computed value of F- statistics is 3.564151; while the probability is 0.014964. Since the probability of the F-statistics in the computed output is less than the desired 0.05 level of significance, we therefore conclude that our regression model fits the data better than the intercept.

The a priori criteria which is determined by the existing economic theories indicate the signs and magnitude of the economic parameter under regression. In Table 5, the gross capital formation has a negative sign contradicting its a priori expectations. Its value of -0.127618 implies that a unit increase in gross capital formation decreases gross domestic product by 12%. Labor force has a positive sign, with its value as 0.443290 implies that a unit increase in the labor force will increase gross domestic product by 44% conforming to our a priori expectation. Renewable energy consumption has positive sign and the coefficient is 0.393531 implying that a unit increase in renewable energy consumption will increase Gross Domestic Product by 39% conforming to the economic a priori expectations. Foreign Direct Investment with a coefficient of 0.069166 is positive which shows that a unit increase in FDI will increase GDP by 6% in conformity with a priori expectations.

The t-statistic measures the statistical significance of the individual parameters in the model. From our regression analysis all the variables, labor force, renewable energy consumption, gross capital formation and foreign direct investment appear to be statistically significant at 5% level of significance. It therefore follows that they have a significant impact on gross domestic product.

The Durbin Watson statistic is used to test for the presence or otherwise of autocorrelation in our model. When the value of DW is closer or a little bit above 2, it means the absence of autocorrelation among the explanatory parameters (Koutsoyiannis, 1997). From the regression result as shown in table 5, the Durbin Watson statistics is 2.3, which satisfies the above condition; hence, the absence of autocorrelation among the explanatory variables.



DISCUSSION OF FINDINGS

This study objectively examined the impact of renewable energy consumption and economic growth in Nigeria. Specifically, it was to determine if there is a causal relationship between renewable energy consumption and economic growth in Nigeria and also to examine the effect of renewable energy consumption on GDP in Nigeria from 1990 to 2020. Statistical pre-tests were carried out on the data set, which include, ADF unit root test, co-integration test and the Toda-Yamamoto test to capture the objectives of the study.

The ARDL bounds test (co-integration) showed that there exists a long run relationship between the variables in Nigeria. The Toda-Yamamoto test also showed the existence of a bi-directional causal relationship between GDP and REC. The individual test statistics revealed that economically REC, FDI, and TLABF assumed a positive linear relationship with GDP; confirming the a priori expectation of the respective variables with the dependent variable. However, GCF does not conform to economic a priori expectations of its relationship with the dependent variable.

Statistically, the t-test result shows all the variables are statistically significant at 5% level of significance, in explaining the variation in GDP given the fact that their respective p-value is less than 0.05. The F-statistic, which shows the overall performance of the model, suggests that all the independent variables are together statistically significant in explaining the total change in GDP. That means they are all important variables to be taken into consideration while determining or explaining the changes in GDP. The coefficient of determination (R^2) shows that 63% of the total variation in GDP has been jointly explained by the independent variables while only 37% is explained by exogenous variables.

The findings of this study despite its different approach is in agreement with the findings in Imadojemu and Akinlosotu (2018), Bhattacharya, Parameti, Ozturk and Bhattacharya (2016) and Li et al. (2021) who observed a significant positive impact of REC on economic growth. It however differs with the findings of Ekone and Amaghionyeodiwe (2020) and Maji, Sulaiman and Abdul-Rahim (2019) who observed that there exists no significant positive relationship between REC and economic growth. This discrepancy could be as a result of differences in study approach, scope of study and choice of variables.

CONCLUSION

This study, aimed at determining the causal relationship between renewable energy consumption and economic growth and the impact of renewable energy consumption on economic growth in Nigeria, used secondary data from 1990 to 2020. The empirical result showed that renewable energy consumption has a bi-directional relationship with economic growth. This means that renewable energy consumption leads to economic growth and economic growth in turn leads to renewable energy consumption. Besides, renewable energy consumption has a significant positive impact on economic growth, meaning that the adoption of the use of renewable energy in Nigeria will lead to growth in the Nigerian economy.



RECOMMENDATIONS

Based on the findings and conclusion of this study, it is recommended that:

- The government should encourage the use of renewable energy in the country in order to reduce the domestic use of fossil fuel. This will help in the reduction of CO₂ emissions that causes climate change, besides encouraging economic growth as renewable energy consumption enhances growth,
- There is a need for the development of a robust waste management system in the country as waste has the potential for energy generation to drive the economy.
- The government should support and encourage investments in the renewable energy sector in the country as well as providing a conducive business environment for them. This will make renewable energy affordable and accessible to the people.
- The citizenry should also be made to understand the importance of domestic using renewable energy in the country.

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SOCIO-ECONOMIC EFFECT OF FLOODING IN KARIM-LAMIDO LOCAL GOVERNMENT AREA OF TARABA STATE USING GIS TECHNIQUE

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ABSTRACT: *Over the years, flooding has affected numerous aspects of the lives of the people in Karim-Lamido Local Government Area. The study aimed at assessing the effects of flood on socio-economic activities in Karim-Lamido Local Government Area of Taraba State using GIS techniques. The study employed questionnaires, oral interviews, personal observations and descriptive statistics to analyse data using pie charts and graphs to present data. ArcGIS 10.1 was used to analyse the flood vulnerability using LandSat images. The flood vulnerability analysis of Karim-Lamido indicates that about 80% of the area is flood vulnerable and the major stream order in Karim-Lamido is between 3-5. Results also revealed that rainfall received annually in the area and the proneness of the area to flood. In addition, loss of agricultural products, properties and lives were revealed as some of the negative effects of flooding in the study area. The result also revealed that the major effects of flood are the washing away of the community's farms lands and their businesses equipment. Furthermore, the researchers recommend that the resettlement scheme programs should be embarked on by the government to resettle most of the communities in the study area. Additionally, for good area planning, individuals, corporate entities, and the government should provide adequate funding for disaster management organisations. Furthermore, a local flood warning system needs to be created. This will go a long way towards educating and preparing the people of Karim-Lamido for major flooding.*

KEYWORDS: Effect, GIS, Flood, Vulnerability, Socio-Economic, Technique.



INTRODUCTION

Flooding occurs when a dry area overflows with water and is not able to absorb it into the ground (Bronstert, 2003). The hazard of flooding is an annual phenomenon that has displaced millions every year worldwide and claimed lives and properties (Bronstert, 2003). According to Bariweni, Tawari and Abowei (2012) and Etuonovbe (2011), Nigeria experiences floods every year especially flash floods and dam related floods during the rainy season. However, each disaster seems to get worse leaving a larger impact than the previous. Over 2.1 million Nigerians were made homeless by the 2012 flood (Bariweni et al., 2012). According to the National Emergency Management Agency (NEMA) (2012), numerous assets, including thousands of hectares of farmland, were destroyed, and many lives were lost. Floods are most prevalent in the northern parts of the nation, particularly in the States where the major rivers (the Benue and Niger rivers) flow through towns where the downstream areas were entirely drowned.

Flood often happens without warning but with a surprise package that always delivers disaster to unprepared communities like the ones in most sub-Saharan African countries. The huge human, financial and economic risk associated with most floodplains have made many experts recommend avoiding such an ecologically viable environment to a less vulnerable area especially as it relates to land use (Bello, Onuthoja & Asikhia, 2013). A settlement is defined as an assemblage of buildings with people residing in them. Thus, considering their general makeup, settlements are of major concern when discussing flood hazard. Going by number and economic losses, flood disasters account for about a third of all natural disasters (Nwilo, Olayinka & Adzanzeh, 2012). Thus, Nigeria is no exception to countries that experienced flooding in recent times. Many communities have suffered losses due to flood problems and the same can be said about floods in Karim-Lamido of Taraba State.

Taraba State has witnessed so many devastating flood incidents since the beginning of the 21st century. Several parts of the state have experienced different degrees of flooding in the past which devastated people's houses and properties, leading to displacement of people annually. Floods are natural occurring processes that are difficult to prevent but can be managed in order to reduce its social and economic impacts. Floods interfere with the local economy and destroy infrastructure, resulting in disruption of livelihoods, normal social services and health care. Flood incidence is likely to increase in the future due to urbanisation and land use changes, high concentration of poor and marginalised populations, lack of regulations and preparedness effort (Oruonye & Adebayo, 2015).

The most sustainable approach to mitigate the effects of flooding in an area is to ensure that all areas that are vulnerable are identified for precautionary measures (Oruonye & Adebayo, 2015). In 2012, there was heavy rainfall in the upper part of the catchment of River Benue in the Republic of Cameroon which led to flooding of the entire basins (SEMA, 2012). The flood was a severe one that the Lagdo Dam which was constructed on the River Benue in the Republic of Cameroon could not control it. Consequently, the dam had to be opened to release some water from the excess impoundments that is capable of collapsing the dam. The release of water from the Lagdo Dam upstream of the River Benue led to the flooding of the entire length and breadth of the downstream catchment of the basin (SEMA, 2012). All the settlements (both rural communities and townships) along the River Benue were flooded.



The length of River Benue in Taraba State has been estimated to be about 390 km (SEMA, 2012). This made the State to be one of the most vulnerable states by the flood in 2012. All the 6 LGAs in the state located along the River Benue valley (which include Karim-Lamido, Lau, Gassol, Ibi, Ardo-Kola) were greatly affected. Also the flood came very suddenly as there was no sufficient communication from the Cameroonian government before the release of the water. This made the impact of the flood very devastating to the affected communities as they were taken unaware and could not rescue their properties and livestock (Oruonye & Adebayo, 2015).

The reoccurrence of flooding especially in Karim Lamido area is becoming more tragic as it is characterised by loss of lives, properties, agricultural lands and produce. The change in rainfall patterns attributable to climate change has made it worse. Since land degradation is causing many areas to reach a point where it is considered unsuitable for survival, climate change should be addressed urgently. Conflicts over the drastic depletion of natural resources, population growth, and poverty have resulted, endangering the stability of the political, economic, and social systems (Schwartz & Randall, 2003).

The advance in remote sensing and the GIS techniques has made it possible to simulate the functionality of watershed systems by using hydrological models on spatial and physical characteristics bases. These techniques provide powerful integrated tools for land use/land cover (LU/LC) monitoring and observing at regional as well as global scales and also tools for change detection in watersheds are very efficient and effective (Huang et al., 2012). The substantive and sustainable approach to mitigate the effects of river flooding is to ensure that all areas that are vulnerable are identified for precautionary measures (Ishaya et al., 2009). In addition, systematic (spatial) information is also needed for post impact assessment and quick estimation of the extent of damage. To deal with this, it is pertinent to adopt a powerful framework with geo-visualisation capability to analyse, model and visualise output for effective decision making. Geospatial technology involving the integration of geographical information systems (GIS) and remote sensing techniques is designed in such a way that multi-dimensional data can be entered, manipulated, checked, analysed and displayed as data referenced to the earth. The utilisation of remotely sensed data in the GIS environment has proved to be the most resourceful approach for river flooding assessment and risk analysis (Jayasselan, 2006; Ishaya et al., 2009; Irimescu et al., 2010). It is against this background that this research focuses on the socio-economic effect of flooding in Karim Lamido area of Taraba using GIS Application.

METHODS AND MATERIALS

The Study Area

The study is carried out in Karim Lamido Local Government Area of Taraba State which is located in North-eastern Nigeria between latitudes 8°33'-10°21'N and longitudes 10°21'-11°24'E (Fig. 1 and 2). It covers a land mass of 6,450.72 km² with a population of 193,924 according to the 2006 population census and sub-Sudan vegetation. It is bounded to the south by the River Benue and traversed by several tributaries of the same river. It has two distinct seasons, namely; rainy which extends from May to October and dry which extends from November to April. Karim Lamido has various ethnic groups, including Bandawa Jenjo,

Wurkum, Karinjo Bambuka, Munga, Dadiya and Hausa Fulani. It contains about 11 political wards, some of which are Jen Ardido, Jen Kaigama, Muri A, Muri B, karim A, karim B.

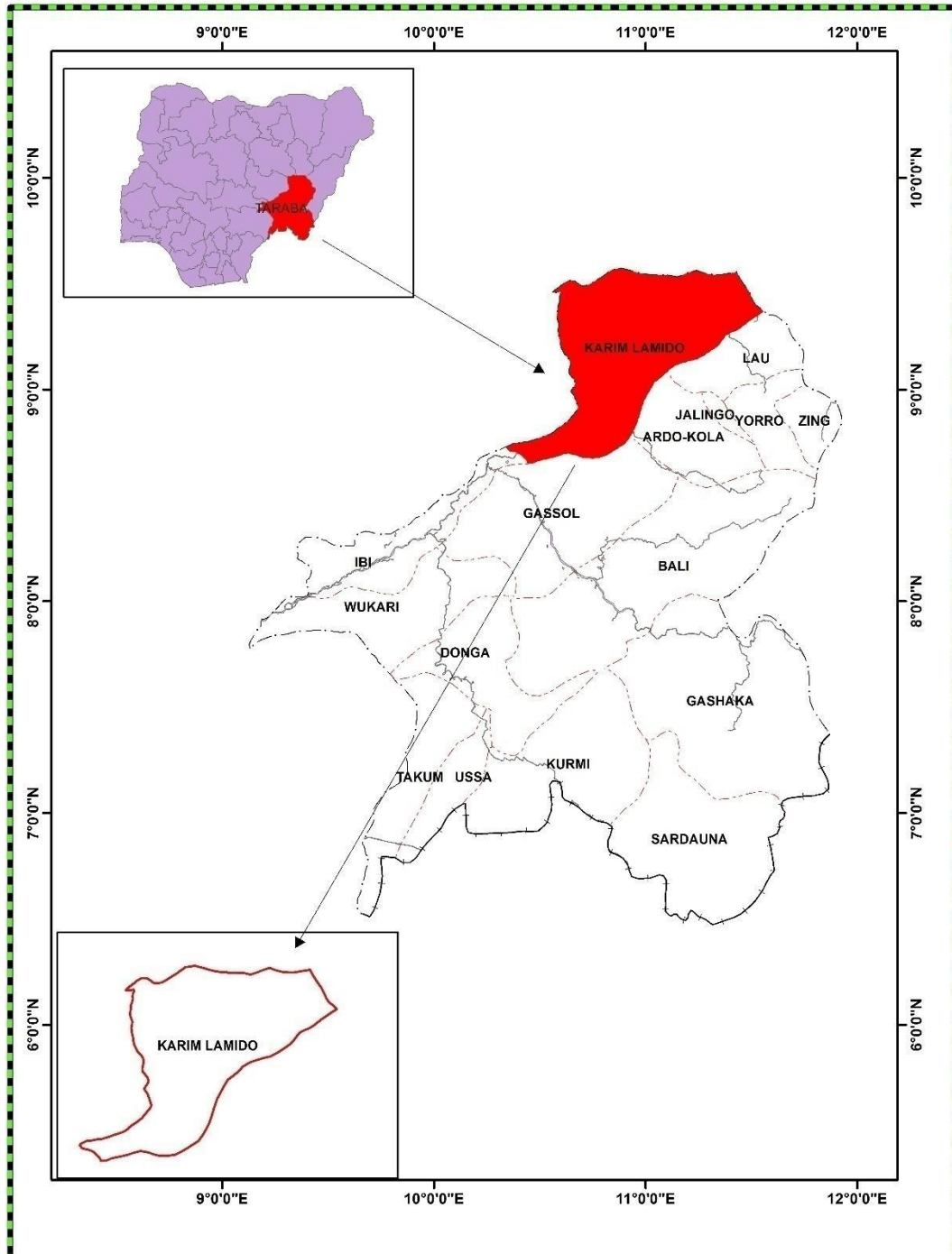
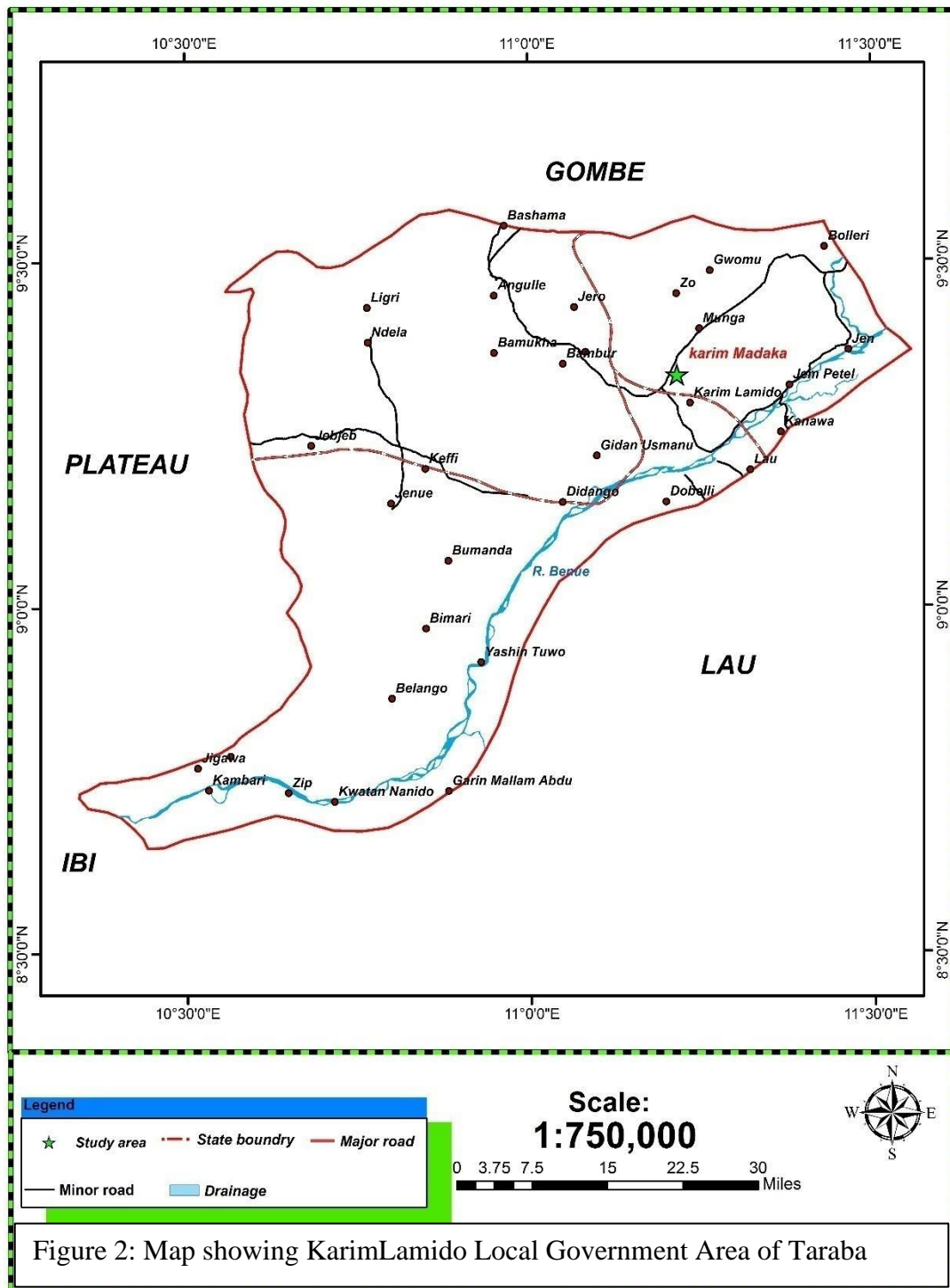


Figure 1: Map of Taraba State showing KarimLamido Local Government Area





Most part of Karim Lamido LGA occupies extensive Fadama swamps of Muri plains which are sparsely settled and virtually uncultivated. River Benue flood plain is an expanse of land occupied by villages in the now defunct Muri Division which is also referred to as Muri plains. The land area is largely made up of soil that is a mixture of clay and loam; this enables it to retain moisture much longer than other types of soils on the Benue floodplain but cracks in the dry season. The significance of the Benue basin and their marshland is that they provide arable land for agriculture. Most of Karim Lamido district areas could be described as extremely fertile land. Like most parts of the northern part of Nigeria, the Karim Lamido LGA has a wet and dry climate; the wet season lasts, on the average, from April to October with mean annual rainfall of 1058mm. The wettest months are August and September. The dry season lasts from November to March; the driest months are December and January with relative humidity dropping to about 15%. Mean annual temperature of about 28°C with maximum temperatures varying between 30°C and 39.4°C, and minimum temperatures range between 15°C to 23°C

The vegetation of Karim Lamido LGA is typically a Sudan Savanna vegetation pattern found in Nigeria as the land has insignificant tree cover, with grasses and flowers located between trees. The land area is characterised by a combination of pyrophytic species of trees and grassland in the border areas of Bandawa district with Munga Jen, Karim while a sparsely distributed short trees towards river Benue (Abdullazeez, 2016). The soil in the area is predominantly lixisols; soil with clay – enriched lower horizon, low CEC and saturation of bases. It has a lower water table in the dry season and an available water supply during the rainy season. Though the soil is good for agricultural activities, it does not support structural development as the movement of the soil or contraction of lixisols in the dry season leads to cracks on the building.

Research Method

The research design used for this study is the descriptive and analytical statistical design, which involves the use of graphs, pie charts and simply percentage and tables to present data. ArcGIS was used to analyse the flood vulnerability of Karim Lamido Local Government Area. The tools used include the questionnaire, personal field observation and focus group discussion among the residents in the study area. SRTM data were also used to generate the flood vulnerability analysis. A preliminary survey of the study area was carried out with special reference to areas which are mostly affected by the flood which include Madaka, Gwenzu, Dansha, Bandawa, Kwantalanga and Jen Petel. Spot assessments were made with respect to the economic activities of the people along the floodplain. The reconnaissance survey assists in determining the type of questionnaire to be administered; in this case, the questions of effects of flooding which helped in the determination of the coping mechanism are adapted over the years.

Data Collection

The research instrument chosen for this study includes the usage of questionnaires and interviews. Shuttle Radar Topography Mission (SRTM) data of Karim Lamido LGA were used to analyse the flood vulnerability of the area. Data were therefore collected through the administration of three hundred and seventy nine (379) well-structured questionnaires with twenty (20) closed ended and open ended questions.



The questionnaire was structured into four sub-sections which includes;

- i. The demography of the respondents
- ii. The factors responsible for flooding
- iii. The effect of flood on socio-economic activities
- iv. The Coping Strategies

At the district and community levels, key informants were interviewed using a checklist. All significant players who are involved in flood management make up the composition of key informants. The interviews were representatives of the community on a local level. The representatives were expected to present typical viewpoints and perceptions on the subject. The interviews took place in a setting set up by the neighbourhood.

The key informant and focus group discussions at district and community levels cover the following topics:

1. Main Livelihood patterns
2. Main Sources of income
3. Main sources of food
4. Rainfall performance and its effects
5. Effects of floods on:
 - i. Agriculture
 - ii. Health
 - iii. Infrastructure
 - iv. Education
 - v. Water and Sanitation
 - vi. Housing and Property
6. Underlying causes of vulnerability to floods
7. Coping Strategies
8. Development options to deal with the problem of floods.

Population of the Study

The study area has a population of 193,924 as of 2016 based on the 3% annual growth rate of the 2006 Census (NPC, 2006). The target population for this study includes households, institutions, community leaders and practitioners; they were purposely selected at household and community levels respectively. This is because this group of people are well equipped with the knowledge of flooding in the study area. Purposive sampling, according to Strydom,



Fouche and Delport (2005), is solely dependent on the researcher's judgement in that a sample is made up of components that have the majority of the traits, representative, or typical attributes of the population.

Sample Techniques and Sample Size

The study used stratified sampling and simple random sampling techniques to select the participants for the sample; these techniques help to minimise cost whilst maximising generalisation. Using stratified sampling, the parent population or the sampling frame is made up of subsets of known size. These subsets make up different proportions of the total, and therefore sampling should be stratified to ensure that results are proportional and representative of the whole. In administering the questionnaires and the interviews after stratifying the respondents into group and sub-group, simple random sampling techniques were adopted in administering the questionnaires and personal interviews.

The sample size for the study was calculated and determined based on the Taro (1964) formula for determination of sample size. According to Taro Yamani, to determine a sample from a population:

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

Where n = sample

N = population size

e = error limit

1 = constant

N = 193,924

e = (0.05) or (0.0025)

n = 193,924

1 + (193934 x 0.0025)

Using the technique, the sample size of this study will be 400.

GIS Application

In implementing the assessment of flood vulnerability within the study area using ArcGIS, the necessary framework and methods in data acquisition, data creation, data processing and manipulation involved in the production of a flood vulnerability map of the study area are discussed.



Data Requirement

The following datasets was used for this study:

- i. Administrative map of Karim-Lamido LGA
- ii. Shuttle Radar Topographic Motor (SRTM Data)

System Selection

The system used includes hardware and software components. The hardware components include the physical equipment that will be used to execute this research and they include:

- i. HP Pavilion dv6 Notebook PC with processor of Intel(R) core(TM) i5-2410M CPU @2.30GHz, 6.00GB RAM and 500GB hard drive.
- ii. Printer

The software components include:

- i. ArcGIS 10.2
- ii. Microsoft word

Data Sources and Collection

The data used in running the various steps for the flood vulnerability model were obtained from different sources.

- i. The Shuttle Radar Topographic Motor (SRTM Data). The SRTM imagery covering the study area was clipped out from the full imagery of the entire region.
- ii. The administrative map of the study area which defines the boundary of the region of concern was obtained.

Data Processing Procedure

Data processing procedure involves the various steps which were involved for the production of the flood vulnerability. During the course of the thesis, the following analyses were carried out. These processes which involve the use of spatial analytical tool for it analysis are:

1. **Fill Sink:** Fill sinks in a surface raster to remove small imperfections in the data. A sink is a cell with an undefined drainage direction; no cells surrounding it are lower. The pour point is the boundary cell with the lowest elevation for the contributing area of a sink. If the sink were filled with water, this is the point where water would pour out.
2. **Flow Direction:** It creates a raster of flow direction from each cell to its steepest downslope neighbour. The output of the Flow Direction tool is an integer raster whose values range from 1 to 255. The values for each direction from the centre are for example, if the direction of steepest drop was to the left of the current processing cell, its flow direction would be coded as 16.



- 3 Flow Accumulation: Creates a raster of accumulated flow into each cell. A weight factor can optionally be applied. The result of Flow Accumulation is a raster of accumulated flow to each cell, as determined by accumulating the weight for all cells that flow into each downslope cell.
- 4 Maths Algebra: Builds and executes a single Map Algebra expression using Python syntax in a calculator-like interface. The Raster Calculator tool allows you to create and execute a Map Algebra expression that will output a raster.
- 5 Stream Link: Assigns unique values to sections of a raster linear network between intersections. Links are the sections of a stream channel connecting two successive junctions, a junction and the outlet, or a junction and the drainage divide.
- 6 Stream Order: Assigns a numeric order to segments of a raster representing branches of a linear network. The output of Stream Order will be of higher quality if the input stream raster and input flow direction raster are derived from the same surface. If the stream raster is derived from a rasterized streams dataset, the output may not be usable because, on a cell-by-cell basis, the direction will not correspond with the location of stream cells
- 7 Slope: Identifies the slope (gradient, or rate of maximum change in z-value) from each cell of a raster surface. Slope is the rate of maximum change in z-value from each cell. The use of a z-factor is essential for correct slope calculations when the surface z units are expressed in units different from the ground x,y units.
- 8 Contour: Creates a line feature class of contours (iso-lines) from a raster surface. Contours do not extend beyond the spatial extent of the raster, and they are not generated in areas of No-Data; therefore, adjacent contour inputs should first be edge-matched into a continuous feature dataset.
- 9 Aspect: Derives aspect from a raster surface. The aspect identifies the downslope direction of the maximum rate of change in value from each cell to its neighbours. Aspect can be thought of as the slope direction. The values of the output raster will be the compass direction of the aspect.
- 10 Base Height: There are two ways to set base heights for features in 3D without requiring 3D geometry:
 - i. Using an attribute or constant value
 - ii. Draping features on a surface

When using the first option, attribute values containing height information are assigned to the layer or used to create an expression that can provide base height values. The constant value to be applied can be any whole number, which would become the future's height in metres above the surface.

The second option, draping, is essentially setting the base heights from a surface. Surface elevation data includes single-band digital elevation model (DEM) rasters, triangulated irregular networks (TINs), and terrain datasets, but in ArcScene, terrain datasets cannot be directly consumed. The area of interest must first be converted to a raster or TIN. There are



some conceptual differences when it comes to setting the role of the layer between ArcScene and ArcGlobe, including steps to define data as a draped layer.

The elevation surface providing z-values to the data does not have to be in the Arc-Scene document. When working with raster layers, setting the base heights can be done with a surface or constant value.

Data Analysis

For this study, the use of table and statistical mode of data presentation found the basis for analysis; results were presented in graphs and tables and flood vulnerability tests were conducted using GIS techniques, using Shuttle Radar Topographic Motor (SRTM Data).

RESULTS AND DISCUSSION

This section basically deals with data presentation analysis, their interpretation, finding and the discussion of results.

Demographic Analysis of Respondents

This section deals with the report on the demographic characteristics of the respondents and their influence on floods in Karim Lamido area. These include gender, age, marital status, educational background and occupation status of the respondents as seen on Table 1.

Table 1: Demographic characteristic of respondents

Gender	Respondents	Percentage (%)
Male	325	86
Female	54	14
Total	379	100
Age		
29 & below	18	5.8
30-39	109	28.7
40-49	159	41.9
50 & above	89	23.4
Total	379	100
Marital status		
Single	128	34
Married	215	57
Divorced	27	7
Widow/Widower	9	2
Total	379	100
Educational status		
Primary	86	23
Secondary	198	52
Tertiary	64	17
None	31	8
Total	379	100



Occupation

Student	61	16
Civil Servant	19	5
Public Servant	22	6
Farmer	277	73
Total	379	100

Source: Field Survey, 2021.

Table 1 shows that 325 of the respondents representing 86% which are majorly into farming activities are male while there are 54 female counterparts representing 14%. This agrees to the fact that the majority of farmers in developing countries are male due to the fact that farming activities are labour intensive as noted by Umar (2002). This also implies that the majority of the respondents are capable of controlling the flood.

The age distribution of the respondents shows that 18 of the respondents representing 5.8% are 29 years and below, 109 of the respondents representing 28.7% are within the age bracket of 30-39, 159 of the respondents representing 41.9% are within the age range of 40-49 and respondents which are 50 and above of age are 89 representing 23.4%. It can therefore be concluded that majority of the respondents are within their productive age bracket of 40-49 years and as such they have the needed strength to be active in farming activity, which include fishing and other agricultural activities

The marital status of the respondents as seen on Table 1 shows that 128 of the respondents representing 34% are single, 215 representing 57% are married, and 9 of the respondents representing 2% are divorced. By implication, it is clear that the majority of the respondents have family and this is very good in developing countries as families are the major source of labour in agricultural activity.

From the educational background of the respondent, it is clear that the majority of the respondents in the study area have formal education. It is shown that 52% of the respondents have secondary education, 23% have only a primary school certificate, and 17% further their education after obtaining a secondary certificate to a higher institution of learning. On the other hand, 8% of the respondents attest to the fact that they do not have any form of formal education from any formal school; this therefore means that they only have informal education. By implication, it is clear that the majority of the respondents have formal education and as such they clearly understand the effects of flooding in their local communities; as education plays a vital role in coping mechanisms of any form of natural disaster.

On the occupational status of the respondents, Table 1 shows that 16% of the respondents are students, 5% are civil servants, mostly working with State or Local Government Authority, 6% of the respondents are public servants and 73% are farmers. Based on the result, one can therefore conclude that Karim Lamido is predominantly occupied by farmers, as majority of the respondents are farmers. This is in line with the general assertion that the major occupation of people in Taraba State is farming (Oruonye, 2012).

Findings indicate that the majority of the respondents are male, the age bracket of the majority of the respondents lines between the ages of 40-49 years most of which are married with children and they have at least a secondary certificate and they are farmers. By implication, it



is clear that respondents are well equipped with adequate knowledge that the researcher needs regarding the effect of flooding in Karim Lamido LGA.

Factors Responsible for Flooding

This section deals with the major factors responsible for flooding as agreed by the respondents in Table 2. The section also tried to ascertain if the respondents have experienced flooding, its last occurrence and how often it occurs in their communities.

Table 2: Factors Responsible for Flooding

Number of Respondents that have experienced flood in their community	Respondents	Percentage (%)
Yes	371	98
No	8	2
Total	379	100
Occurrence of flood		
Annually	103	27
Biannually	79	21
Often, more than three times a year	197	52
Never	-	-
Total	379	100
Causes of flood in the Area		
Building on/close to water course	36	9
Bad refuse Disposal	11	3
Unplanned Settlement	15	4
Lack of/Inadequate Drains	10	3
Flood prone Areas	39	10
Heavy downpour	136	36
Total	132	35
	379	100

Source: Field Survey, 2021.

Table 2 shows the number of respondents who had witnessed flooding in their communities. It is clear from the result that the majority of the respondents which constitute 98% attest to the fact that they have experienced flooding. By implication, it is clear that most of the respondents who are rural dwellers of Karim Lamido had experienced flooding in their various communities. On the other hand, 2% of the respondents had never experienced flood. Studies indicate that every year all the communities in the study area usually experience floods which affect their activities in the areas. The most recent devastated flood recorded in the community was in 2005, 2011 and 2012.

Table 2 elicits information from the respondents on the occurrence of flood in their locality; the results shows how often the floods occur in the study area with 52% of the respondents opening that flooding occurs often more than three times yearly, 27% suggest that flooding in Karim Lamido occur annually, while 21% are with the view that it occurs biannually. By



implication and based on these findings, one can conclude that flooding in the study area occurs at least three times on a yearly basis since the majority of the respondents agree with this fact.

Based on the result in Table 2, it is clear that floods occur annually in Karim Lamido, though there are years that the disaster of flood in the area is devastating. The devastation is usually triggered by the release of water from Lagdo Dam in Cameroon as a result of high rainfall as reported by Oruonye and Adebayo (2013). Although different parts of Taraba state are exposed to flood almost every year, the 2005, 2011 and 2012 floods broke all records of the past, washing away farms and destroying houses.

The results show that the major cause of flood in Karim Lamido Local Government Area according to the respondents includes heavy rainfall and also the fact that majority of the communities are located in flood prone areas; with 36% and 35% of the respondents attesting to this fact. The next causes of flood according to the survey are poor design of drain, building close to water bodies, unplanned settlement and lack/inadequate drains (Table 2).

Conclusively, it is very clear that the majority of land area of Karim Lamido Local Government Area lies on flood prone areas; this makes the areas vulnerable to flood vulnerability. This conjured with the findings in the unpublished report of Taraba State Environment Protection Agency (2010) on flood disaster assessment in Karim Lamido LGA; the report clearly shows that Karim-Lamido LGA lies majorly on flood prone areas along River Benue. Findings in this section agree with the findings in Oruonye (2015) which assert that the 2012 flood in Taraba state alone destroyed over 2,068 farms, 363 houses and partially affected 1,562 houses. Over 6,213 persons were internally displaced and 1,420 families were affected by the flood in 5 LGAs, namely; Jalingo, Lau, Karim Lamido, Ardo Kola and Yorro. This also concords to the assertion in Oruonye and Adebayo (2013) that the 2012 flood in Karim Lamido was majorly as a result of the release of the Lagdo Dam in the Republic of Cameroon on the 24th August, 2012. Their findings show that all the areas adjacent to the River Benue are low lying and part of the extensively flooded Great Muri plain are greatly affected with the flood. By implication, one can therefore confidently say based on these findings that, the major causes of flood in Karim-Lamido are usually increase in annual rainfall which will trigger the release of Lagdo Dam in Republic of Cameroon and also the fact that majority of the part of Karim Lamido is flood vulnerability area.

Effects of Flooding on Socio-Economic Activities

This section elicits information from respondents on the effects of flooding on their socio-economic activities; which includes their business and the extent of the effect in monetary terms as presented in Table 3.

**Table 3: Effects of Flooding on Socio-Economic Activities**

Do you have business in this Area	Respondents	Percentage (%)
Yes	368	97
No	11	3
Total	379	100
Effects		
Loss/Damage to money, stock, equipment, fittings etc.	145	38
Reduction in the amount of time business/trade conducted	50	13
Low patronage from customer	15	4
Temporarily closed down of business	78	21
Course difficulty in transportation	91	24
Total	379	100
Estimate of annual Income lost due to flood (Amount in Naira)		
Below 50,000	8	2
50,000 – 100,000	37	10
100,000 – 500,000	88	23
Above 500,000	131	35
Cannot Estimate	115	30
Total	379	100

Source: Field Survey, 2021.

Table 3 shows the response of the respondents to their respective business activities in the Karim Lamido LGA community. Based on their responses, it is clear that the majority of respondents, constituting 97%, own an enterprise that earns them money in the communities. Findings obtained through interviews show that most of the businesses are agricultural incline businesses, such as farming, canoe makers, canoe riders and sales of agrochemicals.

Table 3 also seeks to examine the effects of flood in Karim Lamido Local Government Area of Taraba State on the businesses of the local people. The result shows that, the major effect of flood in the study area are loss/damage of money, stock, equipment, fittings etc (38%) and course difficulty in transportation (24%); this is basically due to the fact that flood usually come suddenly and residents are fully aware or ready for it. Other impacts of the flood include temporal closure of business (21%), reduction of business time (13%) and low patronage from customers (4%).

This study agrees with findings in Oruonye (2013) that the 2012 flood disaster came suddenly and did not allow the people any chance to pick their things or save their properties. For some communities, the flood arrived in their area at night while they were sleeping. Before they could understand what was happening, water had already filled their houses and as such they could only flee for safety. So many communities could not get help on time because their communities were completely inaccessible to government officials. The flood was so ravaging that many people lost their lives in the process of trying to rescue their properties and assist their neighbours. Bariweni et al. (2012) also revealed that the floods of 2012 had a major impact



on socio-economic life for days, weeks and even months in some areas. Roads and buildings were submerged and victims were trapped due to blockage of road. Children could not go to school, workers to work and traders to the markets. These automatically took its toll on the economy as businesses were affected.

Furthermore, Table 3 indicates the estimated annual income lost from business due to the flood in the study area. The result of the survey shows that 35% of the respondents opined that they lost over Five Hundred Thousand Naira (500,000) and 30% are of the view that their loss cannot be estimated. On the one hand, 23% of the respondents agreed on losing about 100,000-500,000, 10% lost about 50,000-100,000 and 2% lost below 50,000.

This is in line with the findings in Oruonye and Adebayo (2013) that properties worth millions of naira were carted away by the flood in the 2012 flood. In 2012, the unpublished report of Taraba State Flood Disaster Assessment on 2012 Flood in Karim Lamido shows that residents in Karim Lamido lost properties, farmland and other valuables worth millions. The report shows that averagely most residents affected by the flood loss are estimated to be around 400,000 -700,000 with the exception of a few who lost more than a million due to the size of their farmland and store rooms.

This section has vividly revealed that most of the respondents are business owners in Karim Lamido LGA and are residents in the environment. The study shows that most of these businesses are agro-inclined businesses, such as fish selling, canoe making, sales of agro-product, among others. The result also revealed that the major effects of flood according to the respondents include the loss of money, equipment, fittings, among other valuables.

Coping Mechanism and Adaptive Measures Employed

This section examines the coping mechanism and adaptive measure employed by the people of Karim Lamido Local Government Area in checkmating floods in their communities. The section will try to highlight the method employed if any and identify its traditional or scientific method.

Table 4: Coping Mechanism and Adaptive Measures Employed

Can flooding be prevented?	Respondents	Percentage (%)
Yes	198	52
No	88	23
I don't know	93	25
Total	379	100
Are there Public Awareness and Campaign on flood?		
Yes	379	100
No	0	0
Total	379	100
Do People relocate from floodplain during raining season?		
Yes, people often relocate	129	34
Yes, but not often	124	32
People don't relocate	126	34
Total	379	100



Aid received during the flood

National Disaster Management	196	52
State Government	119	31
Traditional Council	25	7
Friends/Relatives	39	10
Total	379	100

Source: Field Survey, 2021.

Table 4 seeks to determine if flooding in the study can be prevented. The result shows that 52% of the respondents believe that floods can be controlled or prevented; 23% reject the fact that floods cannot be prevented or controlled and 25% are not sure if floods in their communities can be controlled or prevented. Those who opine that flood can be controlled or prevented are further probed by suggesting various ways or means to prevent it.

The study seeks to elicit information on the coping mechanisms employed by respondents to check out or reduce the effects of floods in their locality. The result shows that 18% of the respondents agree that there are coping strategies employed to check the activities of the flood by the locals in Karim Lamido communities while 30% are with a contrary view that there are no coping mechanisms in place to check the activities of flood in the area (Table 4). On the other hand, the majority of the respondents, which represent 52%, are of the view that they do not know if there is any coping mechanism in place to check activities in their locality.

Further interview to ascertain the coping strategy, if any, employed by the resident shows that there is no scientific strategy or coping mechanism in place in Karim Lamido communities to check off the destructive activities of flood. The residents who claim there are coping mechanisms agree that the coping mechanisms include vacating their communities at a slide notice of the flood, building of their tent on a projected woody platform during the raining seasons and the use of canoe as the major means of transportation within their areas during flooding. These methods or coping mechanisms are traditional coping mechanisms, as such, they are not effective due to the nature of the flood. Interview clearly indicated that the government has done nothing aside from a public awareness campaign to cushion the effect of the flood in the area. Though several Government reports had recommended a resettlement scheme for the most affected area in the communities, none of such reports has been implemented. An example of such a report is the TEPA Report (2010).

The study also examines if people usually relocate their settlement along waterways (flood plain) during the rainy season. The results show a slide difference in the respondents' as 34% agree that they do relocate often during the rainy season, 32% opine that they do relocate but not often and 34% say they do not relocate during the rainy season as seen on Table 4. This clearly shows why the impact of floods in these communities is usually devastating. Residents do not tend to move out of the water plain during the rainy season until floods catch up with them. This is always the situation of these communities year in and out.

Result of this section shows that there is no clear coping mechanism employed by the locals to check floods in Karim Lamido. Most of the respondent's interviews indicated few traditional methods of coping with the flood in their area. Most of this method is an archaic method which is not effective when the river is fully charged from excess rainfall. Interviews and field surveys

show that other coping strategies employed by households were using sandbags, shifting to higher grounds, and raising the floor of the house and making furrows and canals during floods. It is clear from the findings that these coping strategies are not very effective. The coping strategies depend on a number of factors, some of which include the types of livelihood strategy and marital status as postulated by Mirza et al. (2003). The flood disaster has a different impact on individuals, households and communities, thereby making people cope in different ways. The way and manner people cope with the flood determines the level of impact of the flood.

Extent of Water Coverage and Vulnerability

This section seeks to examine the spatial extent of water coverage and vulnerability of River Benue and its tributaries in Karim-Lamido Local Government Area of Taraba State.

Digital Elevation Model of KarimLamido LGA

Figure 3 shows the Digital Elevation Model (DEM) of Karim-Lamido LGA which are determined from the ASTER DEM using surface analysis tools under the spatial analyst toolbar in ArcGIS. Contours of the study area are extracted from the DEM and this is used to generate the slope and elevation maps. The steepness of the slope affects the flow and inundation of a particular area. Low-lying areas with gentle slope angles have the tendency to be inundated first as compared to areas with steep slope angles during flooding. Flat terrain decreases water runoff and this causes high infiltration where there is open soil, or stagnation where there is impermeable surface leading to water logging conditions.

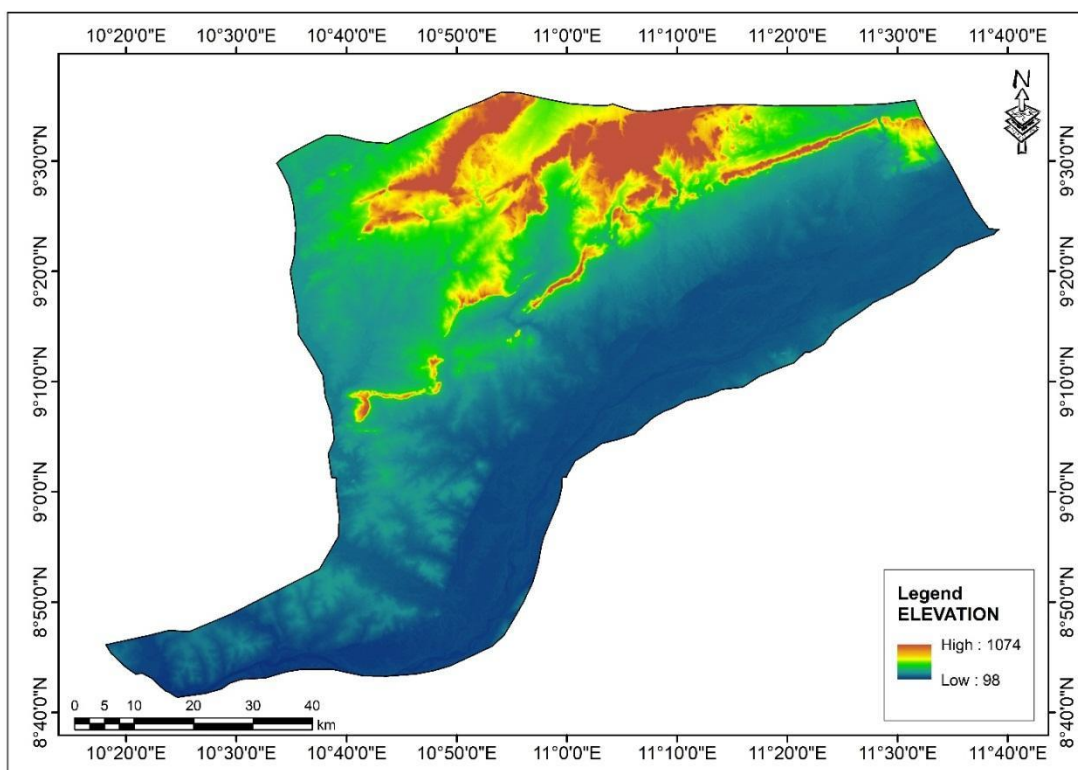


Figure 3: Digital Elevation Model of KarimLamido LGA

Source: USGS Earth Explorer

Figure 3 shows the digital elevation model of KarimLamido LGA. The analysis reveals that the elevation of KarimLamido LGA falls between 98 to 1074 metres above sea level.

Slope and Aspect of Karim-Lamido LGA

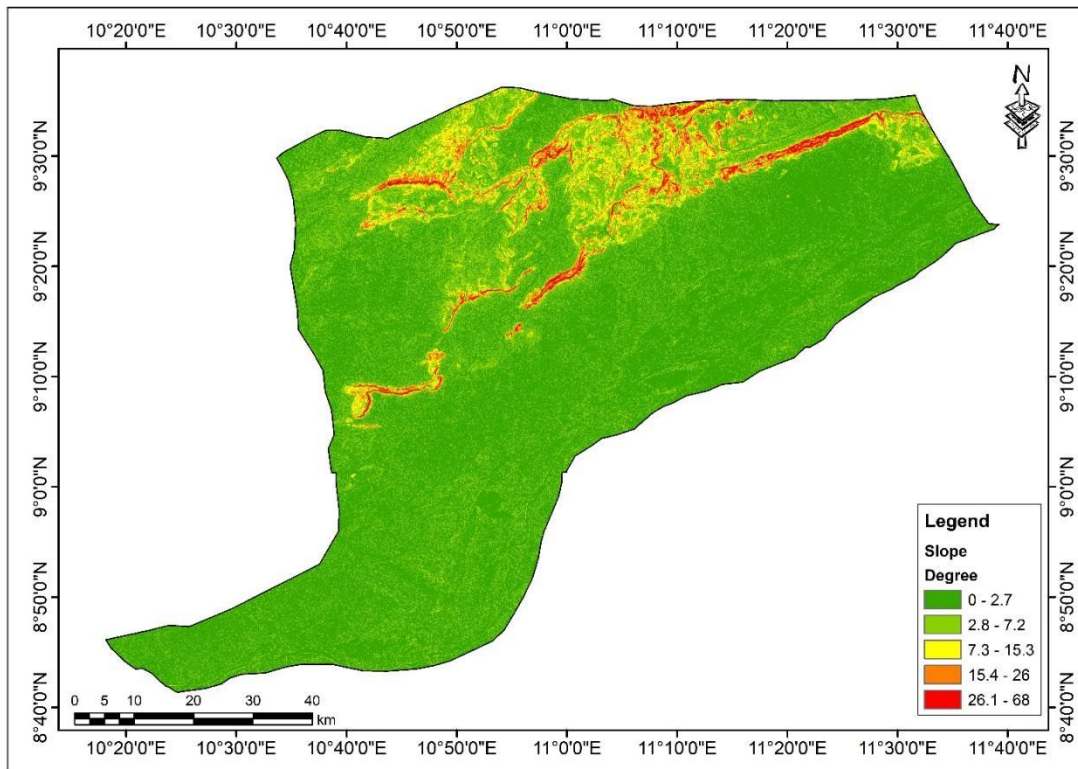


Figure 4: Slope of Karim Lamido LGA

Source: Researcher's Analysis.

Figure 4 shows the Slope of Karim Lamido LGA classified into 5 classes using the Natural Breaks method. The analysis revealed a random slope in the study area with values between 0 – 2.7 degrees as the lowest slope of the study area followed by 2.8 – 7.2 degrees, 7.3 – 15.3 degree, 15.4 – 25 degrees and 26.1 – 68 degrees as the steepest slope in the study area.

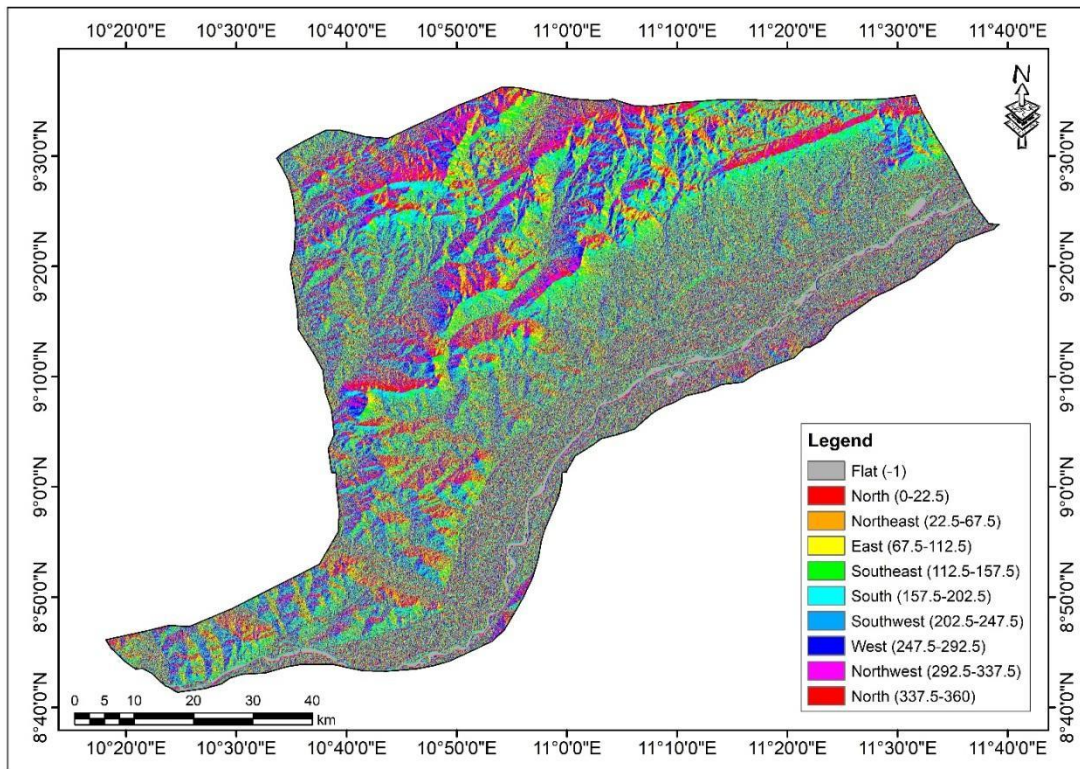


Figure 5: Aspect of Karim Lamido LGA

Source: Researcher's Analysis

Figure 5 above shows the aspect of the study area. The analysis identifies the downslope direction of the maximum rate of change in value from each cell to its neighbours. The values of the output analysis show the compass direction of the aspect.

Stream Order of Karim Lamido LGA

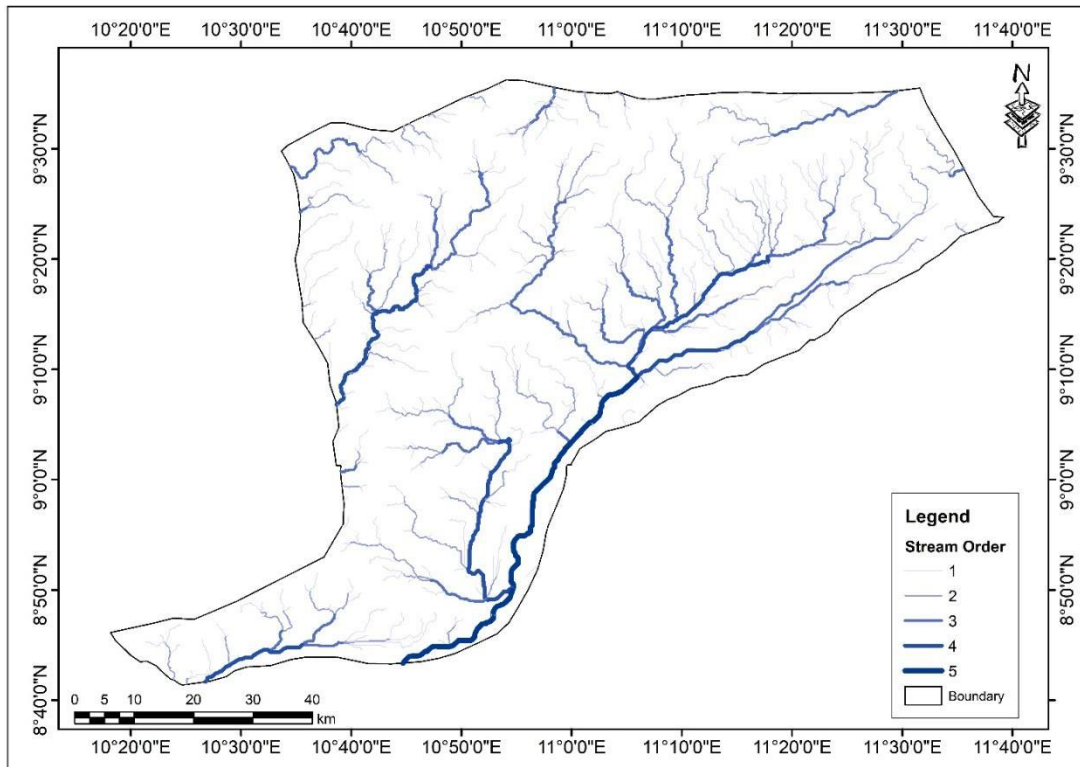


Figure 6: Stream Order of Karim Lamido LGA

Source: Researcher’s Analysis

Figure 6 shows the stream order of the study area. The result reveals that the natural stream of the study area ranges from stream order 1 to 5. The analysis revealed that most part of the Karim Lamido is drained by 3-5 stream order, which makes the area prone to flooding.

3.5.4 Stream Density of Karim Lamido LGA

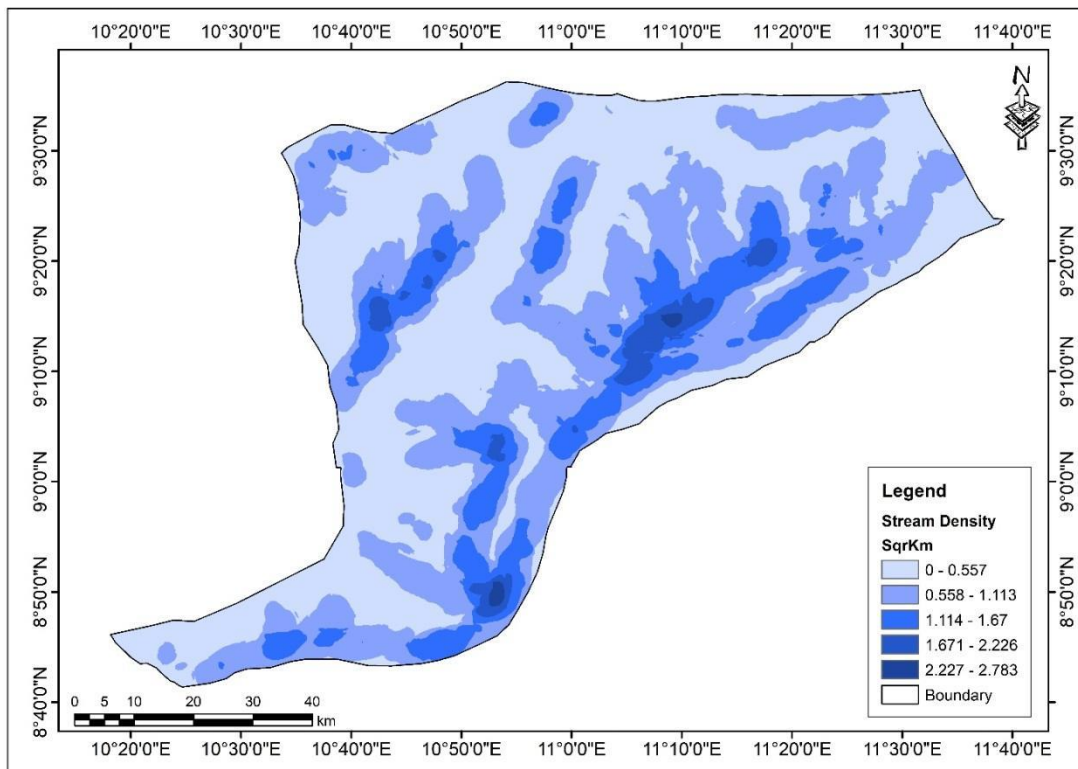


Figure 7: Stream Density of Karim Lamido LGA

Source: Researcher's Analysis

Figure 7 seeks to examine the stream density of Karim Lamido Local Government Area. This was achieved using the natural drainage patterns of the study area and line density analysis was performed. The result reveals that the study area has drainage density of 0 – 2.783 square kilometres.

Flood Risk Map of Karim Lamido

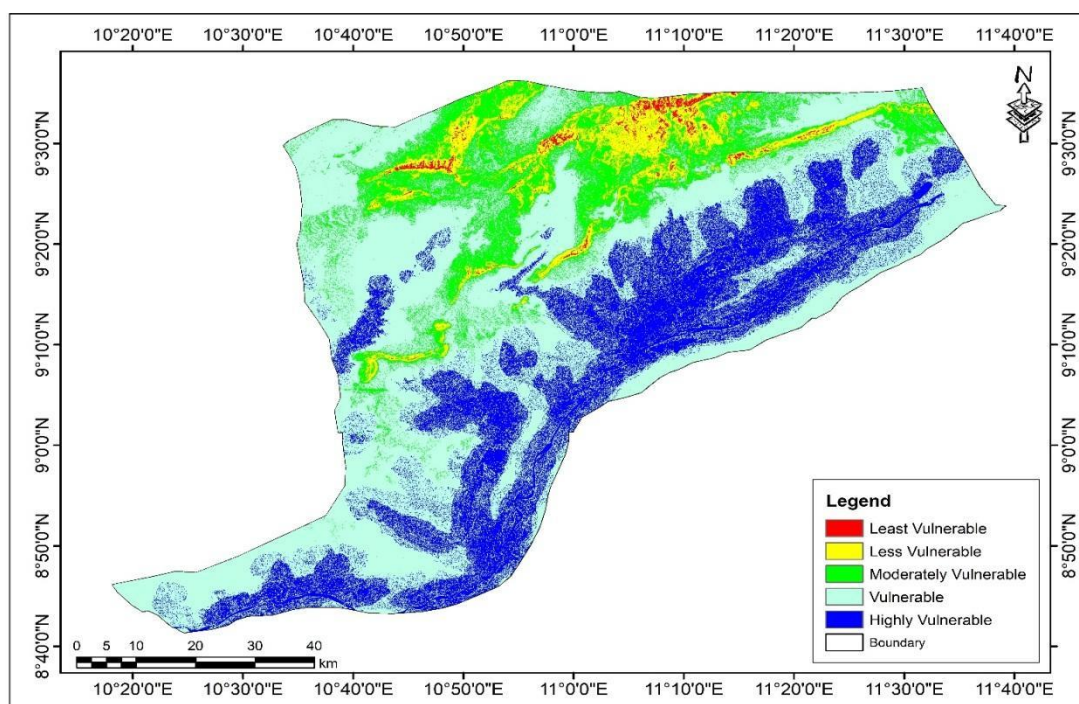


Figure 8: Flood Risk Map of Karim Lamido LGA

Source: Researcher's Analysis

Table 5: Show Flood Vulnerability Values

Levels	Area (Hectare)	Percentage (%)
Least Vulnerable	4984.8	0.726
Less Vulnerable	40554.1	5.906
Moderately Vulnerable	94664.9	13.787
Vulnerable	373743.9	54.431
Highly Vulnerable	172664.7	25.150

Figure 8 and Table 5 reveal the result of the flood vulnerability analysis of Karim Lamido LGA. The result shows that 25.2% of the study area is highly vulnerable to flooding, 54.4% of the study area are vulnerable, 13.8% of the study area are moderately vulnerable, 5.9 % of the study are less vulnerable while 0.71 % of the study area are least vulnerable. This result clearly revealed that about 80% of the total land area of Karim Lamido Local Government Area of Taraba State is vulnerable to flood, with at least 20% moderately vulnerable to flood. This supports the findings in this work that revealed that Karim Lamido is majorly drained by stream order from 3-5. This puts the Local Government Area as a high risk flood prone environment.

The result revealed that the major cause of flood in Karim Lamido is heavy rainfall which usually recharges the river which agrees with Gabriel, Abdullahi and Joseph (2018) that rainfall



variability resulted in the major flood along the Benue river tributaries in Taraba State. Investigation also shows that almost part of Karim Lamido communities lie adjacent to the River Benue and are low lying areas which are part of the extensively flooded Great Muri plain and are greatly affected by flood. Usually increase in annual rainfall triggers the release of Lagdo Dam in the Republic of Cameroon which leads to excessive recharge of Rivers Benue and its tributaries in Karim-Lamido LGA.

Flood vulnerability analysis of Karim Lamido LGA indicates that most parts of the local government are vulnerable as it lies in flood prone areas of River Benue and its tributaries of the entire Karim Lamido LGA are prone to flood. The major effects of flood are the washing away of the communities' farms lands and their businesses equipment.

CONCLUSION

This study has examined the impact of flooding on socio-economic activities in Karim Lamido LGA. The findings show that about 60% of Karim Lamido communities are flood prone areas. Floods in these areas for the past decades are disastrous both in magnitude of damages and spatial spread. So many people were internally displaced, while others lost their lives and properties worth millions of naira. The study shows that all the three tiers of government (Federal, State and Local), individuals and non-governmental organisations responded by providing cash and relief materials to the affected people. There is, therefore, a need to resettle the affected communities. Resettlement plans need to be in place since the most part of Karim Lamido communities are directly affected by flooding annually. Resettlement scheme is the major solution to this annual disaster in this area.

RECOMMENDATIONS

Flooding is an increasing problem in Karim Lamido and Taraba State at large. Governments at all levels, stakeholders and residents of affected communities should collectively play a role in the alleviation of floods. It can accordingly be deduced that application of these aforementioned techniques are essential in all the several stages of flood management which include flood prediction, prevention, mitigation and the identification of flood risk zones (Opolot et al., 2013). It is recommended that the listed management guidelines suggested below are established and undertaken to address the identified problems in the community.

- i. Dredging of River Benue should also be a priority now if we need to control floods along River Benue.
- ii. There should be proper documentation of information on the local history of flooding, mark areas affected and commemorate the dates of significant floods. Steps can be taken to increase protection of such areas by placing emergency response teams on high alert and preparing emergency shelters.
- iii. There should be provision of adequate materials for the state emergency management team such as flying boats and helicopters in order to address the issues of difficult terrain and tidal waves.



- iv. Emergency managers will also require adequate insurance policy to cater for their welfare in event of serious injury or loss of life. This will go a long way in motivating them to give their best to the task of rescuing in event of any disaster.
- v. There should be an intensive public awareness campaign through use of local languages, media houses and the involvement of traditional and religious leaders of the dangers of building along floodplains and the need to respond to disaster warning alerts.
- vi. The Nigerian Government should flag off a resettlement scheme program for the people of Karim Lamido.

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ADHERENCE TO ETHICAL PRINCIPLES IN RESEARCH AMONG ACADEMIC STAFF IN UNIVERSITIES IN CROSS RIVER STATE, NIGERIA

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ABSTRACT: *The study was aimed at assessing academic staff adherence to fundamental ethical principles in research in universities in cross River State, Nigeria. Three research questions were raised and hypothesis. Relevant literature were reviewed according to the variables of the study. The study adopted an ex post facto research design with a stratified and purposive sampling technique to select a total of 500 academic staff from the two major universities in the state (Universty of Calabar and Cross River University of Technology, CRUTECH). A questionnaire developed by the researcher and was well validated and pilot tested using Cronbach alpha reliability estimate whose coefficients for the four sub scales ranged from .78-.81 was used for data collection. Data were collected by the researchers and shall be analysed using simple percentage and the result showed that academic staff adherence to ethical principles of informed consent, confidentiality and beneficence has been very poor. It was recommended that staff should be trained on how to apply ethical considerations in their research practices. That papers that are published must show how ethical considerations are followed before accepted for publications. That this aspect of research must be properly emphasized in the research lessons.*

KEYWORDS: Ethical principles, informed consent, confidentiality, beneficence



INTRODUCTION

Research is an activity that is carried out with an objective mind of discovering the truth. It is an activity that is systematically embarked upon so as to ensure that new discoveries are made, existing knowledge improved, old idea which cannot withstand the current ideas of time refuted or improved upon. No developed nation of the world has achieved all her recorded successes in science and technology, education, health, transport, security etc without the instrument of research (Ofem, Evans & Nkananag, 2016). In education, issues and problems that have plagued the educational system have received considerable improvement via research activities that were conducted over the years. For instance, the new innovations in teaching, assessment and learning methodologies have improved geometrically that students can learn in the absence of the teacher, feedbacks can be obtained by students right at the comfort of their homes and academic information can easily be disseminated through classrooms online forums among others. These are all outcomes of research efforts.

One common characteristics of research in education is that it is mostly quantitative oriented. By this, it implies that it involves the utilization of data in most of her research work in order to obtain a valid and reliable result that can be confidently generalized to the entire population. Research in behavioral science is different from research in physical sciences. In physical sciences, although human subjects are involved, in the laboratories which are dominant for their studies, most of the instruments that are used are inanimate objects which consent is irrelevant. They are standardized and variation in result may not be due to the objects used in research but the researcher's factor. However, in behavioral or social sciences, most of the information that is utilized in research activities are obtained from either primary sources or secondary sources.

Primary sources of information according to Kothari and Garg (2014) are data which are collected afresh and for the first time, and thus happen to be original in character. These data are mostly obtained from individuals either through questionnaire, interviews or observations. O'Leary (2004) pointed out that since most research involves collecting data from people about people, research inevitably carries ethical issues and researchers are unconditionally responsible for the integrity of all aspects of research processes. This is because research activities involve the utilization of human elements who provides the required information needed to solve or understand a particular phenomenon. It therefore implies that these human subjects that are utilized in various research activities must be protected and allowed to take decision such that will either enable them participate in the study or not. It is on this basis that ethical consideration in research are inevitable.

The word "ethics" is derived from the Greek word "ethos" which interpreted means customs, mores or character. It refers to the system of moral principles or values, principles of right or good behavior in relating with others. Ethics refers to the word values regulating the suitable behavior of individuals (Fishe, 2013). Ethical consideration to research therefore refers to the general regulations concerning the duties or procedures followed by researcher. Ethical consideration serves to identify good, desirable or acceptable conduct in the research process. It involves the fundamental values and beliefs that are meant to guide the behavior of researchers in relation to what they do with research participants, instrument, data analysis, results among others.



Ethical principles are expressions of how individuals ought to behave as individuals and as a society. They constitute moral judgments that can be applied to particular situations to help us make decisions and guide our behavior. According to Kelly (n.d), aside from direct treatment of humans, how research is conducted is an important aspect of whether or not, it is ethical. Ethical consideration may help us decide whether the research should even be done, and if so how it should be pursued.

The first modern code governing ethics of research was developed during the Nuremberg trials of Nazi war crimes in response to abuses during medical experimentation on humans. Subsequently, there was concern with protection of human subjects of research in the U.S in the 1950's and 1960s. The code states explicitly requirement for voluntary consent of research subjects and spells out the element of that consent. The code stipulates that the use of human participation is permissible so long as "human subjects are necessary, the result hold promise of benefit to the society's scientific basis and designs are sound, harms of human are minimized or avoided, risks are minimized, experimenters are qualified, voluntary withdrawal of subjects is allowed and that research will be terminated if research subjects are likely to be injured or harmed.

However, over the years, other codes governing the conducts of research involving human subjects have been outlined. For instance, the declaration of Helsinki, Ethical Principles for medical research was developed by the world medical association in 1964 and revised in 2008 which declares the necessity of research with human, physicians duty to safeguard health and privacy, put humans wellbeing before scientific advances and requires free of coercion. Moreover, the Belmont report, published in 1979 in United States identified three ethical principles which are respect for persons, beneficence and distributive justice. However, according to Touka and Mantzorou (2011), the following are the major ethical issues in conducting research; informed consent, beneficence (do not harm), respect for anonymity and confidentiality, respect for privacy, distributive justice are skills of the researcher.

Armiger (1997) noted that informed consent refers to the act of allowing the participant whether to take part in the research or not. It means that a person knowingly, voluntarily and intelligently and in clear terms and manifest way, decides what to do. It is the act of self-determination according to personal plans. This therefore ensures that the liberty, integrity of the individual is sought for. This comes through provision of enough information which includes the purpose of the study, the procedures, the possible harm and benefits, risk involved among others. According to Ana (2010), the researcher must provide a non-coercive disclaimer which states that participation is voluntary and no penalties are involved in refusal to participate, the subject must be told that some information has been deliberately withheld in order to avoid altered behaviors. The researcher must also take into account that persons with physical, cultural and emotional barriers may require a very simple language in order to understand him and the freedom to withdraw must be explained. Therefore, cardinal to informed consent is disclosure, comprehension, competency and voluntariness (Burns & Grooe, 2005).

The ethical principles of beneficence refers to the Hippocratic "do no harm" principle. According to Beau champ and Childress in Fouka and Mantzorou (2011), beneficence suggests that the professional mandate to do effective and significant research so as to better secure and promote the welfare of our constituent while beneficence relates to benefits of the research, malfeasance requires a high level of sensitivity from the researcher



about what constitute “harm”. The type, degree and number of potential risk must be addressed as well as the participants, value system. If the risk outweighs the benefits, the study should be revised. The researcher must be honest and unbiased in the reporting of the findings.

Anonymity and confidentiality as an ethical principle in research is closely related to beneficiaries. Anonymity as used here refers to the complete separation of the participants identity from the responses provided. While confidentiality is concern with the management of private information in order to protect the subjects’ identify (Nies Wiadomy, 2007).

METHODOLOGY

The study adopted an ex post facto research design with a stratified and purposive sampling technique to select a total of 513 academic staff from the two major universities in the state (University of Calabar, Calabar and Cross River University of Technology, (CRUTECH). A questionnaire developed by the researcher and was well validated and pilot tested using Cronbach alpha reliability estimate whose coefficients for the four sub scales was 0.78 was used for data collection. Data were collected by the researchers and were analysed using simple percentages and the results obtained were presented below.

PRESENTATION OF RESULT

Research question one

To what extent does academic staff adhere to the selected ethical principles of research? To answer these research questions simple percentages were used and the result is shown in the table below

Table 1: Simple percentages of adherence to ethical principles in research

S/N	Items	Yes	No
	Informed consent		
1	Do you allow participants to decide whether they participate in a study or not?	341 (66.4%)	172 (33.52%)
2	Do you collect data from participants without explaining the purpose of the research to them?	163 (31.77%)	350 (68.22%)
3	Do you consider the participants fit to decide whether to be involved in the study or not?	481 (93.76%)	19 (6.24%)
4	Do heads of schools sometimes give you consents un- behalf of the participants of the study?	350 (68.22%)	163 (31.77%)
5	Where studies involve children, do you seek the permission of parents/guardians before using them in the study?	170 (33.76%)	343 (66.24%)
6	Do you provide participants of the study enough information about the risk involve in the study before been involved in the study?	132 (18.33%)	381 (81.67%)
7	Participants of the study are sometimes allowed to withdraw without any threat of punishment	341 (66.4%)	172 (33.52%)
	Aggregate score	1973(54.94)	1600(44.56)



Confidentiality			
1	I ensure that I hold information provided by respondents only for the purpose of the study	402 (78.36%)	111 (21.63%)
2	I protect the identity of sensitive information provided by my respondents in my studies	318 (61.93%)	195 (38.01%)
3	I do not allow any second party to get access to the information that is provided for my studies	178 (34.69%)	335 (65.37%)
4	I sometimes discuss certain information obtained from participants of the study with friends for social reasons	122 (23.73%)	391 (76.21%)
5	I don't bother know who provides information on a certain phenomenon of interest.	318 (61.93%)	195 (38.01%)
	aggregate score	1333(52.01)	1245(48.58)
Beneficence			
1	The participants I used in my studies are fully aware of the risk involved in my studies	216 (42.10%)	297 (57.83%)
2	I rarely bother on what it will cost the participant in the process of carrying out the study	197 (38.47%)	316 (61.5%)
3	I ensure that the study I carry out is scientifically sound to provide valuable knowledge to the society	401 (78.15%)	112 (21.83%)
4	I ensure that the integrity of my participants is not affected by the work I carry out	299 (58.2%)	214 (41.71%)
5	I ensure that my findings are not biased as to affect the reputation of the subjects of the study.	361 (70.37%)	299 (58.23%)
		1473(57.47)	1233(48.10)

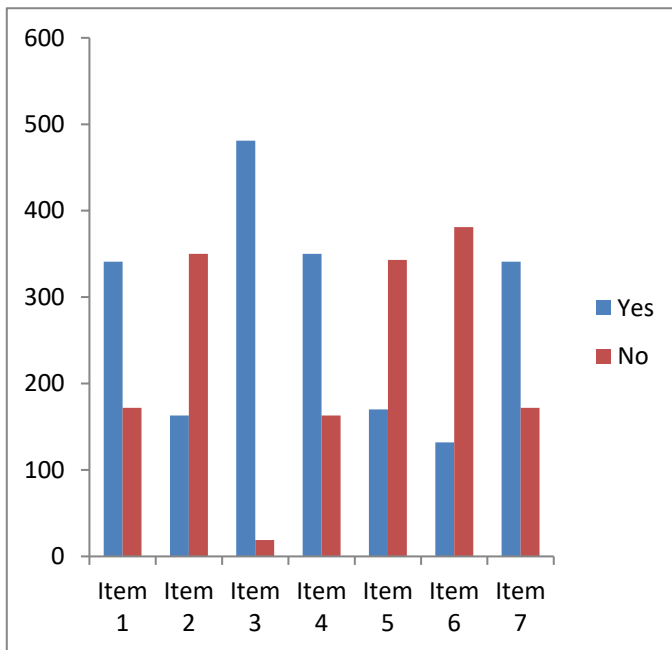


Fig 1. Response on informed consent

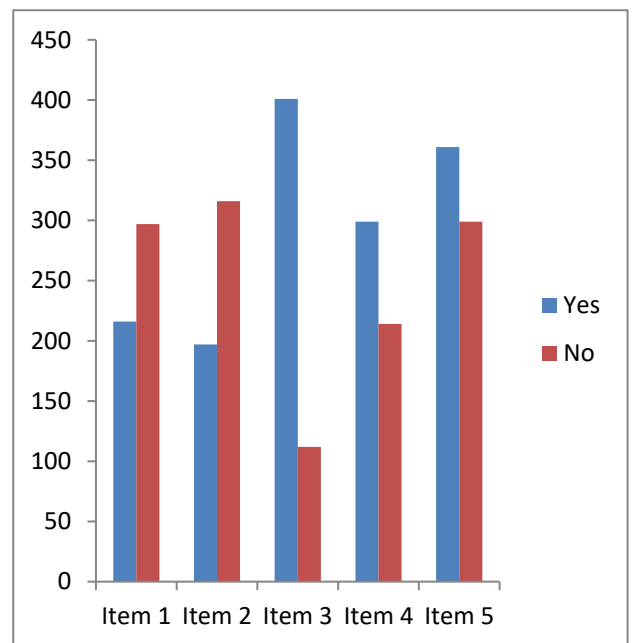


Fig 2. Response on confidentiality

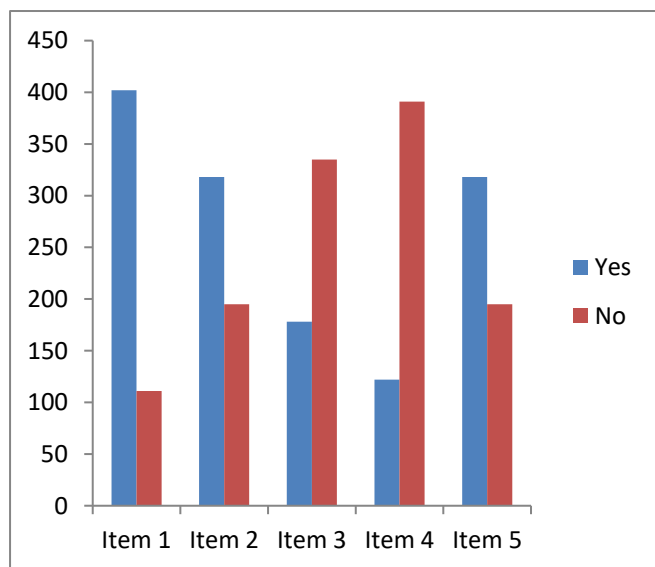


Fig 3. Response on beneficence



The result in the table above shows the responses of academic staff to selected three ethical principles in research. The result showed that for item 1, 3 and 4, researchers follow certain principles of allowing participants, researchers agreed that they allow participants to decide to participate in the study or not (66.4%), consider the ability of the participants in taking decision to be involved in the study (93.76%) as well as obtain permission from school heads before administering questionnaires (68.22%). However, item 7 which involves collecting data from children without permission of their parents, the result showed that most researchers do not stick to this principle.

The result also showed that for adherence to confidential ethical principle, respondents agreed that they ensure that they hold information provided by respondents only for the purpose of the study which represents 78.36% while protection of identity on sensitive information provided by my respondents in my studies, the respondents agreed that they the protect the identity of the respondents which represent 61.93%. however, on the utilization of information obtained with friends, the result showed that there has been negligence as information provided is not completely secured from others as represented by 65.37% of those who said no to the item. On aggregate, the respondents' responses showed that for informed consents as stipulated in the items, 1973 responses representing 54.94% agreed to the items while 1600 responses representing 44.56% said no to it. On confidentiality 1333 responses representing 52.01% said yes while 48.58% said no to the items. While on beneficence, 1173 responses representing 57.17% said yes to the items while 1233 responses representing 48.10% said no.

DISCUSSION OF FINDINGS

The result of analysis showed that staff disposition towards adherence to this selected principles in research is very poor. This could possibly be as result of the fact that in Nigeria precisely, legislations that should have backed these principles are not properly documented as obtained in other countries. Rules and regulations guiding the utilization of research subjects have not been streamlined and this has caused a lot of unethical activities in the process of carrying out research. In collaboration with the research findings Research Ethics in Africa (2014) noted that most researchers in the third world countries do not follow ethical principles of research of outdated legislation, untrained committee members, low awareness of ethics sublines and lack of training bioethics and research ethics. The findings also were in line with that of Ukozor (2011) who opines that researchers in the third world countries are confronted with several problems ranging from noncompliance to research rules, poor perception of respondents to research activities, as well conduction of research for satisfaction of academic requirement for graduation and other reasons. These problems have heightened the possibility of researchers resorting to unethical means to satisfy their interest. The result was also in collaboration with that of Ugande (2011) who noted that some researchers may distort facts , forcefully drop questionnaires for individuals to fill without explaining the rationale of the study to them, as well as even utilize those who are not part of the study for data collection as long as they get what they want.



CONCLUSION

Based on the findings of the study, it was concluded that academic staff adherence to ethical principles in research is not encouraging.

Recommendation

Based on the findings and conclusions of the study, it was recommended that staff should be trained on how to apply ethical considerations in their research practices. That papers that are published must show how ethical considerations are followed before accepted for publications. That this aspect of research must be properly emphasized in the research lessons.

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PSYCHOSOCIAL PREDICTORS OF SMARTPHONE ADDICTION AMONG NIGERIAN UNDERGRADUATES

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ABSTRACT: *Smartphone addiction may be seen as a way of coping with underlying psychological distress but the long-term effect of excessive smartphone use is a matter of under-researched public health concern, especially among an at-risk population - university students in Nigeria. This study explored the predictive influence of psychosocial factors - shyness, loneliness, social maladjustment, gender and school-related variables on smartphone addiction among students in selected Nigerian Universities. In this cross-sectional survey, data were collected from 498 undergraduates {255 (51.2%) males and 243 (48.8%) females} with a mean age of participants at 18.30 (SD = 2.03), using psychometrically-robust measures of shyness, loneliness, social maladjustment and smartphone addiction. It was hypothesised that high scores on shyness, loneliness and social maladjustment will be associated with higher levels of smartphone addiction and that school-related variables would significantly influence smartphone addiction among university students. Results indicated a 17.1% prevalence of smartphone addiction among the participants. Results also indicated that loneliness ($\beta = 0.20$; $t = 4.57$; $p < .05$) and social maladjustment ($\beta = 0.26$; $t = 5.94$; $p < .05$) significantly independently predicted smartphones while shyness did not ($\beta = 0.03$; $t = 0.69$; $p > .05$). Jointly, the three variables had a significant prediction of smartphone addiction $\{F(3,491) = 22.93, adj.R2 = .12, p < .01\}$. It is recommended that psychologists and school counsellors should be more involved in the emotional well-being of university students. Parents and other stakeholders should help students/children by observing those showing signs of loneliness, shyness and social maladjustment, and engaging them in robust, non-evaluative social interactions with a view to minimising resorting to excessive use of smartphones.*

KEYWORDS: Loneliness, Nigerian Undergraduates, Shyness, Smartphone Addiction, Social Maladjustment.



INTRODUCTION

One of the biggest dividends of scientific advancement and technological breakthroughs in the world is the development of smartphones. Due to their multipurpose functions and capacities to meet a variety of people's needs, smartphone devices have become integral parts of human lives, and have penetrated deeply into people's daily routines (Kuss & Griffiths, 2011). The advent of smartphone technology has facilitated the provision of several services to mankind without the need for physical and social contact with service providers. The smartphone is virtually indispensable to modern living - shopping for different items, ranging from food items, books, and clothing to machines; making friends, finding a route to a geographical location of interest, engaging in dating relationships as well as carrying out financial transactions without stepping into banking hall (Bian & Leung, 2015). Smartphone use is particularly common among students and has been shown to be beneficial in a variety of ways such as in carrying out research, attending virtual classes, taking on assignments, and coordinating groups and classmates (Lopez-Fernandez, 2015).

The beneficial use of smartphones notwithstanding, there is a growing concern about the excessive use of smartphones and the consequences of such excessive use (Bianchi &Phillips, 2015). Nigeria is ranked among the top 20 countries with high internet users in the world recorded, with an internet penetration ratio of 33.13%. According to the Nigerian Communication Commission (NCC), there are 122 million internet users in Nigeria as of May 2019 out of a population of 180 million people (NCC, 2019). Shambare et al., (2012) in Al-barashdi, Bouazza1 and Jabur (2016) described the mobile phone as the 21st century's icon as well as possibly the biggest non-drug addiction.

Casey (2012) highlighted five uniquely associated symptoms of addiction: disregard of harmful consequences, preoccupation, inability to control craving, productivity loss and feeling anxious and lost with Smartphone use among university students in mainland China. Yen et al., (2009) have also established that obtaining at least four of seven symptoms such as withdrawal, tolerance, and use for a longer period than intended, is indicative of problematic smartphone use. Further studies have indicated that excessive use of smartphones can lead to functional impairment and maladaptive behavioural difficulties similar to what is found in pathological gambling, and alcohol/drug addiction (Kuss& Griffiths, 2011). Smartphone addiction can also impair academic ability, limit real-life social interaction, and interpersonal relationships (Kuss& Griffiths, 2011; Sim& Kim, 2011 cited in Akpunne and Akinnawo, 2018) and cause physical health-related problems including blurred vision and pain in the wrists or the back of the neck (Kwon et al., 2013). There also exists a positive relationship between smartphone addiction and health-compromising behaviours (Leenaa et al., 2005), sleep disturbances and depressive symptoms (Thome´e et al., 2011 cited in Bian & Leung 2015) as well as depression, anxiety and distress (Boumosleh & Jaalouk, 2017).

Previous research has highlighted the contribution of psychosocial variables in the emergence and maintenance of smartphone addiction in young people (Casey, 2012, Al-barashdi et al., 2016). For instance, the effect of being shy, lonely and socially maladjusted has been found to be overwhelming for growing adults (Casey, 2012, Bian & Leung, 2015). Young adulthood is supposed to be a period of increased social interaction and connectedness, but individuals with underlying psychosocial problems like loneliness, shyness and social maladjustment may find this period overwhelming and the demand of social interaction too burdensome compared to



their counterparts due to an internalised idea of social alienation, distancing and maladaptive assumption of isolation from significant others (Casey, 2012, Arogundade & Amure, 2015).

Bianchi and Phillips (2005) reported that smartphones addicts use smartphones to escape from problems and emergencies; hide their actual use from family and friends (who had at one time or other complained about the excessive use of smartphones); face financial crises because of excessive use of mobile phones; feel preoccupied, anxious, or depressed when out of reception range for some time; and continuously fail to control or cut back mobile phone use. Other research has investigated smartphone addiction from the perspectives of leisure, boredom, sensation seeking, and self-esteem (Leung, 2008).

Loneliness is a perception of social distancing and feelings of discrepancies between desired physical interactions and achieved levels of social contact. Vasileiou, Barnett, Barreto, Vines, Atkinson, Long, Bakewell, Lawson, & Wilson, (2019) stated that young people also present a significant risk of elevated levels of loneliness. Being lonely and shy has been found to exacerbate the tendency of spending more time with one's smartphone in order to avoid the stress and anxiety of face-to-face interactions (Myers, 2013; Casey, 2012). It is also possible that smartphones, unlike regular mobile phones, provide lonely and shy people with a perfect environment to alleviate loneliness and shyness. According to Myers (2013), loneliness is "a self-perceived state that a person's network of relationships is either smaller or less satisfying than desired", and shyness is a "discomfort and inhibition that may occur in the presence of others". Loneliness and shyness were considered to be a measure of a lack of "social connectedness", a term defined as a lack of "interpersonal, community, and general social ties"(Myers, 2013). Lonely and shy people engaged in different activities, like playing online games, taking photos and videos, searching for news, texting a friend, and reading a book on their smartphones (Bian & Leung, 2015). Interaction with their smartphones reduces the emotional turmoil of feeling shy and lonely by curtailing the frequent need to maintain eye contact, and other 'nonverbal cues' (e.g., facial expression and gestures) with others, as it involves less control of the disclosure and interpretation of social cues (Bian & Leung, 2015).

Loneliness has been found to be significantly associated with internet addiction. Engelberg and Sjoberg (2004) found that people that are lonely exhibits poorer social skills and use the Internet more frequently. When it comes to mobile communication, the basic purpose of the mobile phone is to allow people in two different places to communicate instantly, eliminating the primary human anxiety about loneliness (Townsend, 2000). Thus, it is reasonable to believe that lonely people might tend to use their smartphones to connect to the internet, play games, text, and chat more than other people to get rid of this kind of anxiety. Park (2005) also found that loneliness is positively correlated with mobile phone addiction among college students.

Social maladjustment from the psychiatric perspective is described as a behaviour indicating failure of the individual's adaptive capacity. In other words, social maladjustment is a type of adjustment disorder which is a maladaptive reaction to a psychosocial stressor (Arogundade & Amure, 2015). Social maladjustment is described as the inability of the individual to develop a satisfying relationship, a lack of social finesse or a breakdown in maintaining constructive social relationships (Lopes et al., 2005). Few studies have investigated the direct relationship between social maladjustment and smartphone addiction. Findings from studies that have examined social maladjustment as a predictor of psychopathology indicated that social maladjustment was associated with greater suicidal ideation (Resrepo et al., 2016) and problematic use of new technologies (Resrepo et al., 2016; Amendola et al., 2019).



Shyness is described as a temperament that is characterised by being too suspicious and apprehensive of perceived social evaluation, reticence in social situations, and embarrassment as well as being too self-conscious in situations that involved meeting new people or even familiar faces (Spensieri et al., 2019) and a lack of confidence in meeting people and feeling uncomfortable in the presence of others (Bian & Leung, 2015). In recent years, there has been a growing interest in the study of personal characteristics, such as shyness, which may predispose adolescents to the development of cognitive and behavioural patterns related to problematic smartphone use (Casale & Fioravanti, 2011).

Shy people tend to regard their networks as less supportive and less satisfying and are happy and more comfortable being by themselves (Parrott, 2000) as well as being engrossed with their smartphones. Bian and Leung (2015) found that shyness is related to problematic drug and alcohol use both in adolescence and adulthood. Other empirical evidence suggests that deviant internet use is significantly correlated to shyness (Caplan, 2002; Ofofu, 1999). However, Wei and Lo (2006) found that shyness was negatively associated with motivation and frequency of mobile phone use. The plethora of functions of smartphone devices provide avenues for people to avoid communicating with others face-to-face or even by voice; thus, this may be a preferred way for shy people to communicate with others. In addition, other functions of smartphones, which give people access to entertainment like games or allow people to get information by surfing on the internet, help shy people to escape from uncomfortable situations while in public and indulge in a virtual, private mobile computing environment.

Empirical evidence is scanty with regard to the association between school-related factors and smartphone addiction. However, Oliver (2005) found that business students used mobile phones more extensively in their courses, compared to core science students. Abu-Jedy (2008) investigated addiction to mobile phones and its relationship with self-disclosure among a sample of students selected from the university of Jordan and Amman Al-Ahliyya University. It was found that there was a significant difference in terms of addiction related to the student's field of study Abu-Jedy (2008). Specifically, humanities students had higher levels of addiction than natural sciences students. Also, there was a higher level of addiction among private university students than among public university ones. Empirical evidence is scanty with regards to the influence of the level of study in the university on smartphone addiction, Al-barashdi et al., (2016), however, opined that the need to connect to the internet for social networking, research materials for term papers /projects, shopping, as well as betting/gaming increases with a period spent in the university.

Staying connected with one's devices may be assumed to be a way to cope with the underlying psychological distress of feeling shy, lonely and lacking adequate social adjustment capacity for social interactions. Excessive use of smartphones may temporarily relieve the anxiety of being shy, lonely and socially maladjusted among these people but the long-term damage which may result from being addicted to the smartphone is a matter of concern. The study is aimed at investigating the predictive influence of psychosocial factors (shyness, loneliness, social maladjustment, gender and school-related variables) on smartphone addiction among students in selected Nigerian Universities. Specifically, we hypothesised that high scores on shyness, loneliness and social maladjustment will be associated with higher levels of smartphone addiction. We also hypothesised that there would be a greater likelihood of smartphone addiction among female students relative to their male counterparts. Finally, we



hypothesised that school-related variables (type of university, course of study and level of study) would significantly influence smartphone addiction among university students.

MATERIALS AND METHODS

Participants / Setting

Four hundred and ninety-eight undergraduate students, aged 18 years and above, participated in this cross-sectional survey. The study setting was in Osun State Nigeria. Osun State has a total of nine universities, two are owned by the government while seven are privately owned. A purposive sampling technique was used in selecting the two institutions – one a government-owned university and the other a Private university – both located in Osun State, Southwest Nigeria. Osun State University (UniOsun), established by the Government of Osun State in 2005, has its main campus in Osogbo with five satellite campuses distributed across the five administrative/geopolitical zones in Okuku, Ipetu-Ijesha, Ikire, Ifetedo; and Ejigbo. Redeemer's University (RUN) is a private institution owned by the Redeemed Christian Church of God. The University started at the Redemption Camp, Mowe, in 2005 before moving to its permanent site in Ede, Nigeria in 2014.

Participants were selected across the faculties, departments, and levels of study and sex using a purposive sampling technique. Of the 498 participants, 272 (54.6%) were from UniOsun and 226 (45.4%) from RUN. The participants' mean age was 18.30(SD = 2.03) years. In terms of gender, 255(51.2%) of the participants were males while 243 (48.8%) were females. Distribution according to levels of study showed that 239 (48.0%) of the participants are in the first year (100 level) of study, 115 (22.9%) are in the second year (200 level) of study and 144 (29.1%) are in the third year (300 level) of study. With regards to the course of study, 135 (27.0) of the participants were in the Arts / Humanities and Law disciplines, 196 (39.6) 48.9% were in the Management/Social Sciences and 167 (33.4) were in the Basic Medical / Natural Sciences.

Measures

Relevant data were collected using a five-sectioned questionnaire that consisted of validated and widely-used psychological instruments. The first section of the questionnaire assessed participants' background / socio-demographic information such as age, sex, name of the university, course/faculty of study, and level of study.

Loneliness was assessed using the *University of California Loneliness Scale (UCLA-LS)*. The UCLA-LS is a 20-item scale designed by Russell, Peplau and Cutrona (1980) to measure peoples' subjective feelings of loneliness as well as feelings of social isolation. The UCLA-LS is a self-report instrument comprising 20 items scored along a five-point Likert scale with options ranging from Strongly Disagree (1) to Strongly Agree (5) and with higher scores indicating more loneliness. Of the 20 items on the scale, 10 are directly scored while the other 10 are reversed scored. The scale has been widely used by researchers and clinicians and its validity and reliability have been reported (Demir, 1989). The reliability coefficient of the scale was reported to be as high as 0.96 (Demir, 1989). In the present study, a coefficient alpha of 0.74 was obtained for the scale.



Smartphone Addiction Scale-Short Version (SAS-SV), developed by Kwon et al.,(2013), was used to assess smartphone addiction. The SAS-SV, a revised version of the Smartphone Addiction Scale, examines the extent to which people are hooked to smartphones and yields a total score that is indicative of the severity of smartphone addiction. The SAS-SV is scored on a six-point Likert scale ranging from “Strongly disagree” (1), “Disagree” (2), “Weakly disagree” (3), “Weakly agree” (4), “Agree” (5), and “Strongly agree” (6), and with higher scores indicating more severe addictions across the six factors of smartphone addiction (daily-life-disturbance, positive-anticipation, withdrawal, overuse, tolerance, and cyberspace-oriented relationship). Participants’ composite scores are used to assess their levels of smartphone addiction with cut-off values of 31 and 33 for males and females respectively (Kwon et al., 2013). A score higher than the cut-off value is indicative of a high risk of smartphone addiction. A Cronbach’s alpha of 0.87 was obtained for the scale in the present study.

Social Maladjustment Scale (SMS) was developed by Wiggins (1969) and was used to assess social maladjustment in this study. The 27-item inventory was designed to measure social maladjustment along three dimensions - inadequate interaction, shyness and a tendency to be reserved or reticent. The scale is scored along a five-point Likert scale with options ranging from Strongly Disagree (1) to Strongly Agree (5) and with higher scores indicating more social maladjustment. The scale has been shown to possess adequate psychometric properties (Arogundade&Amure 2015, Akpunne et al., 2020). A Cronbach alpha of .83 was obtained for the scale in the present study.

The revised Cheek and Buss Shyness Scale (RCBSS 14-item) was developed by Cheeks and Briggs (1990). Participants are to indicate how certain statements are characteristic or true of their feelings and behaviour on a 5-point scale ranging from “Very uncharacteristic or untrue” (1), “Uncharacteristic” (2), “Neutral” (3), “Characteristic” (4), “Very characteristic or true” (5). While 10 items on the scale are directly scored, 4 items are reversed. They displayed adequate internal consistency ($\alpha = .90$).

Procedure

Data collection was undertaken by the researchers and two colleagues over a three-week period during which the questionnaire was personally administered to 525 participants but 498 were returned with usable data, thus yielding a 94% return rate. Two-stage sampling approach was employed. Using stratified sampling, the population units were divided into government and privately-owned institutions, and then two institutions (a government and privately owned institutions) which were at close distance to the researcher were selected using purposive sampling. Participants were as well selected purposively across the faculties/departments and levels of the participants. The administration of the questionnaires was carried out by the researcher with the help of his colleagues in liaison with secretaries of the participants' departmental offices. Permission to recruit participants was sought through the Dean of their faculties. Consent was assumed at the point of collection of the questionnaire after they had been briefed on the objective of the study. Participants were told of their voluntary participation and that they could discontinue their involvement at any time. Anonymity and confidentiality of responses were also conveyed. Since the questionnaire is self-administered, participants had the option of either returning the questionnaire immediately or dropping it at their departmental office for later collection by the researcher.



Data Analysis

Descriptive statistics including percentages, mean and standard deviation were performed as initial analyses to throw light on the prevalence of loneliness, shyness, social maladjustment and smartphone addiction. Linear multiple regression analyses were performed to explore the predictive influence of loneliness, shyness, and social maladjustment on smartphone addiction.

Conflict of Interest: There are no conflicts of interest concerning this study.

RESULTS

As an initial step, we explored the patterns of loneliness, shyness, social maladjustment and smartphone addiction. Results, using the cut-off values of the various measures indicated that 11.8% of participants scored low on loneliness, 70.1% had scores reflecting moderate loneliness and 18.1% reported high loneliness. On shyness, 13.1%, 67.6% and 18.9% of participants had low, moderate and high shyness respectively. On social maladjustment, 16.7%, 66.0% and 17.3% reported low, moderate and high social maladjustment respectively. Results further indicated that 16.1% reported low smartphone addiction, 66.8 reported a moderate level and 17.1 reported a high level of smartphone addiction.

To investigate the predictive influence of loneliness, shyness, and social maladjustment on smartphone addiction, linear multiple regression analyses were performed. Results indicated, as shown in Table 1, that loneliness is significantly associated with smartphone addiction ($\beta = 0.20$; $t = 4.57$; $p < .05$). This means that the more lonely a student is, the greater the likelihood of smartphone addiction. Findings also indicated that social maladjustment is associated with smartphone addiction ($\beta = 0.26$; $t = 5.94$; $p < .05$) with more social maladjustment indicative of more smartphone addiction. Shyness did not have an independent prediction of smartphone addiction ($\beta = 0.03$; $t = 0.69$; $p > .05$).

With regards to the joint prediction, results indicated that there was a significant joint prediction of smartphone addiction by loneliness, shyness, and social maladjustment ($F_{(3,491)} = 22.93$, $adj.R^2 = .12$, $p < .01$), with the three variables accounting for 12% of the observed variances in students' smartphone addiction.

Table 1: Results of the Multiple Regression Analyses by Loneliness, Shyness, and Social Maladjustment

Variable	<i>t</i>	β	<i>p</i>	<i>F</i>	<i>p</i>	<i>adj.R</i> ²
Loneliness	4.57	.20	.01	22.93	.00	.12
Shyness	0.69	.03	.49			
Social Maladjustment	5.94	.26	.01			

Results, as shown in Table 2, indicated that there was no significant influence of sex on smartphone addiction ($t(498) = .50$, $p > .05$). The mean scores of male and female participants were 30.88 (SD = 11.32) and 30.38 (SD = 11.10) respectively. The hypothesis which suggested significant sex differences in smartphone addiction is, therefore, rejected.



Table 2: Independent t-test showing the influence of sex and type of school on smartphone addiction

Variable	Source	n	M	SD	df	T	P
Sex	Male	255	30.88	11.32	498	.50	.62
	Female	242	30.38	11.10			
Type of University	Public	273	30.98	11.62	498	.74	.42
	Private	225	30.22	10.69			

Results further showed (Table 2) that there was no significant influence of the type of school/university on smartphone addiction $\{t(498) = .74, p > .05\}$. The mean score of students from public universities was 30.98 (SD = 11.62) while the mean score of participants from private universities was 30.22 (10.69). The hypothesis which suggested a significant influence of school type on smartphone addiction is, therefore, rejected.

Univariate analysis of variance or one-way analysis of variance (ANOVA) was performed to determine the influence of the level of study on smartphone addiction. Results showed that the level of study in the university had a significant influence on smartphone addiction $\{F(2,494) = 9.10, p = .00\}$. As presented in Table 3, participants in their first year in the university (100 level) reported the least level of smartphone addiction (M = 24.74, SD = 10.78) than participants in their second year (M = 30.75, SD = 9.53) and third year in the university (M = 33.69, SD = 12.44). Results of post hoc analyses showed these differences to be statistically significant.

Table 3: One ANOVA of Level of study on Smartphone Addiction

Source	Sum of Squares	df	Mean Square	F	P
Between Groups	2211.01	2	1105.51	9.09	.00
Within Groups	60078.07	494	121.62		
Total	62289.08	496			

To determine the influence of course of study/discipline on smartphone addiction, a one-way ANOVA was performed (Table 4). Results indicated a significant influence of the course of study on smartphone addiction $\{F(2,494) = 3.52, p = .05\}$. Participants in Faculties of Basic/Natural Sciences (M = 29.4, SD = 11.21) and Faculties of Humanities/Law (M = 29.8, SD = 11.41) reported significantly lower on smartphone addiction than participants from Faculties of Social/Management Sciences (M = 32.3, SD = 10.90). This showed that smartphone addiction is relatively more prevalent in participants from the Faculties of Social and Management Sciences than in other faculties.

**Table 4: One-way ANOVA of influence of faculty/discipline on smartphone addiction**

<i>Source</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean square</i>	<i>F</i>	<i>Sig.</i>
Between Groups	875.213	2	437.606		
Within Groups	61413.870	494	124.320	3.520	.030
Total	62289.082	496			

DISCUSSION

The present study investigated psychological and school-related factors that can influence smartphone addiction among Nigerian undergraduates. We found that psychological variables of study (loneliness, shyness and social maladjustment) significantly predict smartphone addiction. This finding is consistent with those of Park (2005) and Casey (2012) in which loneliness and smartphone addiction were found to be positively correlated among participants in Korea and Mainland China respectively. In a similar vein, Bian and Leung (2015) reported that psychological attributes such as shyness and loneliness predicted patterns of smartphone usage and addiction among university students in China. They further identified symptoms of smartphone addiction to include disregard of harmful consequences, preoccupation, inability to control craving, productivity loss, and feeling anxious and lost. The findings of this study also appear to corroborate previous empirical evidence with regard to the link between social maladjustment and psychopathological symptoms generally (Resrepo et al., 2016) and problematic use of new technologies (Amendola et al., 2019; Resrepo et al., 2016).

As opined by researchers (e. g. Amendola et al., 2019; Bian& Leung, 2015; Casey, 2012; Park, 2005; Restrepo et al., 2016) and based on the findings of the present study, we are also persuaded that smartphone addiction could be seen as a defence mechanism - a way of coping with or avoiding pervasive underlying emotional issues. In as much as excessive preoccupation with smartphones offers a reprieve for smartphone-addicted individuals from subjective fears, anxieties and worries that are perceived to be associated with face-to-face social interaction by many shy, lonely and socially maladjusted individuals, smartphone addiction represents an escape behaviour and carries the potential to be reinforced consistently, especially with the arrays of pleasant and psychologically-rewarding experiences of visiting certain sites and using certain applications that are now available on smartphones.

This study found a significant influence of some school-related factors on smartphone addiction. With regards to faculty/discipline of study, participants from the Social Sciences and Arts were found to have higher smartphone addiction compared to their counterparts in the faculties of sciences (Basic Medical and Natural Sciences). This finding is consistent with those of previous studies (e.g. Abu-Jedy, 2008; Al-barashdi et al., 2016) and may be due to the relatively heavier load of laboratory work that students in the science-oriented disciplines are exposed to, which may reduce their use of smartphones than students in the Arts and Social Sciences disciplines whose study activities require a lot of searches for materials online.

Interestingly, results indicated first-year students had lower levels of smartphone addiction than their counterparts in upper levels in the university. This result implies that excessive use of the smartphone tends to increase as the students move from an academic level to the next upper one. Although we found no empirical support for this finding, it is plausible to opine that the observed elevated scores on smartphone addiction by higher-level students may be a result of



the increased need to use smartphones for academic activities as one moves higher in the university. It is also possible that the need to connect to the internet for social networking, research materials for term papers/projects, shopping, as well as betting/gaming increases in the upper class than at the entry-level into the university (Al-barashdi et al., 2016).

Based on the findings of this study and discussion of the same, we conclude as follows: First, with over 83% of participants reporting moderate or high levels of smartphone addiction, there is a high incidence of smartphone addiction among students from selected universities in Southwest Nigeria. Second, higher levels of loneliness and social maladjustment are associated with more smartphone addiction. Lonely and socially-maladjusted students use smartphones excessively to cope with or avoid facing pervasive underlying emotional issues. Third, discipline/course of study has an influence on smartphone addiction among students. Specifically, students in the social sciences and management sciences are more likely to be addicted to smartphones than their core science-based counterparts. Fourth, the tendency for smartphone addiction increases with increasing levels of study, with first-year students least likely to be smartphone addicted. Finally, there was neither a significant gender-related influence nor school-type influence on smartphone addiction among students. These imply that the problem cuts across gender and school type.

Given the various psychological and other deleterious effects that have been associated with smartphone addiction, especially among young persons, it is recommended that psychologists and school counsellors should be more involved in the emotional well-being of university students. Parents and other stakeholders should help students/children by observing those showing signs of loneliness, shyness and social maladjustment, and engaging them in robust, non-evaluative social interactions with a view to minimising resorting to excessive use of smartphones.

Students, especially those in the social science/management disciplines and those in the higher levels of their studies, should be targeted for relevant psychological intervention such as psycho-education in which the various negative issues surrounding the unhealthy use of smartphones are highlighted. Prevention and intervention strategies based on a multi-level strategy should be adopted by health providers in managing the effect of psychological factors such as loneliness, shyness and social maladjustment among students in the universities. These strategies could reduce the excess time that students spend with their phones. Training such as social skills and emotional intelligence can be implemented to provide leverage for the socially-withdrawn students to engage in physical/face-to-face interaction more. Also, university authorities should employ the services of qualified psychologists for the provision of psychological health services to help in combating the negative impact of loneliness, shyness and social maladjustment on university students.

The present study, being a survey in which self-reports were relied upon in data collection, is prone to certain limitations which imply that generalisation of the findings should be done with caution. An experimental study in which variables were actively manipulated and the various study conditions properly controlled would have provided a more compelling test of the hypotheses. Also, since only two universities were selected from Osun State in Southwestern Nigeria (although the two universities are adequately representative of the Southwest), generalisability to the entire country would be inappropriate, and thus, constitutes a limitation. The aforementioned notwithstanding, we are persuaded that the limitations are not sufficiently potent to vitiate the findings and conclusions of this study.



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INFLUENCE OF SOCIO-CULTURAL ENVIRONMENTAL FACTORS ON BUSINESS PERFORMANCE

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ABSTRACT: *There are things, events, or situations that occur that affect the way a business operates, either in a positive or negative way. These things, situations or events that occur affect the organizational performance in either positive or negative ways are called driving forces or environmental factors. This study thereby aims at studying the impact of socio-cultural environmental factors on business performance using International Breweries Plc., Ilesha, Osun State, Nigeria as a case study. Sample of 40 respondents derived from the company were put for study from various sectors of the company using stratified random sampling. The analysis was done with the aid of a descriptive statistical tool and categorical regression analysis for inference with the aid of IBM Statistical Package for Social Statistics (SPSS) version 23. It was found that socio-cultural environmental factors have a positive impact on business performance. It is therefore recommended that effort should be made to improve on advertisement based on the studied environmental factors identified.*

KEYWORD: *Socio-cultural factors, Environmental factors, Catreg regression, Correlation, Performance.*



INTRODUCTION

The word environment is used to talk about many things. People in different fields of knowledge (like history, geography, or biology) use the word differently. Environment can be said to be the surroundings or conditions in which a person, animal, or plant lives or operates. It could also refer to the setting or condition in which a particular activity is carried out. Environment is, therefore, the sum total of all surroundings of a living organism, including natural forces and other living things, which provide conditions for development and growth as well as of change and damage. Business organizations do not simply exist in their environment. They constantly interact with it.

Organizations change in response to the conditions in that environment. The environment is the complex set of physical, geographic, biological, social, cultural and political conditions that surround an individual, organizational and that ultimately determine its form and the nature of its survival. The environment influences how organizations strive. For that reason, organizational performance and environment are closely linked. Organizational performance has been taught with many conflicting definitions and it is not a new phenomenon among the academics and the industrialists as well as public institutions.

The three approaches are not inconsistent with one another. They are complementary. Thus business organizations are a part of a large system. This means that events external to the firm affect all business organizations. Conversely, the operations of business organizations affect the external environment.

On the basis of the extent of intimacy with the firm, the environmental factors may be classified into different levels or types. There are broadly two types of environment: the internal environment, i.e., factors internal to the firm and the external environment, i.e., factors external to the firm which have relevance to it. The internal factors are generally regarded as controllable factors because the company has control over these factors; it can alter or modify such factors as its personnel, physical facilities, organization and functional means such as marketing mix to suit the environment. The external factors on the other hand are, by and large, beyond the control of a company.

The external or environmental factors, such as the economic factors, socio-cultural factors, government and legal factors, demographic factors, etc., are therefore generally regarded as uncontrollable factors. Some of the external factors have a direct and intimate impact on the firm (like the suppliers and distributors of the firm). These factors are classified as micro environment. There are other external factors which affect an industry very generally (such as industrial policy, demographic factors, etc.). They constitute what is called macro environment. Entrepreneurs subsume in the environment with which they interact by importing inputs and exporting outputs. Thus, the vagaries and the extremities of the environment affect the fortunes of organizations (Chandrasekar, 2011).

Several studies have attempted to analyse or appraise the effects of environmental factors on various aspects of business organizations. These include Chandhary and Sharma (2012), Cooke (2000), Dolden and Ward (1986), and Viswesvaran and Ones (2000), who investigated the role of the external environment in the market orientation performance linkage among SMEs in the agro-food sector in Malaysia and found that market technology



turbulence and competitive intensity did not moderate the relationship between market orientation and business performance.

Muchhal (2014) observed that the external environment in which organizations operate is complex and constantly changing; a significant characteristic of the external environment is competition.

Indeed, several studies have investigated the association between different environmental factors and established the effects of moderating influences on organizational variables (Nharuddin & Sadegi, 2013). Researchers have argued that firms should monitor their external environment when considering the development of a strong market oriented culture (Okoye & Ezejiofor, 2013).

In a study on the impact of external environment and self-serving motivation on physicians' organizational citizenship behaviours, Cooke (2000) found that external environment does not have significant impacts on job satisfaction, but does have significant negative effects on organizational citizenship behaviours. They also found out that self-serving motivation and job satisfaction also have positive effects on organizational citizenship behaviours, and that the meditative effect of job satisfaction is also significant.

In analyzing and appraising Nigeria business environments and factors, we adapt the SWOT Matrix used by Khan (2012). The SWOT Matrix analysis technique combines firms' internal and external environments and their factors.

Table 1: SWOT Matrix

INTERNAL	EXTERNAL
Strength	Opportunities
Weakness	Treats

External Environment and its Factors (PESTLE Analysis Mode)

Source: www.wikipedia.org, 2010

The external environment of a business consists of a set of conditions and influences outside the business but which shape the life and continued existence of the business. The external environmental factors can be captured with the acronym PESTLE. This describes a framework of macro-environmental factors used in the environmental scanning component of strategic management (www.wikipedia.org). Therefore, in this study, analysis of external environment and its factors is referred to as PESTLE Analysis Model, where:

P - Political Factors; **E** - Economic Factors; **S** - Social Factors;

T - Technological Factors; **L** - Legal Factors; and **E** - Ecological Factors.

The internal environment (SWOT Analysis Model) of a business consists of a set of conditions, influences and elements within the business which are directly controlled and influenced by management of the business to shape the life and continued existence of the business in the direction of attainment of organizational goals and objectives. These conditions and influences are within the firm as a business unit, and it can control them. The



elements of the business internal environment constitute the internal environmental factors. Essentially, they are the employee attitudes, new equipment, processes, strategy, work environment, etc., which are encapsulated in the strengths and weaknesses of the business. The organization has the control of these matters because they happen within the organization unlike external environmental factors. Thompson and Strickland (2001) state that, "Developing strategies is one of the tasks needed to achieve unity and coherence between the firm's internal ability, sources and skills with the external factors which are related to the firm."

In line with this, David (1999) submits that any strategy should match firms' strengths and weaknesses with the surrounding to identify the best effective alternative strategy to be implemented. Therefore, the SWOT analysis technique can be explored to enhance firms' strengths and weaknesses so as to prepare for threats and opportunities provided by the external environment.

Ghani et al. (2010) identify strength variables or factors of the business entity to include: Experienced and skillful workforce (Paulson, Fondahl & Parker, 1992): This enhances rational decisions and fulfillment of project requirements (Abdul & Abdul, 1999).

Existing research has established a link between working conditions and job performance. Having the right environmental factors both, physical and psychosocial, will lead to increased performance. Khan *et al.* (2012) investigated in their study the impact of workplace environment on employees' performance among a sample of 297 respondents from the organizational sector in Ghana and concluded that incentives at the workplace had a positive impact on employees' performance while the environment at the workplace had no significant impact on employees.

To achieve this organizational performance, theory of motivation was applied to motivate employees and to ascertain what they actually want in their work (Mohapatra & Srivastava, 2003).

According to Herzberg, motivators or satisfiers are the factors which could bring about job satisfaction even if the above situation is absent. He maintains that they would not cause dissatisfaction. He assumes that there is a relationship between satisfaction and productivity.

We may therefore consider the business environment at three levels:

- Internal environment
- Micro environment/task environment/operating environment
- Macro environment/general environment/remote environment.

Internal Environment: The important internal factors which have a bearing on the strategy and other decision are: Value System, Mission and Objectives, Management Structure and Nature, Internal Power Relationship, Human Resources, Company Image and Brand Equity, Miscellaneous Factors (physical assets and facilities like production capacity, technology and efficiency of the productive apparatus, distribution logistics, etc.).

External Environment: A business does not operate in a vacuum. It has to act and react to what happens outside the factory and office walls. These factors that happen outside the



business are known as external factors of influences. These will affect the main internal functions of the business and possibly the objectives of the business and its strategies. External environment is made of the micro and macro environment. An external environment consists of an economic system, a social system, a monetary system, a political/legal system, and an environmental system.

Aim and Objective of the Study

The aim of this study is to examine the impact of socio-cultural environmental factors on business performance, while the specific objective is to evaluate the relationship between socio-cultural environmental factors and business performance.

Hypothesis

H₀: There is no significant relationship between socio-cultural environmental factors and business performance.

METHODOLOGY

Questionnaires were used to collect data in order to ascertain the impact of socio-cultural environmental factors on business performance (A Study on Employees of International Breweries Plc., Ilesha, Osun State, Nigeria). The study population was the entire staff. Samples were gathered through stratified sampling technique. The study covered samples of 40 respondents and comprised the top management, middle management, lower management and junior staff. SPSS version 23 software was employed for analyzing the data collected; statistical tools of tables, frequencies, percentages and Catreg regression analysis (optimal scaling regression) were employed.

Model Specification

Considering the functional notation, the models are specified as followed:

$$Y = f (X_1, X_2, X_3, \dots, X_8) \quad (1)$$

However, the linear function of the above notation is stated as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + X_8 + U_t \quad (2)$$

$$U_t \sim \text{idd}(0, \sigma^2)$$

Table 2: Variables and Notations

Notation	Variables
X1	Do you think a good work environment enhances workers efficiency, job satisfaction and dedication to the job?
X2	Sex
X3	Religion
X4	Family composition
X5	Language/Ethnic



X6	Age Distribution
X7	Designation
X8	Highest qualification obtained
U	Error term
Y	Is socio-cultural environment conducive for an improvement in performance?

The OSR, R-square and ANOVA were used to affirm the reliability and fitness of the model used. The values of coefficients (β s) and p-values were used to test the level of impact and its significance respectively. However, the tolerance and level of importance were also shown.

ANALYSIS

Table 3: Descriptive Presentations (Demographic structure of respondents)

Variable	Options	Frequency	Percentage (%)
Sex	Male	24	60
	Female	16	40
Religion	Islam	10	25
	Christianity	28	70
	Traditional	2	5
Family composition	Monogamy	23	57.5
	Polygamy	17	68
Language/Ethnic	Yoruba	25	62.5
	Ibo	7	17.5
	Hausa/Fulani	4	10
	Others	4	10
Age Distribution	Below 25yrs	8	20
	25–45yrs	18	45
	Above 45years	14	35
Designation	Top management	5	12.5
	Middle management	15	37.5
	Low management	20	50.0
	Others	0	0
Qualification	Primary School	1	2.5
	Secondary School	1	2.5
	NCE/OND	11	27.5
	HND/BSC	17	42.5
	Postgraduate	10	25.0
	Others	0	0
Years spent in the company	Below 5years	4	10
	5–10 years	12	30
	Above 10 years	24	60

Source: field survey, 2022.

Comments: As indicated in Table 3, 24 (60%) out of the 40 respondents are males while females account for 16 (40%). Eight (20%) of the respondents are below 25 years of age, while the majority of the respondents are of ages between 25 and 45 years—16 (45%), while the rest, 14 (35%) are above 45 years old. Majority of the respondents are Christians, 28 (70%) followed by Muslims, 10 (25%) and other religions are only two (5%). In terms of family composition, 23 (57.5%) are monogamous while the rest are polygamous. Yorubas take a larger percentage (62.5%) of the respondents; this is assumed to be due to company location, followed by Ibo extraction. The distribution of designation, qualification and years spent in the company are as stated in Table 3 above.

Do you think a good work environment enhances workers efficiency, job satisfaction and dedication to the job?

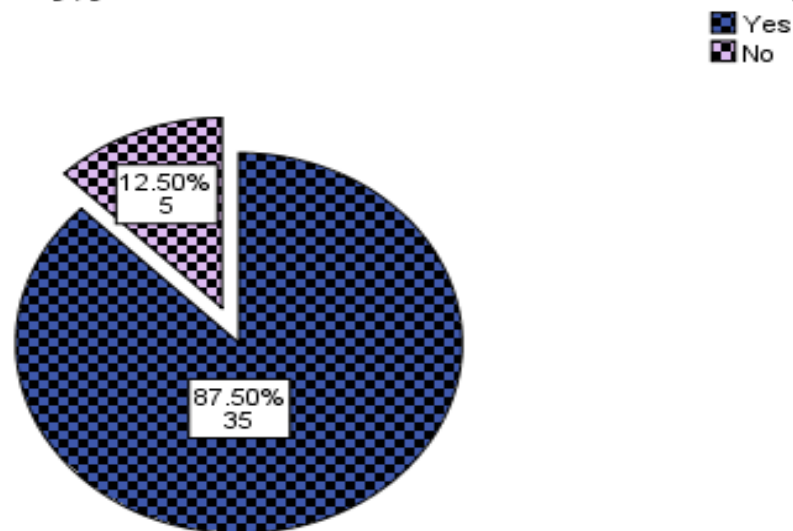


Fig. 1: Work Environment and Job Satisfaction

Is socio-cultural environment conducive for an improvement in performance?

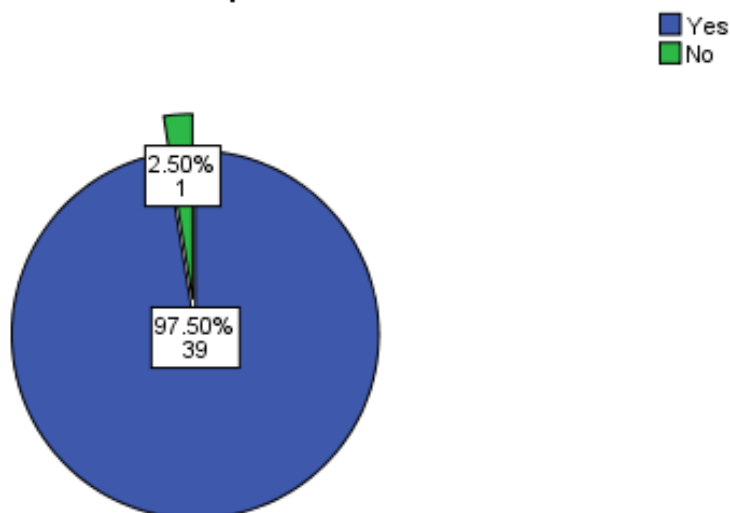


Fig. 2: Socio-cultural Environmental Factors and Performance

Comment: Fig. 1 and 2 depict that work environment and socio-cultural environmental factors respectively enhance company performance, as 87.55% and 97.5% respondents affirmed “Yes”.

Inferential Statistics

Table 4: Model Summary

Multiple R	R Square	Adjusted R Square	Apparent Error	Prediction
.431	.186	.221	.814	

Dependent Variable: Is socio-cultural environment conducive for an improvement in performance?

Predictors: Do you think a good work environment enhances workers' efficiency, job satisfaction and dedication to the job, sex, religion, family composition, language/ethnic group, age distribution, designation, and highest qualification obtained?

The relationship between socio-cultural environmental factors and business performance is positive, $R=0.431$ (Table 4) and also significant as ANOVA p-value (0.030) is less than 0.05 level of significance (Table 5).

**Table 5 ANOVA**

	Sum of Squares	df	Mean Square	F	Sig.
Regression	7.439	13	.572	.457	.030
Residual	32.561	26	1.252		
Total	40.000	39			

Table 6: Correlations and Tolerance

	Correlations			Importance	Tolerance	
	Zero-Order	Partial	Part e		After Transformation	Before Transformation
Do you think a good work environment enhances workers efficiency, job satisfaction and dedication to the job?	-.061	-.111	-.10	.035	.865	.838
Sex	.196	.300	.284	.356	.709	.726
Religion	.032	-.101	-.09	-.021	.599	.588
Family composition	.186	.191	.175	.203	.747	.749
Language/Ethnic	-.124	-.235	-.21	.204	.508	.752
Age Distribution	.080	.083	.075	.036	.799	.785
Designation	.061	.183	.168	.066	.686	.648
Highest qualification obtained	.078	.251	.234	.120	.671	.667
Dependent Variable: Is socio-cultural environment conducive for an improvement in performance?						

Table 6 above shows the level of correlation and importance of some identified components of social-cultural environmental factors under study. It is observed that gender, family composition, age distribution, qualification and designation are important and positively correlated to the company performance in that order.

CONCLUSION AND RECOMMENDATION

It was found that socio-cultural environmental factors have positive impacts on business performance. It is hereby recommended that efforts should be made to improve on advertisement based on the studied environmental factors identified.



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THE POST COLD WAR EXTERNAL ENVIRONMENT AND NIGERIA FOREIGN POLICY

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ABSTRACT: *This paper examines some important post Cold War changes in the external environment that have contributed to changes in Nigeria's foreign policy. The external environment of foreign policy is the totality of extraneous factors that influence and shape a country's foreign policy. The international system was remarkably altered by the historic end of the Cold war. The post Cold War facilitated changes in the international system that have made international relations more complex and challenging. Globalisation, international pressures for democratisation and respect for human rights; changes in the international system and Nigeria's commitments to bilateral and multilateral agreements were identified as some of the external sources of influence on the country's foreign policy. These developments have challenged and tremendously altered the dynamics of Nigeria's foreign policy. Neo-liberal theory was employed as the framework of analysis. Data were sourced from secondary sources: books, journals, newspapers, magazines and the Internet.*

KEYWORDS: External Environment, International System, International Relations, Foreign Policy.



INTRODUCTION

Foreign policy is an interactive process between the domestic and external environment (Sesay & Eyinla, 2012; Kissinger, 1969). Any foreign policy is therefore shaped by both domestic and external factors which together constitute the environment of foreign policy (Saliu & Aremu, 2013). The dynamics (both domestic and external), structures and processes, are all constituent parts of the environment of foreign policy (Alli, 2010). External factors that impinge on foreign policy are the sum of extraneous factors outside of a country that shapes and influences a country's foreign policy (Alli, 2010).

Beginning from the last decade of the 20th century, the international system witnessed unprecedented changes that necessitated states to redefine and refocus their foreign policies in response. With economic liberalisation and unfettered market forces assuming dominance in the global economy, globalisation became a significant phenomenon that impacted particularly the foreign policies of states in developing countries. The unbundling of the economies of states together with the emergence of democratic principles and governance as a consequence of the global push for democratisation, are all part of the wild wind of changes in the international system (Akindele, 2012). These developments were fallouts of the pulling down of the Berlin Wall in 1989 which marked the demise of communism and an end to the bitter Cold War that characterised the international system. This new order in the international system characterised by liberalism has facilitated enormous changes in international relations and has continued to shape and mould the nature and character of inter-state relations.

Nigeria's foreign policy is not immune from these changes. This paper is therefore an inquiry into the factors in the external environment that shape the content and character of the country's foreign policy and attempts to proffer answers to the following question: What are the external factors that impinge on Nigeria's foreign policy?

The paper is divided into four sections. Immediately following the introduction is a theoretical framework that provides a theoretical explanation to the study. That is followed by an overview of Nigeria foreign policy. A discussion of the external factors that shape Nigeria's foreign policy is considered next and ends with a conclusion.

THEORETICAL FRAMEWORK

This paper employs the neo-liberal theory of international relations as the analytical framework. Neo-liberalism is an offshoot of liberalism which is one of the traditional theories of international relations (Mingst, 1999). Liberalism was the dominant theoretical persuasion, particularly in the Inter-War years. It held an optimistic view of the international system in spite of the acknowledged anarchy that pervades international politics. Liberal scholars believe in the possibility of peace in international relations. They believe peace among nations is desirable and attainable. To secure global peace, liberals reposed confidence on the role of international law, international norms and international institutions.

These liberal ideas provided the foundation for the establishment of the League of Nations and its successor, the United Nations. Immanuel Kant was one of the early proponents of liberalism. These ideas were later promoted after the First World War by President Woodrow Wilson of the United States (Gold & McGlinchey, 2017). Liberalism weakened with the outbreak of the



Second World War. It did not however go into extinction as the League was replaced by the United Nations with a similar mandate.

Neo-liberalism gained momentum in the 1980s as a system level analysis of the behaviour of states. Its proponents include John Locke, Adam Smith, Benjamin Constant, John Stuart Mill, John Rawls, Robert Nozick, Bruce Auckerman and a host of others (Odion-Akhaine, 2009). Essentially, neo-liberal theorists analyse state behaviour through the international system. This is based on the belief that the characteristics and dynamism of the international system is a primary explanation for the changes in the behaviour of states (Mingst, 1999). Change in the foreign policies of states, according to the neo-liberal system-focused analysis, is a consequence of changes in the international system. Therefore, behavioural change in states is a manifestation of changes in the international system. In essence, it is the character of the international system that causes states to behave in particular ways (Gold & McGlinchey, 2017).

Neo-liberalism is concerned by the ways international institutions influence the behaviour of states by spreading values and creating rule-based behaviour (Mingst, 1999). The system focused analysis of state behaviour which neo-liberalism espouses is considered an appropriate framework because it explains the influence of the changes in the international system on Nigeria's foreign policy.

METHODOLOGY

Data for this research were sourced from secondary materials. The secondary sources of data that were consulted include books, internet sources, journals, magazines and newspapers. Data from these sources were reviewed and logical conclusions drawn.

Literature: An Overview of Nigeria Foreign Policy

At independence, Nigeria foreign policy focused on specific problems both at the domestic and international levels. The major issues at the domestic sphere were ensuring peace and unity at home and in promoting political unity and stability. An equally important concern was the search for aid and other development assistance from the international community to facilitate the process of economic development at home (Ofuegbu, 1978). Foreign policy was an indispensable instrument in the pursuit of these goals. Nigeria's membership of the United Nations and the Commonwealth was expected to contribute in various ways to the country's ability to enhance these domestic aspirations (Fawole, 2003; Asobie, 2010). The persistence of these problems decades after independence is an indication that efforts in this direction have not recorded remarkable success.

In the international system, the major concerns and objectives in Africa which formed the centre-piece of Nigeria's foreign policy were decolonisation and settler colonialism and apartheid in South Africa (Fawole, 2003). The politics of the Cold War necessitated the need for the country to tread with caution in its relations with the great powers, a constraint that informed the policy of non-alignment and Nigeria's membership of the Non-Aligned Movement (NAM). Other principles, such as the commitment to the promotion of friendship, cooperation and promotion of international peace and security; respect for the sovereign equality of states; and non-interference in the domestic affairs of other states were essentially important provisions of international law and norms in the international system to which all



nations were expected to respect (Fawole, 2003). These were, therefore, shared commitments as all African states subscribed to international law, the norms of the international system and as a commitment to the promotion of international peace and security (Wright, 1999). Also, the problems of economic development at home, political stability and social harmony were objectives that were common to all African states. Broadly therefore, all African states had commonly shared objectives in their international relations (Wright, 1999).

With the highest demography in Africa and endowments in both human and material resources, the makers of foreign policy believed Nigeria was specially endowed by providence to play a special role in continental and global affairs (Fawole, 2003). This imbued successive leaders of the country with an Africa-centred foreign policy and a marked commitment to the pursuit of continental objectives (Adebayo, 2008). This found practical expression in its international relations from the early years of independence through to the 1970s and even to date. This commitment has been demonstrated in many instances. The severance of diplomatic relations with France, three months after independence (January, 1961) over its atomic tests in the Sahara was in furtherance of its African policy (Adebayo, 2008, p.8).

Also, Nigeria played a leadership role in the establishment of the Organisation of African Unity (OAU) in 1963 and the Economic Community of West African States (ECOWAS) as a regional economic bloc in 1975; all of which are efforts to find solutions to the plethora of political and economic challenges in Africa and the West African sub-region respectively. The commitment to Africa has endured through the decades. It is generally acknowledged that since independence, the country's foreign policy has been characterised by continuity rather than change (Jinadu, 2005; Osuntoun, 2005). This shows that the African objectives of Nigeria's foreign policy formulated at independence by Sir Abubakar Tafawa Balewa are still the guiding principles of the country's foreign policy (Gambari, 2008; Asobie, 2010). However, since the 1980s, the vigour and commitment to an Africa-focused policy has been greatly weakened by the country's diminishing economic fortunes.

It is worth noting, though, that the major continental political issues which had engaged the country's foreign policy have all been resolved by the close of the 20th Century (Freidrich Ebert Stiftung, 2011). In their place, fresh problems have emerged to which the country's foreign policy has lacked robust response. The problems of intra-state and inter-state wars, terrorism, HIV/AIDS, globalisation, hunger and disease, political instability and economic crises and a lot more of other issues are the blight of African nations to which Nigeria's foreign policy response have been lacklustre, at best. The end of the Cold War and the unprecedented rapprochement between nations has driven the ominous spectre of a Third World War to a distant memory. But Africa does not share in the peace dividends of the post-Cold War. Intra-state and inter-state wars have been the bane of the continent, and have left in their trail, woes of general instability, mortality, refugee crises, disease, hunger and economic crises in most nations in the continent (Barynham, 1994). So, while the issues that animated Nigeria's foreign policy at independence have largely been resolved, these have been replaced by a set of fresh problems which have not been properly articulated by the country's foreign policy establishment.



RESULTS/FINDINGS

The foreign policy of any country is subject to influence from both domestic and external factors. Nigeria is not an exception as the external environment has had tremendous influence in the direction of the country's foreign policy. The major factors in the external environment that exert influence and change on foreign policy in Nigeria are:

1. Pressures from Globalisation

Essentially, foreign policy is aimed at achieving objectives that cannot be realised within the borders of the initiating country. It is, therefore, a policy directed at the international community (Ofuegbu, 1978). A foreign policy can be prompted either by domestic demands and needs or stimulated by the external environment (Alli, 2010). In the case of the latter, states that will be impacted by the external initiative will have to devise strategies in the form of policies to either ameliorate or take advantage of the stimuli. Globalisation is one major externally initiated phenomenon that confronts Nigeria's foreign policy.

Globalisation has engendered increased interaction of peoples and institutions across the globe (Ogonnaya, 2012). This is not entirely new as nations have lived with elements of the phenomenon. However, the intensification of the processes of globalisation in the 21st Century has created enormous challenges for developing nations like Nigeria. It has contributed to the blurring of state borders, and with it, the sovereignty of nations. The so-called borderless world or global village presents grave challenges to weak states in their ability to effectively control their foreign policies. The sovereignty of a state over its domestic affairs and its international relations are being called to question and repeatedly challenged by the forces of globalisation. Due to the impact of globalisation, the state is said to be in recession and even derided as an institution that is withering away (The Economist, 1997). Consequently, the sovereignty of states and state centrism in international relations is also being attacked and severely contested.

The increased influence of Multinational Corporations, International Financial Institutions (IFIs), Non-Governmental Organisations (NGOs), International Institutions and other bodies has continued to constrain the domain of the state in the conduct of foreign policy in Nigeria (Alli, 2010). A remarkable feature of globalisation is the increasing powers of International Organisations, particularly international financial and economic institutions like the World Trade Organisation, the International Monetary Fund and the World Bank in dictating socio-economic policies and governance systems to developing countries (Oluyemi-Kusa, 1994). The powers of these institutions over the socio-economic development of countries in the global South are vast and untamed thereby virtually dominating and dictating the socio-economic and political progress in these countries (Ogonnaya, 1999). In most developing countries, *de facto* political power resides in the hands of these institutions as globalisation has subjected the state to attack on all fronts. Even in global economic relations, globalisation has through the instrumentality of international financial institutions, pressured and conditioned countries in the developing world to open up their economies through privatisation, liberalisation and the adoption of free-market economies (Ogonnaya, 1999). These prescriptions have facilitated the domination of the economies of these countries with devastating consequences. It is in this dominated environment that governments formulate foreign policies and pursue their legitimate interests in the international system.

Also, globalisation has made everyone a global citizen to the extent that what happens in a particular state can be influenced by happenings around the globe. Citizens are thus subjected



to two simultaneous influences, each competing for attention. Due to advancements in communication technology, citizens are often influenced more by what happens in the international community. Explosion in communication has also advanced networking among citizens of different countries, leading to the formation of organisations cutting across national borders and without the knowledge, permission or regulation of national governments (Omoweh, 2000). Incidents occurring in other countries are instantly brought to the living rooms of people across the globe, facilitating reactions from people living far-away from the epicentre of events and which governments have no control but are compelled to fashion a response to the domestic as well as the international reactions to such developments (Muhammad, 2013). These developments arising from globalisation present tremendous challenges on the ability of the state to exercise control over foreign policy in Nigeria.

This is so because the socio-cultural, economic and political life of Nigerians are increasingly influenced and determined by developments abroad. The intensification of this process is reducing the capacity of the state to control its affairs. It is in this realisation that The Economist (1997) in discussing the economic impact of globalisation on states noted that the advances of computing and telecommunications have enlarged the global economy by eroding national boundaries. It further noted that the process has rendered governments “mere servants of international markets” (The Economist, 1997, p. 1). This aptly captures the dilemma of developing countries as most of them are vulnerable to manipulation due to the weakened capacity to exercise effective control over their foreign policies.

This makes it an important issue in international relations and brings to immediate relevance the observation that “globalisation has become an important theme of the post-Cold War discussion of the nature of the international order” (Olayode, 2016, p. 10). It is one phenomenon that has shaped the relationships among states and the policies of states, and a force that has weakened the power and effectiveness of the Nigerian state.

2. International Pressures for Democracy and Human Rights

The end of the Cold War unleashed liberal democratic values globally. The 1990s were, therefore, generally referred to as the golden age of democracy. This was as a result of the exponential growth in the number of nations that embraced democracy as a form of government. The development was particularly facilitated by the renewed commitment of the United States and its Western allies to the promotion of democratic values around the world. Though the U.S. has had the promotion of democracy as a primary objective of its foreign policy, the end of the cold war reinforced the global drive for the entrenchment of democratic values in U.S. foreign policy. The U.S. National Security Strategy of 1997 captures the country’s commitment to democracy:

Underpinning that international leadership is the power of our democratic ideals and values. In designing our strategy, we recognise that the spread of democracy supports American values and enhances both our security and prosperity. Democratic governments are more likely to cooperate with each other against common threats and to encourage free and open trade and economic development - and less likely to wage war or abuse the rights of their people. Hence, the trend toward democracy and free markets throughout the world advances American interests. The United States must support this trend by remaining actively engaged in the world. This is the strategy to take us into the next century (Mateo, 2020).



At the historic end of the Cold War, the United States took a number of measures in the promotion of democracy, culminating in the signing of the Freedom for Russia and Emerging Eurasian Democracies and Open Markets Support Act of 1992 (Freedom Support Act, 1992). Known as the Freedom Support Act, this piece of legislation was aimed at the promotion of democracy and liberal market values in the former Republics of the Union of Soviet Socialist Republic (USSR). It was, however, expected to have an impact on the promotion of democracy globally.

In sub-Saharan Africa, the end of the Cold War diminished the strategic importance of this region to Western powers but a sustained interest and engagement with governments and civil society on the promotion of democratic institutions and values was maintained. For Nigeria, the transition from the Cold War to the New World Order coincided with a chequered history of political instability under military regimes. Successive military governments in the country with a record of blatant human rights violations were in sharp conflict with the global trend for democratic governance and respect for human rights (Fawole, 1999). This domestic setting had grave implications on the country's foreign policy in the new dispensation.

At the United Nations, promotion of democracy and the protection of human rights became the concerns of the international community. Other international organisations took a cue and made democracy and human rights a priority for member states. For instance, the Commonwealth revisited the issues of democracy and human rights in its 1991 Harare Declaration to which Nigeria is a signatory (Akinrinade, 1992). The Declaration enjoined member states to uphold democratic practices and respect for human rights in their various countries. The provisions of the Harare Declaration were brought to the fore in the suspension of Nigeria from the Commonwealth in 1995 over sundry human rights violations that climaxed in the execution of the Ogoni 9 by the General Sani Abacha military junta (Akinrinade, 1997).

Nigeria's membership of the UNO, the Commonwealth, the African Union and other multilateral organisations were a source of pressure on the country to conform to the emergent democratic values of the international community. There were visible impacts of these developments on Nigeria's foreign policy. The suspension by the Commonwealth exacerbated the pariah status of the country which compelled it to search for new friends from among countries at the fringes of the international community (Fawole, 2003). The existence of military governments in Nigeria after the Cold War and the associated human rights abuses was therefore a challenge to the country's foreign policy.

At the height of its crisis with the international community, Nigeria was ostracised when the June 12, 1993 presidential election was annulled by General Ibrahim Babangida (Asobie, 2010). General Sani Abacha took the country further down the path of diplomatic exclusion with unprecedented human rights abuses which culminated in the suspension of the country by the Commonwealth; the imposition of sanctions by the European Union and was subjected to diplomatic alienation by its traditional friends (Alli, 2010). The United States Government was not left out as it imposed a barrage of sanctions on the country over democracy and human rights (Ayam, 2010). Consequently, Nigeria was isolated and suffered a pariah status until the enthronement of democracy in 1999. Ayam (2010) observed that the bulk of US aid of \$7million to Nigeria between 1993 and 2000 went into funding pro-democracy activities in the country. These developments gravely challenged the foreign policy of the country and weakened its potency and the successes recorded.



These pressures from the international community had a remarkable impact on Nigeria's foreign policy. There could be no better indication than the fact that the vicious military regime of General Sani Abacha attempted to promote its democratic credentials by intervening militarily to restore democracy in Sierra-Leone in 1998 (Fawole, 2003). As a result of the pressure and expectations of the international community, democracy became a corner-stone of Nigeria's foreign policy in Africa, particularly under successive democratic dispensations. For instance, even at the risk of being accused of intervening in the internal affairs of other African countries, Nigeria demanded the restoration of democracy in Cote d' Ivoire in six months when President Henri Konan Bedie was overthrown in December 1999 (Asobie, 2010). In 2003, Nigeria intervened to restore democracy in Sao Tome and Principe and in 2005, Nigeria made sure elections were held in Togo (Asobie, 2010). Assuming the responsibility to drive the promotion of democracy in Africa was a consequence of the democratic disposition of the post-Cold War global order and the need for the country to exercise leadership in the continent.

Military rule and human rights violations mortgaged the international relations of Nigeria and badly reduced the country's international standing in a global order dominated by the values of democracy and respect for human rights. The successful transition to a democratic rule was received with the gradual reversal of the country's pariah status with the termination of the suspension by the Commonwealth, the rescinding of sanctions by the EU and the evident rapprochement with the United States and its allies. Democratic rule largely refreshed Nigeria's international relations as President Olusegun Obasanjo assumed the chairmanship of G.77 and successfully advocated for debt forgiveness and earned Nigeria a debt cancellation in 2005 (Dokubo, 2010).

3. Changes in the International System

The end of the Cold War impacted the foreign policies of African states in many ways. The Cold War ended with the liberation of Eastern Europe. The emergence of these countries attracted the attention and sustained support of the West at the expense of Africa. The result was that international attention on Africa and the relevance of the continent in international relations diminished considerably (Gambari, 2008).

Also, a remarkable feature of the post-Cold War global order was the change from a bipolar architecture to a unipolar order, dominated by a lone super power; the United States. This unprecedented development had a tremendous impact on international relations generally and the relations of states with the emergent super power (Gimba & Ibrahim, 2018). The changes in the international system were immediately noticeable and impactful, particularly on African nations. The moribund Cold War era offered African states the leverage to manoeuvre their relations with the two superpowers and remained the focus of attention from both sides of the divide (Dunning, 2004).

The end to the Cold War eliminated this special privilege as the new order severely constrained the options available to African states and the freedom they had enjoyed in choosing from competing options on international issues. Nations had to adjust to dealing with the only super power on terms dictated by it. Nigerian foreign policy suffers from the strictures imposed on the behaviour and actions of states by the post-Cold War changes in the international system.

The post-Cold War international system presented to nations both opportunities and challenges, almost on equal measure. It was a global system that was marked by a phenomenal rise in



ethnic nationalism and irredentist movements in Africa and in other parts of the world with tremendous impacts on the international system (Mayall, 1983). Africa was particularly hard-hit as the continent was wrecked by wars and state failures arising from ethnic nationalist struggles (Ogwu & Alli, 2007). As a nation with two major religions (Christianity and Islam) and a multiplicity of ethnic groups, a keen interest in the reflection of these differences in the articulation and implementation of the country's foreign policy in order to ensure domestic peace and stability was a priority consideration of foreign policy. The twin issues of religion and ethnicity have always exerted tremendous influence on foreign policy in the country (Fawole, 2003).

The post-Cold War world is largely in transition in several ways. Even as the United States is acknowledged as the superpower, the existence of other poles of power contributing to the diffusion of power in the international system is a living reality. Germany, France and the United Kingdom are recognised regional powers in Europe just as Japan, China and India occupy a position of pre-eminence in Asia, as is Brazil in Latin America (Poladian & Oehler-Sincai, 2014).

In Africa, Nigeria and South Africa are the regional powers. There has also emerged a plethora of multilateral organisations creating other centres of power in the international system. The Brazil, Russia, India, China and South Africa (BRICS) forum, G8, G15, G20, D8, G77 and a lot more others have sprung up and have become increasingly assertive on issues of common interest in the international system. For instance, they have consistently berated the unilateral policies of the U.S., as was the case in the NATO intervention in Kosovo and Libya and the proposal to intervene militarily in Syria under the auspices of the United Nations (Haibin, 2013; Macfarlane, 2016).

There have also been remarkable changes in the global economy in the dawn of the 21st Century: the global economic base is shifting from Euro-American domination to emerging economies in Asia (Ahearn, 2014). In this regard, the phenomenal economic growth of China is particularly remarkable. China has accelerated in economic growth, becoming the fastest growing and the second most powerful economy in the world (Akpuru-Aja, 2012). It has replaced Japan as the most powerful economy in Asia and has become one of the three most powerful economies of the world (Poladian, 2014).

A Congressional Research Service Report had noted that global economic power was “shifting from the United States and Europe to several fast-growing and large developing countries” (Ahearn, 2014, p. 2). This was premised on the fact that these economies “account for rising shares of global GDP, manufacturing and trade, including a significant expansion of trade among the developing countries (South-South trade)” (Ahearn, 2014, p. 2). The reality is that Chinese trade with Nigeria and investments in the country has increased remarkably in the past twenty years (Alli, 2010). In the same vein, China has become a source of development loans for Nigeria in recent years. The changes in the global economy and China's increasing trade relations with Nigeria; China as a source of development loans and its rising profile in international economic relations are all sources of influence on the foreign policy of Nigeria.

Another dimension of influence is the proliferation in the number and impact of Non-Governmental Organisations (NGOs) in international relations. The number of NGOs has remarkably increased after the Cold War. These organisations have also grown in their reach, power and influence. Nigeria and other developing countries have been subjects of enormous



pressures from Non-Governmental Organisations (NGOs). Through persistent advocacy, these organisations have become catalysts of change in the behaviour of states. They have often influenced states by mounting pressures to alter government policies or commitment to particular policies.

Similarly, non-state actors like Transnational Corporations (TNCs), terror groups and others have been particularly effective in mounting pressure on state policies (Wilkinson, 2005; Kim & Milner, 2019). Not only has there been a phenomenal increase in the number of these groups after the cold war, they have also become more assertive in the pursuit of their objectives, thereby impacting state policies in various ways. The activities of non-state actors in the international system have flourished in the aftermath of the Cold-War due largely to the liberal international environment for their operations (Schneckener & Hofmann, 2011).

Bilateral and Multilateral Relations

In recent years, Nigeria has increased its bilateral and multilateral relations through various agreements covering both economic and security objectives. Nigeria has an established bilateral framework with China, India, South Africa, the United States and several other countries. These bilateral relations embody various commitments that impact on the conduct of the country's foreign relations. Since Nigeria's foray into international relations, its engagements have been focused particularly on developments that impact the African continent (Ofuegbu, 1978). The country has not waived on this commitment in the face of unprecedented developments in the international system (Fawole, 2003). The birth of South Africa as a democratic nation in 1994 was a challenge to the position of Nigeria as a *primus inter pares* in African affairs (Alli, 2010).

Africa itself was undergoing fundamental changes with impacts on Nigeria foreign policy. Immediately after the Cold War, the continent was engulfed in conflicts and wars. The situation was such that left Nigeria handicapped to make any meaningful intervention beyond its immediate region. With economic difficulties at home coupled with a military government in power, and with the country facing its own domestic challenges, Nigeria could only venture an intervention in the war in Liberia and later Sierra-Leone under the auspices of the Economic Community of West African States Monitoring Group (ECOMOG) (Adebajo, 2008). The enormous resources that were committed to the pursuit of peace in these countries and the diplomatic engagements to secure peace in the immediate neighbourhood are all factors that impinged on the foreign policy of the country. This does not imply that Nigeria was aloof to the wars in other parts of Africa. Through various contributions, Nigeria was active in finding solutions to the many wars and other challenges that confronted the continent-impacted by developments in Africa, a region that has for decades occupied the centre-piece of Nigeria's foreign policy.



CONCLUSION

The external environment has been an influential determinant of foreign policy in Nigeria after the Cold War. The intensification of the forces of globalisation has been a major influence on foreign policy in Nigeria. It has rendered ineffective the ability of the Nigerian state to assert sovereignty over its citizens and to shield the citizens from influences generated from the international community. The ascendance of democratic values globally and the pressure on the Nigerian state to democratise, observe human rights and respect democratic tenets of governance has also significantly altered not only the domestic policies of the government but also the foreign policy of the country. The remarkable changes in the international system at the end of the Cold War have had tremendous impacts on the foreign policy of Nigeria. The emergence of a unipolar global order, upsurge in ethnic nationalism, changes in the global economy, and the increase in numbers, influence and power of TransNational Corporations and Non-Governmental Organisations are all factors that have influenced the foreign policy of Nigeria. The country has also committed itself to bilateral and multilateral agreements that have constrained its foreign policy. These have all impacted the foreign policy of the country in various ways.

Future Research

A focused inquiry on the impact of each of these external sources of influence and change in Nigeria's foreign policy will contribute to broadening the frontiers of existing knowledge and is a veritable area for further research.

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TAX EDUCATION, FAIRNESS AND PENALTY ON COMPLIANCE BEHAVIOR OF MICRO, SMALL AND MEDIUM ENTERPRISES IN BAYELSA STATE, NIGERIA

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ABSTRACT: *This study investigated the relationship between tax education, tax fairness and tax penalty on voluntary tax compliance in Bayelsa State, Nigeria. A cross sectional survey was conducted on a sample of owners of micro, small and medium enterprises (MSMEs) in Bayelsa State. Primary data were collected using a questionnaire with a five-point Likert scale. The sample was 313 owners of micro, small and medium enterprises (MSMEs) taxpayers that were purposely selected. The data collected were presented with the use of descriptive statistics, while bivariate and univariate analysis was used in the estimation of the regression model developed for the study. The results from the analysis revealed a positive and significant relationship between print form tax education and voluntary tax compliance; positive and significant relationship between electronic form tax education and voluntary tax compliance; positive and significant relationship between stakeholder sensitization programme and voluntary tax compliance; positive and significant relationship between tax fairness and penalty on voluntary tax compliance in Bayelsa State, Nigeria. The study concluded that tax education, tax fairness and tax penalty influence the level of tax compliance of micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria. The study, therefore, recommended amongst others that the government through the relevant tax authorities should evaluate and re-integrate tax education programs feedback on tax behaviors to progressively increase revenue generation.*

KEYWORDS: Tax education, Tax fairness, Tax penalty, Tax compliance, Bayelsa state.



INTRODUCTION

Tax revenue is of vital significance for the sustainability of both industrialized and emerging nations. This is due to the fact that tax is the major source of revenue to the government; its collection is compulsory and regular that can guarantee stability of government income. According to Oladipupo and Obazee (2016), taxes are indispensable in nation building. The authors contend that taxes are necessary for the capacity building for meaningful economic growth and development of any country. Tax is a compulsory contribution made by the citizens of any given country to the state or even an alien, subject to the jurisdiction of the government, for reasons of residence or property and this contribution is for the provision of social amenities for the well-being of that given society (Appah & Zibaghafa 2018; Appah, 2019). Anyaduba and Otugbu (2019) and Omesi and Appah (2021) state that the major objective of taxes in any given society is to ensure that the government uses the revenue derived for the facilitation of economic growth, economic stabilization, income redistribution, promotion of fairness and equity, fiscal responsibility and accountability, as well as for the provision of national goods and services. Also, Omesi and Appah (2021) argue that the main objective of taxes is to increase sufficient revenue to finance government spending that seeks to maximize social welfare that defines its redistribution ability. However, taxpayers are not always enthusiastic and prepared to obey when it comes to the commitments enacted on them by law. Castro and Scartascini (2015) argue that low tax compliance by taxpayers influences the capacity of the government to increase the desired revenue for economic growth and development of industrialized and emerging nations. Amaning et al. (2021) maintain that improved tax revenue will enable the government to carry out more developmental schemes to assist and increase the living standards of the people. According to De Simone et al. (2013), taxpayers wish to minimize cost and maximize revenue, while the government wants to maximize revenue through improved tax compliance.

Tax compliance is a foremost challenge for many tax authorities globally. James and Alley (2004) argue that it is not a simple duty to convince taxpayers to obey tax obligations even as tax laws are not always specific in some respects. Oladipupo and Obazee (2016) maintain that taxpayers are essentially likely to decrease their tax liability either through tax evasion or tax avoidance. The authors further argued that this may give rise to improper filling of their tax returns to tax authorities. Excessively intricate tax regime enforcement makes tax compliance unduly difficult and often have a distortionary influence on the development of micro, small and medium scale enterprises (MSMEs) as they are tempted to change into forms that offer a lower tax burden or no tax burden at all (Oladipupo & Obazee, 2016). Amaning et al. (2021) claimed that the failure of the taxpayer to obey tax laws has negative effects on the economic growth and development of nations. Tax evasion tends to negatively influence the government's ability to undertake the desired developments to improve the living standards of the people. The negative impact of tax evasion on government income has terrible costs for the economy. It plunges revenue required by governments to invest in significant facets of society including health, education and infrastructure development (Robbins & Kiser, 2020). Hence, tax education enhances the level of tax compliance. According to Asshaw and Sebat (2019), tax compliance is the obedience to the administrative rules of tax authorities of reporting and paying taxes on time by taxpayers. The authors further noted that compliance involves the coverage requirements, procedural rules and laws of taxation. Also Appah and Woswei (2016) described tax compliance behavior as the readiness of an individual or corporate taxpayer to comply with relevant tax laws by paying their taxes as at when due. Twun et al. (2020) contend



that tax compliance describes the making and submission of financial reports as well as making payments to the tax authorities on time and in the required fashion. The authors added that tax compliance is how much a taxpayer goes along or neglects to agree to the assessment standards of a country. It is the willingness of taxpayers to meet their taxation obligations as per the relevant guiding principle without the condition for tax audits.

Tax education is one of the major determinants that improve the level of tax compliance. Consequently, studies have investigated the association between taxpayer education and tax compliance behaviors (Amaning et al., 2021; Twun et al., 2020; Adusei, 2018; Ali, 2017; Swenson, 2016). Taxpayer education is explained as the method of enlightening both taxpayers and potential taxpayers about the tax system as a whole and the principle of tax payment. Taxpayers are enlightened on paying their taxes to the government as a result of this method. Therefore, encouraging taxpayers to fulfill their tax payment obligations freely is the key importance of taxpayer education. The reason for taxpayer education consists of imparting knowledge with regards to the tax laws and compliance, persuading the behavior of the taxpayer towards taxes largely, and maximizing tax revenues through voluntary tax compliance. However, tax compliance behavior continues to stay low in most of the emerging and developing nations. This has served as a major prickle to governments as taxes are their major source of revenue to fund public sector services. Poor tax education has a number of implications to the government. First, it definitely impacts tax compliance. Giulia et al. (2019) are of the view that less educated taxpayers are more likely to feel confused about complex tax rules, thus potentially failing to obey tax rules.

A number of researchers have conducted numerous researches on tax compliance and the determinants influencing tax compliance have endeavored to describe the diverse reasons why tax compliance still remain a challenge, despite the many incentives, punishments and guidelines in place (Adekoya, 2021; Amaning et al., 2021; Twun et al., 2020; Adusei, 2018; Ali, 2017; Swenson, 2016; Waithira, 2016). However, none of these studies has clearly assessed and measured the effect of taxpayer education on tax compliance behavior among the micro taxpayers, who form the majority of taxpayers and who are generally ignorant of tax matters. In spite of all these, very little is known about the influence of taxpayer education on tax compliance behavior in Nigeria, and Bayelsa State in particular. Therefore, an empirical study is considered necessary to assess the association between taxpayer education and tax compliance behavior. This study seeks to address this gap by investigating the effect of taxpayer education on tax compliance behavior among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria. The specific objectives of this study are as follows:

1. To investigate the relationship between electronic form of taxpayer education and tax compliance behavior among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria.
2. To evaluate the relationship between print media form of tax education and tax compliance behavior among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria.
3. To determine the relationship between stakeholders sensitization programmes of tax education and tax compliance behavior among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria.



4. To investigate the relationship between tax fairness and tax compliance behavior among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria.
5. To examine the relationship between penalties and enforcement and tax compliance behavior among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria.

This study was guided by the following research questions:

1. What is the relationship between the electronic form of taxpayer education and tax compliance behavior among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria?
2. What is the relationship between the print media form of tax education and tax compliance behavior among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria?
3. What is the relationship between stakeholders' sensitization programmes of tax education and tax compliance behavior among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria?
4. What is the relationship between tax fairness and tax compliance behavior among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria?
5. What is the relationship between penalties and enforcement and tax compliance behavior among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria?

This study tested the following null hypothesis:

- H0₁:** There is no significant relationship between electronic form of taxpayer education and tax compliance among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria.
- H0₂:** There is no significant relationship between the print media form of tax education and tax compliance among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria.
- H0₃:** There is no significant relationship between stakeholders' sensitization programmes of tax education and tax compliance among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria.
- H0₄:** There is no significant relationship between tax fairness and tax compliance among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria.
- H0₅:** There is no significant relationship between penalties and enforcement and tax compliance among micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria.

REVIEW OF RELATED LITERATURE

Conceptual Review

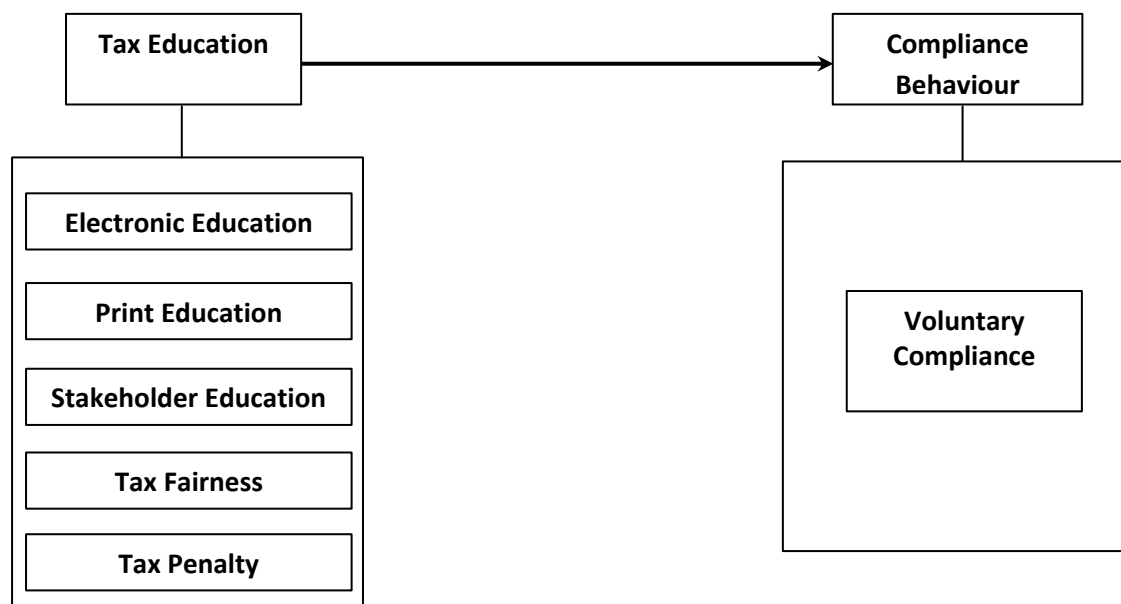


Fig.1: Conceptual Framework on Tax Education, Fairness, Penalty and Compliance Behaviour

Tax Education: Taxpayer education is fast becoming a major route of tax administration. According to Organisation for Economic Cooperation and Development (2015), governments and tax administrations globally explore different methods to supplement traditional enforcement focused practices; they turn to taxpayer education to expand tax compliance behavior. Taxpayer education is the method of enlightening both taxpayers and potential taxpayers about the tax system of a given nation as a whole and the relevance of tax payment. According to Adekoya (2021), tax education consists of any informal or formal plan created by the tax authority or other agencies to encourage taxpayers in filing tax returns appropriately and also to encourage consciousness of their responsibilities in respect of the tax system of any given nation. Wanjuru (2020) stated that the objectives of tax education include knowledge and awareness of tax rules and laws; modification of taxpayer's attitude towards taxation and growth of tax collection through voluntary tax compliance behavior. Amaning et al. (2021) contend that taxpayer education enables taxpayers to perform their tax responsibilities to the nation. Wanjuru (2020) further claims that the principal aim of taxpayer education is to boost voluntary tax compliance amongst taxpayers. Tax education entails the use of electronic, print media and stakeholder sensitization programmes to inform taxpayers on the relevance and importance of tax payment to the citizens in particular and the government in general.

Electronic Form of Taxpayer Education and Tax Compliance: Taxpayer education can be improved through the use of electronic forms of communication. According to Amaning et al. (2021), these means of taxpayer education assists the relevant tax authorities to increase



taxpayers' earnings which culminate into better income for a nation's economic growth and development. Palil (2010) contends that electronic taxpayer education using radio and television is among the most effective communication means of publicizing up-to-date tax information to taxpayers and others. Amaning et al. (2021) maintain that this could lead to improved tax compliance among MSMEs. Palil (2010) further claims that tax officials can use email, short messages (SMS), and websites to frequently update taxpayers on tax issues with their tax obligations. The application of electronic tax education does provide the required information on e-registration, e-filing and e-payment boost compliance behavior of MSMEs in developing and emerging countries (Amaning et al., 2021). Gitaru (2017) maintains that the electronic taxpayers education positively and significantly impacts on compliance behavior of micro, small and medium enterprises in Kenya. A similar study conducted by Amaning et al. (2021) in Ghana indicated that e-education of taxpayers positively and significantly affects tax compliance of small and medium enterprises in Ghana.

Print Media Form of Tax Education and Tax Compliance: The application of print media, such as newspapers and magazines, will enhance the tax compliance behavior of taxpayers. According to Tetteh (2019), the use of magazines, flyers, newspapers, print outs, and others to disseminate information on tax issues among small and medium enterprises improves taxpayers awareness, submission of returns, and self-confidence leading to voluntary tax compliance. Nurlis (2015) affirms that the use of print media taxpayer education will advance better knowledge and awareness of the tax laws, tax consciousness, tax returns submission, loyalty and decrease in tax evasion. According to Gitaru (2017), the adoption of print media tax education such as newspapers and magazines will increase tax awareness, the filing of tax returns, and eventually increase taxpayers' voluntary compliance and enhancement of government revenue. The investigation conducted in Ghana by Amaning et al. (2021) showed that print education of taxpayers positively and significantly affects tax compliance of small and medium enterprises.

Stakeholders' Sensitization Programmes of Tax Education and tax education: Stakeholders sensitization programmes are also used by tax authorities to educate taxpayers on tax compliance. According to Amaning et al. (2021), stakeholder sensitization programmes are done using workshops, seminars and tax clinics. Gitaru (2017) study in Kenya noted that the Kenya Revenue Authority organizes tax workshops to educate citizens on the importance of voluntary compliance. Also, Tetteh (2019) affirms that the Ghana Revenue Authority (GRA) arranges workshops for taxpayers to enhance voluntary tax compliance. Amaning et al. (2021) claim that the opinions and fears of the taxpayers are implored to assist advance tax administration. The authors further noted that through such mediums the worries of taxpayers concerning their rights and responsibilities are resolved; the tax authority's administrative procedures are made known to the taxpayer, and taxpayers' consciousness about the various interferences and inducements meant at reducing the cost of transactions and the accessibility of time concerning tax laws are made known to taxpayers (Gitaru, 2017; Tetteh, 2019). The investigation conducted in Ghana by Amaning et al. (2021) showed that stakeholder sensitization programmes of taxpayers positively and significantly affects tax compliance of small and medium enterprises.

Tax Fairness and Tax Compliance: Tax fairness is having an equitable tax system. Fairness of the tax system is believed by taxpayers and tax authority as one of the determinants of compliance behavior (Amina & Saniya, 2015). A number of studies explain the positive relationship between tax fairness and tax compliance. Tilahun and Yidersal (2014), Maseko



(2015), Gerger et al. (2014) established that perception of the fairness of the tax system significantly influences the tax compliance behavior. Similarly, Geletaw's (2017) research in Ethiopia indicated a positive and significant association between tax fairness and tax compliance levels in the formal sector. However, studies conducted by Tadesse and Goitom (2014) and Assfaw and Sebhat (2019) indicated a statistically insignificant relationship between tax fairness and tax compliance behavior.

Tax Penalties and Enforcement and Tax Compliance: Tax penalty is a disciplinary measure that the tax law imposes for the performance of an act that is proscribed, or for the failure to perform a required act such as failure to timely file return or filling wrong or undervalued returns (Oladipupo & Obazee, 2016). According to Assfaw and Sebhat (2019), tax penalty is the money paid to the relevant tax authority, as a punishment for tax evasion. Sawyer et al. (2014) contend that a surge in tax deterrence sanctions relating to the discovery of likelihood and the severity of penalties gives rise to lower non-compliance among taxpayers. The level of tax penalty significantly impacts on tax compliance behavior. This is similar with the study of Yunus et al. (2017) which indicates that the rate of tax penalties has a positive influence on the tax compliance behavior. Ahmed and Kedir (2015) showed that the penalty magnitude is significantly positively related to tax compliance intentions; that is, when taxpayers perceive that there is a high penalty rate for any non-compliance, the level of non-compliance will decrease. However, the study of Tilahun (2016) conducted on factors influencing tax compliance attitudes in Ethiopia indicated that offenses and penalties are not significant variables in explaining tax compliance behavior. Similarly, the study conducted by Waithira (2016) and Oladipupo and Obazee (2016), Assfaw and Sebhat (2019) indicated that there exists an insignificant negative association between tax penalties and residential rental income tax compliance behavior.

Tax Compliance Behaviour: Tax compliance is the adherence to the tax rules of reporting and paying taxes as at when due. It consists of filing tax returns on time, covering all the income and claiming the proper tax reliefs and making tax payments on time. According to Assfaw and Sebhat (2014), tax compliance is an individual's act of filing their tax returns, declaring all nonexempt financial gain correctly, and paying all collectable taxes at intervals, the stipulated amount, while not having to attend for follow-up actions from the tax authority. Amaning et al. (2021) described tax compliance as the conscious act of obeying and complying with tax laws and honoring tax payments obligation properly. Ndubula and Matiku (2021) defined tax compliance as the filling of all required tax returns at the proper time and that returns correctly report tax liability in accordance with tax rules and laws applicable at the time of filling the returns. Akhand and Hubbard (2016) explained that tax compliance is composed of three mutually exclusive elements: filling, reporting, and payment.

Theoretical Review

This study is anchored on the economic deterrence theory advanced by Allingham and Sandmo (1972). This theory stated that the attitude of a taxpayer is typically predisposed by the issues that govern the cost and advantages of tax evasion (Wanjiru, 2020). According to Amaning et al. (2021), this theory incorporates the concept of an economically rational taxpayer who will evade taxes so long as the merits from such activities surpass the visualized disciplinary actions of being caught. Walsh (2012) states that this theory views the taxpayer as a rational economic entity, who measures the costs and benefits of evading taxes, and consequently selects not to pay, if the benefit of non-compliance exceeds the costs. The theory explains that the taxpayer



maximizes expected benefits of non-compliance tax risk. This theory implies that taxpayers will only pay their taxes due to the fear of being punished for noncompliance. Awa and Ikpor (2015) contend that a rise in punishment as a result of fines and penalties will improve tax revenue.

Empirical Review

There are several prior empirical investigations on the association between tax education, fairness and penalty on tax compliance behavior in developed and developing nations. Some of these studies are reviewed below with a view to observing the trends of the findings and the gaps in literature.

Table 1: Summary of Empirical Review

S/N	Authors/Year	Research Topic	Methodology Used	Findings
1.	Amaning et al. (2021)	Tax compliance among Ghanaian SME: How impactful is taxpayer education?	The study employed an online survey to collect responses from 297 respondents using purposive and simple random sampling techniques. Partial Least Square – Structural Equation Model (PLS-SEM) approach was adopted in assessing the measurement and structural models.	The study revealed that electronic media tax education; print media tax education and stakeholders' sensitization positively impact on tax compliance.
2.	Assfaw and Sebhat (2019).	Analysis of tax compliance and its determinants: Evidence from Kaffa, Bench Maji & Sheka Zones Category B Taxpayer, SNNRP, Ethiopia	The study utilized descriptive and explanatory research designs. A population of 1397 and a sample size of 311 using Yamane method. Questionnaire was used as the primary source of data collection while univariate, bivariate and multivariate methods of data analysis were adopted in the study.	The study's logistic regression analysis suggested that that tax compliance was positively affected by education level of taxpayers, tax knowledge and awareness of tax payers, simplicity of the tax system, attitude of tax payers towards tax, perceived role of government expenditure, and rewarding scheme for loyal taxpayers.



3.	Ndubula and Matiku (2021)	The effects of tax education on government revenue collection: The case of small and medium enterprises in Morogoro Municipality, Tanzania.	The study employed descriptive and explanatory research. Also cross – sectional research design was used. Questionnaires and interviews were employed as the primary sources of data collection. A population of 2950 with a sample size of 96 participants. Univariate method of data analysis was utilized.	The findings of this study disclosed a high level of non – compliance to tax due to timeliness for tax payment, voluntary tax payment, use of Electronic Fiscal Devices, issuance of fiscal receipts and online filing of tax returns. Hence the key factor of non – compliance to tax is the level of tax education.
4.	Omes and Akpeekon (2019)	Determinants of Income tax and tax compliance in Nigeria.	The study employed survey research design and questionnaire was the primary source of data collection. Univariate and Multivariate methods of data analysis were adopted.	The findings of this study showed a negative and significant relationship between cost of tax compliance and tax behavior in Nigeria; a positive and significant association between tax education and tax compliance behavior and a negative and significant relationship between tax revenue utilization and tax compliance behavior in Nigeria.



5.	Aregbesola et al. (2020)	Marital status and educational background as determinants of tax compliance in Nigeria.	The study employed cross-sectional design which consisted of a structured questionnaire. The population of the study comprised of employees who were 18 years and above in the public and private organizations as well as artisans and traders to represent the informal sector. The Taro Yamane formula was used to determine the sample size of 400 which was distributed among the three Southwestern states selected namely, Lagos, Oyo and Osun using proportionate sampling technique. Data were analyzed using percentages, mean, standard deviation and Analysis of Variance (ANOVA).	The result of the study revealed that marital status significantly impact on personal income tax compliance in Nigeria and educational background does not significantly impact on personal income tax compliance behavior.
6.	Aremu and Siyanbola (2021)	Tax education and compliance in the informal sector in Ogun State, Nigeria	The study used cross sectional survey research design. The population consisted of the six economic zones in Ogun State of 2465 participants with a sample size of 310 while 240 responded. The primary data were analyzed using univariate, bivariate and multivariate analysis.	The result of the study suggested that tax education has a positive and significant effect on taxpayer registration. The study also disclosed that tax education has a significant influence on timely filing of returns. Tax education has a significant influence on the correct declaration of taxable income. Tax education has a significant influence



				on timely payment of assessed tax.
7.	Mbilla et al. (2020)	Tax education and tax compliance in Ghana	The study employed exploratory and explanatory research methodology. The study utilized cross – sectional research design and a population of 400 with a sample size of 200 people. Questionnaire was used as the primary source of data collection and univariate, bivariate and multivariate methods of data analyzed were used for data analysis	The findings of the research reveal that tax compliance is influenced when there is appropriate tax education. Tax education enhances the knowledge level of taxpayers with regards to technical skills needed to determine the tax liability and awareness of tax regulations. Tax revenue mobilization is influenced through several ways which are hinged on the knowledge level, through tax education, of individual tax payers.
8.	Twun et al (2020)	Tax knowledge and tax compliance of small and medium enterprises in Ghana.	The study employed cross sectional research design. A total of 139 respondents and 130 completed the study questionnaire. Questionnaire was the primary source of data collection while univariate, bivariate and multivariate methods of data analysis were employed.	The results of the multivariate analysis disclosed that knowledge of tax rights and responsibilities, knowledge of employment income, and awareness of sanctions established a positive and significant relationship with tax compliance. While Knowledge of business income was not statistically related to tax compliance. The findings of the study suggest that knowledge of tax rights and



				responsibilities, and awareness of sanctions are the strongest determinants of tax compliance in the SME.
9.	Adekoya (2021).	Taxpayer education and tax compliance in Lagos State.	The study employed survey research design and the population of the study consists of four million two hundred and sixteen thousand seven hundred and fifty one (4,216,751) individual taxpayers in Lagos State and a sample size of 400 while 348 was used for analysis. Questionnaire was employed as the main source of data collection and univariate, bivariate and multivariate analysis were employed for the analysis of data.	The result of the multivariate analysis suggested a positive and significant relationship between tax education and tax compliance in Lagos State, Nigeria.

Source: Authors' Compilation (2022)

METHODOLOGY

This section of the study examined the research design, population of the study, sampling and sample size determination, instrumentation, validity of instrument, reliability of instrument, administration of instrument and methods of data analysis.

Research Design: This study adopted cross-sectional and correlation survey research design. Appah (2020) noted that correlation study is a quantitative method of research in which the researcher has two variables from the same group of respondents and tries to create a relationship between the two variables. This design was employed to study the correlation between tax education, fairness and penalty on tax compliance behavior in MSMEs in Bayelsa State, Nigeria.

Population of the Study: A research population is the total elements, events, possible traits, people, subjects or observations having the same features, concerning the circumstances of interest in the study to be explored. The population of this research consists of 2,000 MSMEs registered with the Bayelsa State Ministry of Trade and Investment, Yenagoa.



Sampling and sample size determination: This investigation used random sampling. The choice of simple random sampling technique was due to the fact that it is by far the earliest and simplest probability sampling in terms of conception and application. Taro Yamene's model (1967) was used to determine a sample size of three hundred of thirty seven (337) respondents that are the owners of MSMEs in Bayelsa State.

Instrumentation: The study utilized questionnaire as the main instrument for data collection taking into consideration the objectives of the study. The instrument was named *Tax Education and Compliance Behaviour (TECOB)*. It comprised four sections. Section one consists of information on personal information of the respondents; section two consists of questions on tax education; section three on tax fairness; and section four on tax penalty. The questionnaire used a four point Likert scale of strongly agree, agree, disagree and strongly disagree. A total of three hundred and thirty – seven (337) copies of the questionnaires was administered to owners of Micro, Small and Medium Enterprises (MSMEs) in Bayelsa State and a total of three hundred and thirteen (313) copies of the questionnaires was retrieved and used for data analysis.

Validity and Reliability of Instrument: The research adapted content validity where the instrument was given to experts in the Department of Accountancy, Niger Delta University, Federal University of Otuoke, Bayelsa State who read through and made necessary corrections. The instrument was administered to thirty (30) respondents of the target population who were not part of the respondents and after a period of two weeks, the same instruments again were given to the same thirty (30) respondents to ascertain the reliability. The Cronbach alpha was used to determine the statistical reliability of 0.82, which implies the instrument is very reliable. A Cronbach alpha value that is above 0.5 (that is 50%) is reliable and values between 0.7 and 0.9 are very reliable.

Measurement of Variables

Measurement of a variable is essentially the process of allocating numbers to variables of a study (Appah, 2020). The author further noted that measurement of variables is a systematic research process and a vital element of research design. Therefore, the variables for this study were measured using suitable proxies on the basis of prior studies. The table below shows the various variables and their respective measurements.

Table 2: Measurement of Variables

S/N	Symbol	Meaning	Measurement	Source
1.	VOTC	Voluntary Tax Compliance	morality, the imposition of fines, the severity of punitive measures, the general attitude in evading taxes, ineffective enforcement	Wanjiru (2020); Appah and Wosowei (2016); Aregbesola et al. (2020); Ndubula and Matiku (2021); Amaning et al. (2021)



			actions, the negative influence of tax evaders, and higher tax rates	
2.	EFTE	Electronic Form Tax Education	Internet access, the flexibility of the electronic system, use of radio, TV, emails, and mobile phones for taxpayer education, and online access to educational materials	Adekoya (2021); Amaning et al. (2021); Aremu and Siyanbola (2021); Ndubula and Matiku (2021)
3.	PFTE	Print Form Tax Education	newspapers, brochures, magazines, banner, flyers, books, or leaflet publications, easy accessibility of the publication, the quantum of educative information found in the published material, the publication's applicability, the publication's flexibility	Amaning et al (2021); Aremu and Siyanbola (2021); Ndubula and Matiku (2021)
4.	STSP	Stakeholders Sensitization Programmes	Seminars, workshops, tax clinics organized by tax authorities	Amaning et al. (2021); Aremu and Siyanbola (2021); Ndubula and Matiku (2021)
5.	TAFN	Tax Fairness	Horizontal equity, vertical equity, exchange equity and	Oladipo et al. (2022); Farrar (2011); Tadesse and Goitom (2014); Assfaw



			procedural fairness	and Sebhat (2019); Assfaw and Sebhat (2019); Oladipupo and Obazee (2016);
6.	TAPT	Tax Penalty		Omesi and Appah (2022); Oladipupo and Obazee (2016); Assfaw and Sebhat (2019)

Source: Authors' Compilation (2021)

Method of Data Analysis: This study used univariate (or descriptive) analysis, bivariate analysis and multivariate analysis (ordered logistic regression). The multivariate analysis used multiple regression that was guided by the model below:

$$VOTC = f(EFTE, PFTE, STSP, TAFN, TAPT) \text{-----} 1$$

$$VOTC = \beta_0 + \beta_1EFTE + \beta_2PFTE + \beta_3STSP + \beta_4TAFN + \beta_5TAPT + \varepsilon \text{-----} 2$$

Where:

VOTC= Voluntary Tax Compliance; EFTE = Electronic Form Tax Education; PFTE = Print Form Tax Education; STSP = Stakeholders Sensitization Programmes; TAFN = Tax Fairness; TAPT = Tax Penalty and ε = error term. The priori expectation: β_1 - $\beta_5 > 0$. E-view was applied in data analysis. The E-view p value shows what is the smallest level at which we would be able to accept the null hypotheses of a test. The study utilized a 5% level of significance; hence we conclude that the coefficient is significantly different from zero at the 5% level if the p-values is less than or equal to 0.05. If it is greater than 0.05 then we cannot reject the null hypothesis that the coefficient is actually zero at our 5% significance level.

RESULTS AND DISCUSSION OF FINDINGS

Table 3 presents the descriptive analysis of the variables under investigation disclosing the minimum, maximum, mean, standard deviation, skewness and kurtosis of the relationship between tax education, fairness and penalty on tax compliance behavior in MSMEs in Bayelsa State, Nigeria.

**Table 3: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std.D	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Std. Error	
VOTC	313	36.00	62.00	48.6989	5.23234	.012	.183	.148	.364
EFTE	313	38.00	62.00	50.5000	6.52293	-.113	.183	-.845	.364
PFTE	313	18.00	25.00	20.9943	2.00142	-.053	.183	-1.202	.364
STSP	313	25.00	70.00	40.0227	5.12245	.453	.183	6.363	.364
TAFN	313	30.00	48.00	40.9830	3.77885	-.786	.183	.890	.364
TAPT	313	48.00	64.00	53.0398	4.16428	1.238	.183	.525	.364

Valid N (listw) 313

Source: Source: SPSS Output of Field survey (2022)

The table shows that all the variables have a positive response growth rate as in indicated between the minimum and maximum statistical values. VOTC grow from 36.00 to 62.00 with a Mean value of 48.698 and Standard Derivation of 5.232, EFTE grow from 38.00 to 62.00 with a Mean value of 50.500 and Standard Derivation of 6.522, PFTE grow from 18.00 to 25.00 with a Mean value of 20.994 and Standard Derivation of 2.001, STSP grow from 25.00 to 70.00 with a Mean value of 40.022 and Standard Derivation of 5.1224, TAFN grow from 30.00 to 48.00 with a Mean value of 40.983 and Standard Derivation of 3.778, TAPT grow from 48.00 to 64.00 with

a Mean value of 53.039 and Standard Derivation of 4.164. The result also indicates skewness and kurtosis which shows the average level of consistency. The various statistics indicate that the variables have different distributions. The skewness and kurtosis statistics provide useful information about the symmetry of the probability distribution of various data series as well as the thickness of the tails of these distributions respectively. VOTC, STSP and TAPT variables had positives values of 0.012, 0.453 and 1.238 skewed shows that these variables VOTC, STSP and TAPT have a long right tail while EFTE, PFTE and TAFN are negatively skewness with a statistics values of -0.113, -0.053, -0.786 and -1.802 respectively. The result also indicates that ETFE and PFTE are negatively Kurtosis with statistics values of -0.845, and -1.202 respectively, which implies that the extent of flatness of the distribution is less than the normal curve while VOTC, STSP, TAFN and TAPT had positive kurtosis values of 0.148, 6.363, 0.890, 0.525 and 6.227 implies that the extent of flatness of the distribution is normal among these five variables.

**Table 4: Correlation Matrix**

	VOTC	EFTE	PETE	STSP	TAFN	TAPT	
Pearson Correlation	VOTC	1.000	.064	-.039	.047	.015	-.063
	EFTE	.064	1.000	.121	-.421	.148	.207
	PETE	.039	.121	1.000	-.174	.452	.275
	STSP	.047	-.421	-.174	1.000	-.148	.130
	TAFN	.015	.148	.452	-.148	1.000	.081
	TAPT	.063	.207	.275	.130	.081	1.000
Sig. (1-tailed)	VOTC	.	.201	.304	.268	.419	.204
	EFTE	.201	.	.055	.060	.025	.464
	PETE	.304	.055	.	.011	.056	.071
	STSP	.268	.060	.011	.	.025	.043
	TAFN	.419	.025	.056	.025	.	.143
	TAPT	.204	.464	.071	.043	.143	.

Source: SPSS Output (2022).

The correlation matrix from Table 4 showed the extent of the relationship between the dependent variable (VOTC) and the independent variables (EFTE, PETE, STSP, TAFN and TAPT). The correlation coefficient (0.064, 0.039, 0.047, 0.015, 0.063) shows a low positive correlation between voluntary tax compliance (VOTC) and electronic form tax education (EFTE), print form tax education (PFTE), stakeholders sensitization programme (STSP), tax fairness (TAFN) and tax penalty (TAPT).

Table 5: Coefficient of Determination (Model Summary)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.522 ^a	.649	.615	6.565

Source: SPSS Output (2022)

Table 5 shows the coefficient of determination (model summary) of the relationship between voluntary tax compliance and tax education, tax fairness and tax penalty in Bayelsa State, Nigeria. The coefficient of determination is applied to evaluate the adequacy of the fitted regression model. It provides the overall predictive power of the model. The result indicates that only 0.649 (64.9%) of the variation in the model has been explained by the independent variables in the model while (35.1%) remain unexplained by the model.

**Table 6: Test of goodness of fit for regression****ANOVA^a**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	374.616	5	62.436	2.449	.029 ^b
	Residual	7241.098	308	43.102		
	Total	7615.714	313			

Source: SPSS (2022)

Table 6 shows the test of goodness of fit for the regression (ANOVA), since $F_{cal}=2.449$ is less than $F_{tab}=2.100$, and also the p-value 0.029 is lower than the significance level 0.05, we conclude that the independent variables (tax education, tax fairness and tax penalty) does influence the prediction of the dependent variable (voluntary tax compliance) of micro, small and medium scale enterprises in Bayelsa State, Nigeria.

Table 7: Significant of B₁, B₂, B₃, B₄, B₅**Coefficients^a**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	35.922	14.540		2.471	.014
	EFTE	.255	.118	.043	2.161	.043
	PETE	.274	.101	.170	2.713	.031
	STSP	.276	.109	.083	2.532	.015
	TAFN	.273	.136	.049	2.068	.013
	TAPT	.263	.126	.023	2.087	.047

Source: SPSS (2022).

Table 7 discloses the significance of the relationship between voluntary tax compliance and tax education, tax fairness and tax penalty in Bayelsa State, Nigeria. The table shows that electronic form tax education (EFTE) is positively and significantly related to voluntary tax compliance in Bayelsa State ($0.043 < 0.05$); print form tax education (PFTE) is positively and significantly related to voluntary tax compliance in Bayelsa State ($0.031 < 0.05$); stakeholders sensitization programme (STSP) is positively and significantly related to voluntary tax compliance in Bayelsa State ($0.015 < 0.05$); tax fairness (TAFN) is positively and significantly related to voluntary tax compliance in Bayelsa State ($0.013 < 0.05$); and tax penalty is positively and significantly related to voluntary tax compliance in Bayelsa State ($0.047 < 0.05$).



DISCUSSION OF FINDINGS

Print Form Tax Education and Voluntary Tax Compliance: The result from the multiple regression analysis revealed a positive and significant relationship between print form of tax education and voluntary tax compliance micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria. This result is in agreement with the findings of Amaning et al. (2021), Aremu and Siyanbola (2021), Tetteh (2019), Adekoya (2021), Omesi and Akpeekon (2019), Gitaru (2017), Nurlis (2015) and Young et al. (2010) that print form of tax education influences the level of tax compliance. Nurlis (2015) noted that the implementation of print media taxpayer education will improve understanding of the tax laws, taxpayer consciousness, tax returns submission, payment awareness, loyalty and reduction in tax evasion. Gitaru (2017) also established that the effective and efficient use of newspapers and magazines will improve tax awareness, the filing of tax returns, and ultimately boost taxpayers' morale. However, the findings disagree with the study conducted by Tadesse and Goitom (2014) that the level of education of taxpayers is insignificant for the enhancement of voluntary tax compliance.

Electronic Form Tax Education and Voluntary Tax Compliance: The result from the multiple regression analysis disclosed a positive and significant relationship between electronic form of tax education and voluntary tax compliance micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria. This result is consistent with the findings of Amaning et al. (2021), Aremu and Siyanbola (2021), Adekoya (2021), and Gitaru (2017) that electronic form tax education influences voluntary tax compliance. Amaning et al. (2021) stated that an all-inclusive taxpayer education through the implementation of electronic medium would improve tax compliance among SMEs in the Techiman Municipality of Ghana. The tax authorities' adoption of electronic taxpayer education can offer the needed information about electronic tax payments systems including e-register, e-filing and e-payment to enhance tax compliance among micro, small and medium enterprises (MSMEs) (Palil, 2010). Also, Gitaru (2017) opined that the electronic medium of educating taxpayers (e-taxpayer education) positively impacts the level of voluntary tax compliance. However, the findings disagree with the study conducted by Tadesse and Goitom (2014) that the level of education of taxpayers is insignificant for the enhancement of voluntary tax compliance.

Stakeholder Sensitization Programme and Voluntary Tax Compliance: The result from the multiple regression analysis disclosed a positive and significant relationship between stakeholder sensitization programme and voluntary tax compliance of micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria. The result from this research concurs with the findings of Amaning et al. (2021), Gitaru (2017), Nurlis (2015) that sensitization of the citizens in any given society influences the level of tax compliance. According to Nurlis (2015), workshops organized by tax officials and interactions with taxpayers relating to tax issues culminate into improved tax compliance. Tetteh (2019) also found that sensitisation programmes support taxpayers to comply with the tax laws. Consequently, workshops organized by the tax officials for stakeholders are critical in educating citizens on tax compliance among taxpayers. These face-to-face communications allow for clarifications on any complex issue, which ultimately results in improved tax compliance (Amaning et al., 2021). However, the findings disagree with the study conducted by Tadesse and Goitom (2014) that the level of education of taxpayers is insignificant for the enhancement of voluntary tax compliance.



Tax Fairness and Voluntary Tax Compliance: The result from the multiple regression analysis disclosed a positive and significant relationship between tax fairness and voluntary tax compliance micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria. The result from this research is in tandem with the findings of Assfaw and Sebhat (2019), Maseko (2015), Gberegbe et al. (2015) and Paper et al. (2016) that fairness of the tax system positively and significantly influences the level of tax compliance behavior of citizens. However, the findings from this research disagree with the study of Tadesse and Goitom (2014) that tax fairness is not statistically significant with the level of voluntary tax compliance of citizens. Paper et al. (2016) in a study conducted in Rwanda and Geletaw (2017) in Ethiopia discovered that the fairness of the tax system is positively and statistically significant to affect the level of voluntary tax compliance in the formal sector.

Tax Penalty and Voluntary Tax Compliance: The result from the multiple regression analysis disclosed a positive and significant relationship between tax penalty and voluntary tax compliance of micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria. The result from this study is consistent with the findings of Sawyer et al. (2014), Paper et al. (2016), Waithira (2016), Oladipupo and Obazee (2016), and Yunus et al. (2017) that fines and penalties positively and significantly influence the level of tax compliances. Hence the greater the fines and penalty on taxpayers, the higher the discouragement for potential tax evasion. Aemiro et al. (2014) and Ahmed and Kedir (2015) showed that the penalty magnitude is significantly positively related to tax compliance intention; that is, when taxpayers perceive that there is a high penalty rate for any non-compliance, the level of non-compliance will decrease. However, the study contradicts the finding of Tilahun (2016) conducted in Ethiopia that offenses and penalties are not significant variables in explaining tax compliance attitudes. Also, Modugu and Anyaduba (2014) in Nigeria discovered that the tax penalties and enforcements negatively and significantly influence the level of tax compliance.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This study investigated tax education, tax fairness and tax penalty on voluntary tax compliance of micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria. The study anchored on the economic deterrence theory advanced by Allingham and Sandmo (1972) and survey research design, Taro Yamene model (1967) was used to determine a sample size of 313 respondents. Also Cronbach Alpha was employed for the reliability of data and univariate, bivariate and multivariate analysis was used from the responses collected from the questionnaire administered. The multiple regression analysis indicated that a positive and significant relationship between print form of tax education and voluntary tax compliance micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria; positive and significant relationship between electronic form of tax education and voluntary tax compliance micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria; positive and significant relationship between stakeholder sensitization programme and voluntary tax compliance micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria; positive and significant relationship between tax fairness and voluntary tax compliance micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria; and positive and significant relationship between tax penalty and voluntary tax compliance micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria. Hence, the study concluded that tax education, tax fairness and tax penalty influences the level of tax compliance behavior of micro, small and



medium enterprises (MSMEs) in Bayelsa State, Nigeria. Hence, the following recommendations are provided:

1. The government should educate taxpayers on how to keep revenue and expenditure records, and complaining procedures during injustice. Moreover, by using different print and electronic mass media, such as magazines, pamphlets, radio, TV, etc., tax payers will be more knowledgeable on the benefits of tax compliance for the development of the country.
2. The government should continuously use face to face awareness creation programs for taxpayers pertaining to how to fill tax returns, compute and pay tax liability to the tax authority timely.
3. The government through the relevant tax authorities should evaluate and re-integrate tax education programs feedback on tax behaviors to progressively increase revenue generation. Also tax authorities should evaluate the performance of tax education for further the development of MSMEs owners' level of tax compliance in Bayelsa State, Nigeria.
4. The government should promote fairness in tax policies and programmes that would ensure a high level of voluntary tax compliance from owners and managers of micro, small and medium enterprises (MSMEs) in Bayelsa State, Nigeria.
5. Tax fines, penalties and enforcement should be properly articulated to promote citizens and managers of micro, small and medium enterprises (MSMEs) to show commitment on voluntary tax compliance and revenue generation in Nigeria.

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APPENDIX

Voluntary Tax Compliance

S/N		Strongly Agree	Agree	Disagree	Strongly Disagree
1.	My tax obligations are honoured due to good morals.				
2.	There are severe punitive measures for tax evaders.				
3.	The penalties accompanying tax evasion deter me from evading taxes.				
4.	Non-compliance attitude of some taxpayers adversely affects other taxpayers.				
5.	Group norms and expectations influence tax compliance amongst SMEs.				
6.	When taxpayers perceive the enforcement actions of tax authorities as ineffective, they become less compliant.				

Source: Amaning et al (2021).

Electronic Tax Education

S/N		Strongly Agree	Agree	Disagree	Strongly Disagree
1.	The tax authorities educate us on our rights and obligations via TV, Radio, Mobile phones, WhatsApp, email, etc				
2.	There are regular updates from the tax authority on our rights and obligations as taxpayers through SMS.				
3.	The usage of email by the tax authorities to educate SMEs their rights and obligations as taxpayers is inappropriate.				
4.	Taxpayer education via the WhatsApp and Facebook does not receive much patronage				
5.	Taxpayer education through local dialect on TV/Radio is effective				

Source: Amaning et al (2021).



Print Media Tax Education

S/N		Strongly Agree	Agree	Disagree	Strongly Disagree
1.	The use of newspapers to educate SMEs about their rights and obligations as taxpayers is inappropriate.				
2.	The use of leaflets by the tax authority in educating SMEs about their rights and obligations taxpayers is appropriate.				
3.	The use of brochures by the tax authority in educating SMEs about their rights and obligations taxpayers is inappropriate.				
4.	The use of flyers by the tax authority in educating SMEs about their rights and obligations taxpayers is inappropriate.				
5.	Using of magazines by tax authority to educate SMEs about their rights and obligations do not lead to tax compliance				

Source: Amaning et al (2021).

Sensitisation Programme Tax Education

S/N		Strongly Agree	Agree	Disagree	Strongly Disagree
1.	Tax authority organises stakeholders sensitisation programmes for SMEs to create tax awareness.				
2.	The public is enlightened about the essence of honouring their tax obligations through awareness				
3.	SME taxpayer can file their tax returns with ease as a result of stakeholders sensitisation programmes.				
4.	Tax base and tax revenue have improved as a result of stakeholders sensitisation programmes organised by tax authority				
5.	The attitudes of taxpayers have due to the improved Taxpayer sensitisation has played a vital role				



	in changing the attitudes of taxpayers				
6.	As a result of the detailed nature of workshops and tax clinics, the public is provided with ample time in conceptualising ideas.				

Source: Amaning et al (2021).

Tax Fairness and Voluntary Tax Compliance

S/N		Strongly Agree	Agree	Disagree	Strongly Disagree
1.	It is fair for me to pay a similar share of income tax compared with other taxpayers earning an equivalent amount of income				
2.	It is fair for individuals with similar amounts of income to pay a similar amount of income tax				
3.	Two taxpayers who earn the same income should pay the same amount of income tax				
4.	Two identical taxpayers should pay the same amount in income tax				
5.	It is fair that high-income earners are subject to tax at progressively higher rates than middle-income earners				
6.	It is fair that middle-income earners are taxed at a lower rate than high-income earners				
7.	High-income earners should pay a greater share of income tax than low-income earners				
8.	I get fair value in government services in exchange for the income tax I pay				
9.	The income tax I pay is returned to me in social services received				
10.	The amount I pay in income tax represents the amount I receive in government services				
11.	The Nigerian tax authority procedures lead to consistent outcomes				
12.	The Nigerian tax authority does not take my interests into account				



13.	The Nigerian tax authority takes the circumstances of individual taxpayers into account when making decisions				
14.	The Nigerian tax authority makes sure to have the necessary information available to make decisions				

Source: Authors Compilation (2022)

Tax Penalty

S/N		Strongly Agree	Agree	Disagree	Strongly Disagree
1.	Penalty for failure to file tax returns increase my level of voluntary compliance to income tax.				
2.	Penalty for failure to pay tax increase my voluntary compliance to income tax				
3.	Penalty for understatement of tax liability improves my level of voluntary compliance to income tax				
4.	Penalty for the overvaluation of deductible property increase my level of voluntary compliance to income tax				
5.	Failure to pay estimated tax penalty improves my level of voluntary compliance to income tax.				