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**PLOT 559, MABUSHI DISTRICT, OFF AHMADU BELLO WAY,**  
**ABUJA, FCT.**



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**APRIL - JUNE, 2021**



**President/Chairman of Council, Prof. Benjamin C. Osisioma, FCNA**  
**delivery his speech at the 26th Annual National Conference, Abuja.**



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# **The Certified National Accountant**

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**EDITORIAL**

With the warmth of comradeship, the editorial board welcomes all our esteemed members, astute contributors and prolific and avid readers to this edition of our esteemed Journal- The Certified National Accountant, Volume 29, Number 2. This quarterly publication has come to stay as a critical professional mouth piece open to the teeming population of our members and the entire accounting professional bodies for learning and re- learning, researches, contributions to professional and other contemporary issues regarding our profession.

The editorial board painstakingly selects papers/articles that are considered capable of enriching and widening the knowledge horizon of our esteem members with the view of improving our professional practice, providing guidance to the young intents in the profession and contributing maximally as a profession to national development.

This edition promises to be an interesting and enjoyable read-ride through the pages of the CNAJ, especially, considering the well- crafted articles contained therein. The kick-off is taken by the well-articulated sub-theme 2 of the just- concluded 2021 Annual Conference of our noble professional Association- ANAN; this is followed by other papers on professional and emerging related issues. The menu of this edition is finally garnished and wrapped up with the 2021 National Conference Communique of our Association. Succinctly, the articles waiting to whet your appetite and fill your palate are:

- \* Exploring new opportunities for National building: Ethical Accountant as a strategic planner
- \* New venture creation in the midst of Corona Virus Pandemic in Nigeria
- \* Foreign remittance and human capital development in a developing African economy: A study of Nigerian economy (1987-2018)
- \* Macroeconomic variables nexus and human development index in Nigeria. (1986-2018)
- \* Environmental Disclosure and Sustainability Development in Nigerian Manufacturing Firms during COVID-19 period

- \* Ecological processing cost efficiency and petroleum output
- \* Communique of the 26th Annual National Conference of Certified National Accountants

I assure all our members and readers, this edition is a "de rigueur" reading and therefore welcome all on board this promising professional reading cruise.

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**CALL FOR PAPER**

The Certified National Accountant Journal (CNAJ) invites unpublished, original, empirical, professional and high quality research work written in English from interested and related scholars, researchers and practitioners for publication on quarterly basis. The research areas of the papers for publication include among others: Current Challenges and Emerging Issues in the Accounting Profession, Financial Accounting and Reporting, Forensic Accounting and Internal Control Systems, Cost and Management Accounting and Management Information System. Financial Management and Control. Energy Finance and Renewable energy. Taxation, Tax Policy and Implementation. Corporate Governance and Economic Development, Corporate Social Responsibility and Financial Reporting, Accounting Theory and Disclosure. Electronic Accounting, Environmental, Petroleum and Solid Minerals Accounting, Human Resource Accounting. Public Sector Accounting and Reporting. Budgeting System and Implementation Crisis, Contemporary Issues in Accounting. Auditing and Accounting Standards and Institutions. Accounting Ethnics, The Position of IFRS in the Nigerian Accounting Practice, Financial Reporting and the Nigerian Financial Regulations and any other accounting related areas.

**FORMAT OF THE MANUSCRIPT**

Manuscript should be written in English (if it is written in French, English translation must be included). The Manuscript should not be more *than 16 pages on A4 type paper with 1 inch margin for the top and bottom while the right and left hands margin should take 1.25 inches each*. The reference should be in the current APA style. Times New Roman with 12 font size of one and half line spacing are to be adopted. There should be separate cover page to contain the title of the work, the author(s)' full names and titles, addresses, institutional affiliation, phone number and e-mail address and abstract of the work should not be more than 300 words. The keywords of four to six words should also be included in alphabetical order.

Microsoft words should be used. The work should be structured into Introduction, Literature review. Methodology, Results, Discussion and Conclusion, References and Appendices (where applicable). The manuscript should be numbered consecutively on the bottom centre. Manuscript that does not conform to these guidelines may be returned to the author for compliance before review. All manuscripts are subjected to blind review by experts in the specialized area to ensure relevance, contribution, acceptance or otherwise before final necessary action by the Editorial Board of CNAJ.

**ONLINE SUBMISSION**

All manuscripts should be submitted electronically as a t t a c h m e n t t o o u r e - m a i l : [ananpubcommittee2021@gmail.com](mailto:ananpubcommittee2021@gmail.com). The journal is quarterly: submission of manuscript shall be acknowledged within two days. Authors should note that publication in CNAJ is free of charge as contribution of ANAN to the development of accounting research in Nigeria.

# Exploring New Opportunities For Nation Building - Ethical Accountant As Strategic Planner

Adebayo Paul Adejola, *FCNA, FCCSA, FCA, FCTI, PhD.\**

## A. Preamble

Nation building requires men, resources, technical knowhow and opportunities. No matter how promising plans to build a nation looks, no matter how empowered and knowledgeable her professionals are, without the opportunities to implement, the march towards nation building will be in abeyance. Nations envied in the globe today among the comity of nations were built by men and not ghosts. Nigeria is blessed with human and natural resources; the challenge is the efficient management of these resources.

## Nation Building

A nation is a group or race of people with shared history, tradition, culture, religion, and language. At the core of the concept, is the issue of a common identity.

Nation-Building can therefore be seen as constructing or structuring a national identity using the powers of the state. It seeks to enhance the capacity of state institutions to unify and develop people within the state to ensure long-term stability and viability.

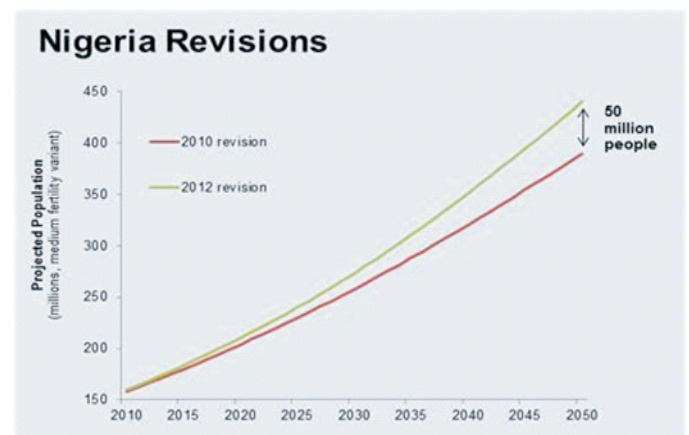
Nation-building describes the greater integration of state and society, as subjects become citizens, and citizenship leads to loyalty, national identity and integrity, and social homogeneity in the modern nation-state.

Nation building is the process in which a society of people with diverse origins, history, languages, cultures and religion come together within the boundaries of a sovereign state, establish a unified constitution and legal dispensation.

## Our Population

Nigeria is Africa's most populous country with over 200 million people.

By 2050 Nigeria is projected to be the world's third most populous country with total population expected to exceed 400 million.



## Our Youth Population

- i. Half of the population in Nigeria is aged under 19 years;
- ii. Youth population in Nigeria is larger than all European countries except Russia and Germany;
- iii. Nigeria's young and highly entrepreneurial population presents extraordinary advantages for future growth.

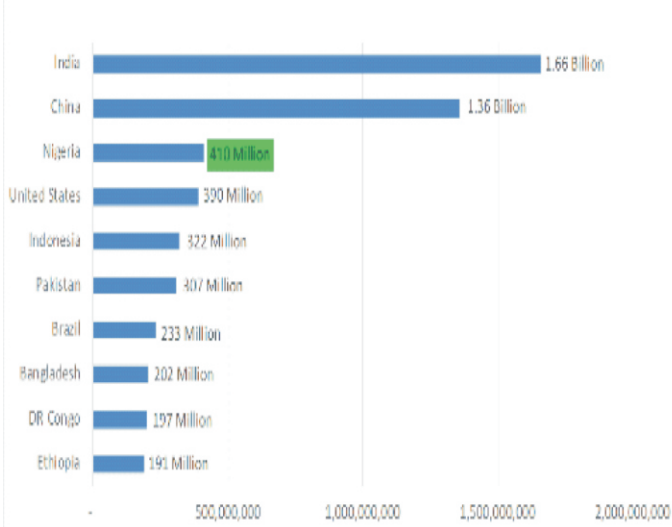
## Nigeria's Demographics

As of 3.15am today, Tuesday, September 6, 2021, based on World meter (real time world statistics) elaboration of the latest United Nations data, Nigeria is the 7th most populous country in the world with 212,461,392 million people (Males - 51%, Females - 49%); it is also Africa's most populous country. Nigeria currently accounts for 20% of Sub-Saharan Africa's population and 2.64% of the total world population.

*\*Adebayo Paul Adejola, is a Prof. of Accounting, Finance, Forensic Auditing & IT, Nasarawa State University, Keffi-Nigeria. Regional Rep., Association of Chartered Certified System Accountants.*

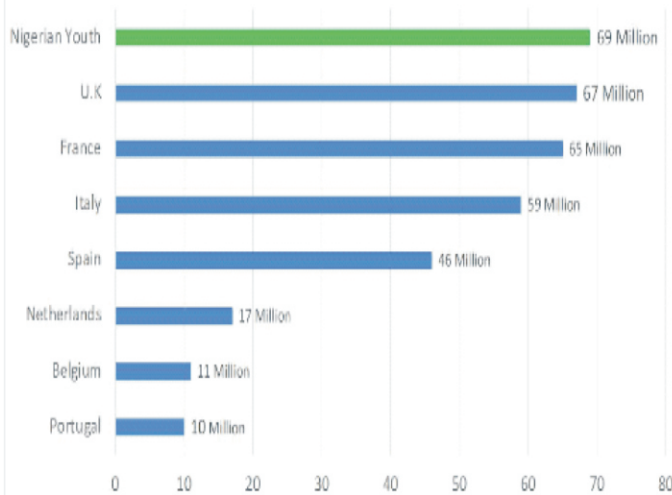


Top 10 Most Populated Countries - 2050



By 2050, Nigeria is projected to be the world's third most populous country with estimated population of 410 million

Nigerian Youth Population Vs Major European Countries



\* Youth population in Nigeria of above 69 million is larger than all European countries except Russia and Germany.

**Our Resources**

1. Abia - Gold, Lead/Zinc, Limestone, Oil/Gas & Salt
2. Abuja - Cassiterite, Clay, Dolomite, Gold, Lead/Zinc, Marble & Tantalite
3. Adamawa - Bentonite, Gypsum, Kaolin & Magnesite
4. Akwa Ibom - Clay, Lead/Zinc, Lignite, Limestone, Oil/Gas, Salt & Uranium
5. Anambra - Clay, Glass-Sand, Gypsum, Iron-ore, Lead/Zinc, Lignite, Limestone, Phosphate & Salt
6. Bauchi - Gold, Cassiterite (tine ore), Columbite, Gypsum, Wolfram, Coal, Limestone, Lignite, Iron-ore & Clay
7. Bayelsa - Glay, Gypsum, Lead/Zinc, Lignite, Limestone, Maganese, Oil/Gas & Uranium
8. Benue - Barite, Clay, Coal, Gemstone, Gypsum, Iron-Ore, Lead/Zinc, Limestone, Marble & Salt
9. Borno - Bentonite, Clay, Diatomite, Gypsum, Hydro- carbon, Kaolin & Limestone
10. Cross River - Barite, Lead/Zinc, Lignite, Limestone, Manganese, Oil/Gas, Salt & Uranium
11. Delta Clay, - Glass-sand, Gypsum, Iron-ore, Kaolin, Lignite, Marble & Oil/Gas
12. Ebonyi - Gold, Lead/Zinc & Salt
13. Edo - Bitumen, Clay Dolomite, Phosphate, Glass-sand, Gold, Gypsum, Iron-ore, Lignite, Limestone, Marble & Oil/Gas
14. Ekiti - Feldspar, Granite, Kaolin, Syenite & Tatum
15. Enugu - Coal, Lead/Zinc & Limestone
16. Gombe - Gemstone & Gypsum
17. Imo - Gypsum, Lead/Zinc, Lignite, Limestone, Marcasite, Oil/Gas, Phosphate & Salt
18. Jigawa - Butyles

- |  |   |
|--|---|
| <p>19. Kaduna - Amethyst, Aqua Marine, Asbestos, Clay, Flossper, Gemstone, Gold, Graphite, Kaolin, Hyanite, Mica, Rock Crystal, Ruby, Sapphire, Sihnite, Superntinite, Tentallime, Topaz &amp; Tourmaline</p> <p>20. Kano - Gassiterite, Copper, Gemstone, Glass-sand, Lead/Zinc, Pyrochinre &amp; Tantalite</p> <p>21. Katsina - Kaolin, Marble &amp; Salt</p> <p>22. Kebbi - Gold</p> <p>23. Kogi - Cole, Dolomite, Feldspar, Gypsum, Iron-ore, Kaolin, Marble, Talc &amp; Tantalite</p> <p>24. Kwara - Cassiterite, Columbite, Feldspar, Gold, Iron-ore, Marble, Mica &amp; Tantalite</p> <p>25. Lagos - Bitumen, Clay &amp; Glass-sand</p> <p>26. Nasarawa - Amethyst (Topaz Garnet), Barytex, Barite, Cassirite, Chalcopyrite, Clay, Columbite, Coking Coal, Dolomite/Marble, Feldspar, Galena, Iron-ore, Limstone, Mica, Salt, Sapphire, Talc, Tantalite, Tourmaline Quartz &amp; Zireon</p> <p>27. Niger - Gold, Lead/Zinc &amp; Talc</p> <p>28. Ogun - Bitumen, Clay, Feldspar, Gemstone, Kaolin, Limestone &amp; Phosphate</p> <p>29. Ondo - Bitumen, Clay, Coal, Dimension Stones, Feldspar, Gemstone, Glass-Sand, Granite, Gypsum, Kaolin, Limestone &amp; Oil/Gas</p> <p>30. Osun - Columbite, Gold, Granite, Talc, Tantalite &amp; Tourmaline</p> <p>31. Oyo - Aqua Marine, Cassiterite, Clay, Dolomite, Gemstone, Gold, Kaolin, Marble, Silimonite, Talc &amp; Tantalite</p> <p>32. Plateau - Barite, Bauxite, Betonite, Bismuth, Cassiterite, Clay, Coal, Emeral, Fluoride, Gemstone, Granite, Iron-ore, Kaolin, Lead/Zinc, Marble, Molybdenite, Phrochlore, Salt, Tantalite/Columbite, Tin &amp; Wolfram</p> | <p>33. Rivers - Clay, Glass-Sand, Lignite, Marble &amp; Oil/Gas</p> <p>34. Sokoto - Clay, Flakes, Gold, Granite, Gypsum, Kaolin, Laterite, Limestone, Phosphate, Potash, Silica Sand &amp; Salt</p> <p>35. Taraba - Lead/Zinc</p> <p>36. Yobe - Soda Ash &amp; Tintomite</p> <p>37. Zamfara - Coal, Cotton &amp; Gold</p> |
|--|---|

**Our Talents:**

1. Renowned mathematician late Chike Obi solved Fermat's 200-year-old conjecture with pencil and paper while the Cambridge mathematician John Wiles achieved same with the help of a computer working over a decade.
2. Philip Emeagwali won the 1989 Gordon Bell Award for his work in super-computing. Jelani Aliyu designed the first electric car for American automobile giant General Motors. Olufunmilayo Olopede, Professor of Medicine at the University of Chicago, won a McArthur Genius Award for her work on cancer.
3. Victor Olalusi recently graduated with such stellar performance at the Russian Medical Research University, Moscow, and was feted the best graduate throughout the Russian Federation.
4. Habiba Daggash, daughter of Senator Sanusi Daggash, graduated with a starred first class in Engineering at Oxford University.
5. Anne marie Imafidon earned her Oxford Masters in Mathematics and Computer Science when she was only 19. Today, she sits on several corporate boards and was awarded an MBE in 2017 for services to science.
6. Ufot Ekong recently solved a 50-year mathematical riddle at Tokai University in Japan and was voted the most outstanding graduate of the institution. He currently works as an engineer for Nissan, having pocketed two patents in his discipline. This is only the tip of the iceberg.



7. Emmanuel Ohuabunwa earned a GPA of 3.98 out of a possible 4.0 as the best overall graduate of the Ivy-League Johns Hopkins University. Stewart Hendry, Johns Hopkins Professor of Neuroscience, described the young man as having "an intellect so rare that it touches on the unique...a personality that is once-in-a-life-time".
8. Young Yemi Adesokan, postdoctoral fellow of Harvard Medical School patented procedures for tracking the spread of viral epidemics in developing countries.
9. An Accounting Icon with name, Rev. Canon Prof. Benjamin Osisioma graduated with a First Class in Accounting from University of Nigeria, Nsukka. With over 45 of his Supervisees elevated to the rank of Professor, selected as Man of the year by American Biographical Institute in 2001, listed in the Directory of Outstanding 2000 intellectuals of the 21st century and his contributions to the advancement of the science of Accountancy in Nigeria; the recognition of his contributions by a past President of Association of National Accountants (ANAN) led to his admission into the Council and succession line and currently, he is the President and Chairman of Council of ANAN.

Today, Nigerian doctors, scientists and engineers are making massive contributions in Europe, North America and Asia. Our brightest and best fled abroad.

If our system were not so harsh to talents, we would be celebrating a bountiful harvest of geniuses in all the fields of human endeavours.

**Our Challenges:**

We punch miserably below our weight in the hierarchy of world economics and politics. None of our institutions comes near the top 1000 in the World Universities League Table.

An estimated 47.3% or 98million of our people live in extreme poverty. Youth unemployment hovers around 55.4 percent. The poverty is heart-breaking.

Our per capital GDP is less than \$2,900 as compared to Singapore's\$58,902. We have a bad road carnage record in the world, with more than 20,000 lost to road accidents annually.

We wasted over \$18 billion on the power sector and our people still live-in darkness. The state governments are virtually bankrupt.

Leadership ineptitude, corruption, incompetence, lack of political will, economic mismanagement, lack of diversification, nepotism, improper planning, terrorism, lack of unity, religion intolerance, disregard for rule of law and lack of entrepreneurial acumen.

**B. New Opportunities For Nation Building**

In exploring new opportunities for nation building, it is important to note that no society is challenge free and any society that runs an unjust system will lose the opportunities for nation building.

No structure or constitution is perfect, but much of the success of a structure or constitution that is capable of benefiting and exploring new opportunities; depends largely on the capacity, vision and commitment of the leaders.

Nigeria has all it takes to be great including material, human, structure, constitution but seems to lack the right calibre of elite to propel her to greatness.

New opportunities with the potentials to work as building blocks in nation building are as follows:

- i. CAREER OPPORTUNITIES
- ii. BUSINESS OPPORTUNITIES
- iii. CORPORATE TRANSFORMATIONS
- iv. GOVERNMENTAL ADVANTAGE
- v. PROFESSIONAL OPPORTUNITIES
- vi. EDUCATIONAL TRANSFORMATIONS
- vii. TRANSFORMATION IN THE HEALTH SYSTEM
- viii. NEW DISCOVERIES AND INNOVATIONS/ TECHNOLOGICAL ADVANCEMENT
- ix. INVESTMENT OPPORTUNITIES

**Career Opportunities:**

- a) Increase in robotic manufacturing
- b) Smart Companies and automation organizations,
- c) Creating a high demand for Information technologically skilled staff,
- d) Data Analyst, Data Scientist, Artificial Intelligent/Machine learning experts, Software Engineers, Digital Accountants/ Auditors, etc. are in high demand,
- e) Becoming Digital professionals present great promises for nation building.
- f) Demand for platform providers, remote supervising applications and assistance, consultants, etc. to help in making the remote working effective. This means organizations should invest heavily in Information Communication Technology (ICT).
- g) Counselling, Psychologist jobs will be on the increase.
- h) High Demand for Health workers and paramedical.

**Business Opportunities:**

- a) People can also get into businesses that help companies plan and execute remote working as a form of business process transformation.
- b) Higher demand for, Hardware, software, Mobile Devices, and Accessories.
- c) As businesses increasingly work remotely, there is going to be a surge in the demand for hardware, devices, and others to make that model succeed. Hence, there will be an increase in demands for laptops, tablets, and other mobile devices. Businesses that sell these devices and accessories will experience increase demands.
- d) Production and selling of Personal Protection Equipment: Nobody knows how long COVID-19 will remain with us. As long as we live with it and at the same attempt to go back to our normal life there will be demand for PPE.
- e) Increase in e-commerce and Online Retailing.
- f) More business automation will mean more demand for companies in the business automation trade for the foreseeable future.
- g) Increase in demand for Baby products and baby care.
- h) Investment in cyber security, controls, and safety of companies' data and privacies.

- i) Upsurge in Market for Audio, e-books, and video recordings. Book writers changing from hardcopy to more online books writing.
- j) Abundant opportunities to learn any hand on skills like cooking, sewing, etc. Hence, business opportunity.
- k) Increase in Raw Food Retailing. COVID-19 has changed many people's habit of eating out for health consciousness and fear of infection, hence more people will want to continue eating home-cooked meals, thereby maintaining a high demand for food products at supermarkets and grocery stores which will have a direct effect on agribusinesses.
- l) Career Planning and Life Coaching Businesses. Career planning and life coaching will also be an area for businesses to explore. With millions of people out of job and the changing nature of work, there will be lots of people who need career advice and life coaching to help redirect the focus of their lives.

**Business Opportunities:**

Business Consulting Services. Business marketing and consulting will be on the increase. Millions of people will be starting their businesses either out of necessity or as new opportunities emerge. This would lead to a spike in demand for marketing and general business consulting services.

**Corporate Transformations:**

- a) Many companies are going to retain remote or Home Working and new companies will adapt it, having seen the advantages in terms of productivity, cost-saving, the impact on staff welfare and family life especially those in metropolitan cities like Lagos and Abuja.
- b) Greater Use of Automation in Industries. The Covid-19 lockdown has shown companies what can happen to businesses that are wholly dependent on humans to function. There will be more drive towards automation of business processes and activities as future business continuity and survival strategy.

**Governmental Advantage:**

- a) More homegrown goods and move towards self-reliance.

- b) Diversification and development of non-oil sectors.
- c) Focus on the health sector. More funding into healthcare and research.
- d) Changes and review of laws and legal frameworks to accommodate the new normal and business operations

#### **Professional Opportunities:**

- a) Technologically-Skilled professionals. With an increase in remote working and business automation, there will come a higher need for a better- skilled workforce. So, acquiring the relevant skills, competencies and professionalism will stand one out in the business environment of the future.
- b) To remain relevant in this new era, professionals must go digital. The era of analogy is gone! Online transactions and remote services will have to be audited, only accountants with necessary skills that will remain relevant. Members of ANAN are in for a great time if they align themselves with the rich resources and training at their disposal.
- c) Tax and Income Planning Consultancy. Governments, as part of recovery mechanisms, will become more aggressive with taxation and other revenue collection drives. This means tax consultants will be in high demand for years to come.

#### **Professional Opportunities:**

For legal practitioners, there is going to be an Increase in COVID- related Legal Disputes. There will be complaints and lawsuits aimed at addressing the many disruptions to contracts, relationships, and partnerships caused by the pandemic. It will be a business boom for lawyers.

#### **Educational Transformations:**

- a) Opportunities for upskills, access to online programs, Open courses. More online educational platforms like Coursera, Udemy, edX, Udacity, etc. will emerge. Whatever profession you maybe, demand for Information Technological skills is going to become a must. Hence, as Accountants, the demand to upscale, increase, and digitalize your skills can no longer be over-emphasized, if you must remain relevant. As professionals, those open courses also provide opportunities to acquire more skills.

- b) More Online Learning and Education Delivery. There will be an increase in the number of organizations and individuals providing remote education and training having being forced to online/digitalized teachings during the lockdown, many educational institutions have discovered the advantage and will like to expand it and make it another revenue- generating source.

#### **Transformation in the Health System:**

- a) Spike in Demand for Hospital and Medical Services. Many people would have suppressed minor medical conditions during the lockdown for fear of catching Covid-19 in hospitals or to avoid overloading the health system. After the lockdown, they will need to address their various medical challenges. This will be a boom for hospitals and related services.
- b) Increase in funding for Immunological and Medical Research. Governments, pharmaceutical companies, and other businesses are expected to be more generous with funding research that will make the world better prepared for future infectious disease outbreaks. Researchers in these fields will be happy with increased funding and donations.
- c) Increase in the need for physical and virtual counsellors, Psychologists and, family counsellor other health experts to take care of health issues, like depression, mental, emotional, and, other health issues.

#### **New Discoveries and Innovations/ Technological Advancement:**

- a) Emergence of AI (Algorithm) tools in the market. A boom for AI Developers.
- b) Demand for Applications That Enable Remote Working, Conferencing, and Remote Learning Platforms. There will be increased demand for security applications to enable and support remote working, conferencing, and remote learning in the post- COVID economy. Just as we have the emergence of indigenous Electronic payment platform providers, indigenous teleconferencing platforms will start to emerge to compete with platforms like Zoom, Skype, etc which will be more affordable and easier to support locally.



- c) As we are already seeing, African innovations in response to COVID- 19; like mechanical fumigators by Ooni of Ife, pedaled handwash and dispensing kit, production face mask, etc. More will emerge.
- d) Virtual Sports/Entertainment Events and Activities will increase. Imagine virtual concerts with choir remotely connected. More of home videos, cinemas, etc.
- e) Event Planners can introduce social distance and automated safe sanitary dispensers into their services which will attract sales. They can also plan remote or virtual parties.
- f) Online Workout Services: Many people to keep safe will prefer online coaching to go to gyms.

### **Investment Opportunities:**

- a) Emphasis will be more on investment and entrepreneurship rather than salary jobs as a result of the harsh experiences of salary earners during the pandemic.
- b) Investing in PPE: Demand for PPE will likely be high for a long time.
- c) Investment in the Stock market: Although many will advise against investing at this time, this is the best time to invest in proven good companies' shares. The stock prices are relatively low now, one can buy before they pick up again.
- d) Invest in real estate before the economy starts picking up. Be a risk-taker.
- e) Invest in multilevel marketing companies because most of them deal with organic products that are in high demand and it requires very little start-up capital.
- f) Investment in 21st Century businesses like Cryptocurrencies, Blockchain.

### **C. The Ethical Accountant**

Ethics require accounting professionals to comply with the laws and regulations that govern their jurisdictions and their bodies of work.

Avoiding actions that could negatively affect the reputation of the profession is a reasonable commitment that business partners and others should expect.

Accounting ethics is also an important subject matter because, accountants are the key personnel who access the financial information of individuals and entities. Such power also involves the potential and possibilities for abuse of information or manipulation of numbers to enhance company perceptions or enforce earnings management.

### **Practices in private or public domain are set out below:**

#### **I. Integrity Standards**

Integrity is an important fundamental element of the accounting profession. Integrity requires accountants to be honest, candid and forthright with a client's financial information.

Accountants are expected to restrict themselves from personal gain or advantage using confidential information.

#### **II. Independence**

Independence is an important ethical value in the accounting profession. Accountants must remain free from conflicts of interest and other questionable business relationships when conducting accounting services.

Failure to remain independent may hamper an accountant's ability to provide an honest opinion about a company's financial information.

Independence is also an important ethical value for auditors, and often, the accounting industry usually limits the number of services accounting firms or individual professional accountants can offer clients.

#### **III. Due Care and Competence**

Due care is the ethical value requiring accountants to observe all technical or ethical accounting standards.

Professional accountants are often required to review generally accepted accounting principles, as well as international financial reporting standards and apply this framework to a company's specific financial information.

Due care requires accountants to exercise competence, diligence and a proper understanding of financial information.

Competence is usually based on individual's education and experience.

#### **IV. Professional Responsibilities**

In carrying out their responsibilities as professionals, accountants are required to exercise sensitive professional and moral judgments in all their activities.

This principle directs accountants to work collaboratively with other accountants to improve both the image and practices of accounting.

Part of that responsibility includes public education, helping both clients and the general public to understand the role, standards and limitations of accountants.

#### **V. The Public Interest**

The code of ethics for accountants requires that professionals should accept the obligation to act in a way that will serve the public interest, honour the public trust and demonstrate commitment to professionalism.

This suggests that rather than advocating for one segment of what constitutes accounting public - clients and employers, creditors, governments, investors, and the business and financial community at large - accountants must strive to represent the collective well-being of all those parties.

In other words, when the overall public good is served by employing all the accounting guiding principles, the best interests of an accountant's client or employer get served in the process.

#### **VI. Professional Skills**

Accounting is a detail-oriented career that requires knowledge and skills to do the job correctly.

Mistakes lead to problems with investors, business partners, finance lenders and the Internal Revenue Service. It is imperative that anyone working at any level in accounting understands what is required of the job and how to execute it properly.

#### **VII. Confidentiality of Information**

Accountants see the 'good, the bad and the ugly' of a company or a person's financial situation.

Clients have a right to know that this information is kept in the strictest of confidentiality and is only shared with other professionals if consultation is required to address a specific problem. Failure to keep information confidential could result in bad publicity and possible defamation of a company or person.

#### **VIII. Fundamental Accounting Skills**

Fundamental accounting (and sometimes business) skills are the attributes accountants need when working in a business or accounting environment.

These skills include dealing with co-workers, managing time at work, attending meetings, presenting accounting information to managers or supervisors and corresponding with individuals outside the business.

These skills are important because the accounting environment is usually time sensitive and may be highly demanding at certain times of the year. Accountants must be able to create a proper workflow in their job and manage the amount of time spent on each project.

#### **IX. Interpretive**

Interpretive skills are an important part of the accounting skill set as well as ethical principles to subscribe to. Accountants must be able to prepare information, meet with other individuals to discuss financial concepts and interpret the impact of accounting decisions on the company.

Individuals may also need to review current accounting principles and determine how financial information should be handled by the company. The ability to review and interpret technical accounting standards helps the accountant present accurate financial information to internal and external business stakeholders.

#### **X. Professionalism and Demeanor**

Professionalism is a standard that goes beyond the office. Whether at a networking event or a party, maintaining a professional demeanor is good business.

Accountants should be law-abiding citizens who do not have bad habits and to avoid actions and inactions, that could put them in a risky position to

compromise client information. No one trusts an accountant who is careless, has a bad behavior and gives out any information that is bound by confidentiality standards.

### **XI. Honesty Standards**

Honesty covers a lot of different ethical standards that include integrity and professional conduct in all circumstances.

An accountant should always present the facts objectively and refrain from slanting information in a misleading way. An accountant who does not demonstrate a high level of honesty is not trustworthy and loses the confidence of clients.

### **XII. Objectivity**

Most accountants are partnered or licensed to advise clients on investing and financial services.

It is important that accountants maintain a fiduciary responsibility, seeking an objective solution and providing advice based on that objectivity.

It has been a rampant problem in the financial services industry that products were recommended to clients simply because they provided the highest compensation to the adviser.

Accountants must be objective (with independent viewpoints), especially since they are dealing with the financial details of the company.

### **D. Strategic Planning**

Strategic planning is an organization's process of defining its strategy, or direction, and making decisions on allocating its resources to pursue this strategy. It may also extend to control mechanisms for guiding the implementation of the strategy.

Strategic planning tools are techniques and models that business leaders use to determine where their business is at present, where they want it to be in the future, and which key metrics and initiatives they should track and pursue to achieve that target state.

#### **The basic steps followed in strategic planning are:**

- i. Assess the current environment and the organization's capabilities;
- ii. Formulate strategy;

- iii. Translate the overall strategy into an operational plan; and
- iv. Continually refine the plan through an ongoing feedback process

### **E. Tools in the Hands of the Ethical Accountant for Nation Building**

The role of the ethical accountant as a strategic stakeholder in nation building and national development is critical as accounting plays a major role in the sustenance of economic viability, political stability and social harmony in any given state or nation.

The reason for this obvious fact as regarding national development is not farfetched considering the enormous multi-sectoral dimension of Nigerian economic activities both in the public and private sector.

The ethical professional accountant comes in as the tool that measures the profitability and viability of 'a project' within an economic system.

#### **i. Budgeting and Budgetary Control:**

Time and money are scarce resources to any nation (including individuals and organizations), and so the efficient and effective use of these resources requires planning.

Planning alone, however, is insufficient. Control is also necessary to ensure that plans actually are carried out. A budget is a tool that professional accountants in their ethical considerations for nation building can utilize an instrument to plan and control the use of scarce resources.

A budget is a plan showing the company's objectives and how management intends to acquire and use resources to attain those objectives.

#### **ii. Corporate Governance:**

Corporate governance during the last decade has gradually come into the spotlight and became a matter of great interest and debate in the business environment and public circle in Nigeria.

The occurrence of corporate frauds and failures enhanced the interest, which has brought company



directors, accounting regulators, auditors, and in general the accounting profession into sharp focus.

The ethical accountant, no doubt has an additional strategic tool in corporate governance, as an instrument for nation building.

### iii. Transparency

Accountants in Nigeria, must not only be ethical in their approaches to accounting activities, but must subscribe to the greater need to adopt corporate transparency as a basic ingredient of projecting the image of the profession in Nigeria and unto nation building.

Corporate transparency as a strategic tool in this context, means the accessibility of information to stakeholders of institutions, regarding matters that affect their interests. Nevertheless, it is far more than the obligation to disclose basic financial information; transparency is a corporate value, reflecting the corporate culture.

### iv. Professionalism and updated skills:

Professional accountants in Nigeria who are desirous of strategically contributing to nation building must seek to maintain professional knowledge and skill at the level required to ensure that a client or employer receives competent professional service based on current developments in practice, legislation and techniques.

One pertinent question every professional accountant must seek to answer is whether a professional accountant is employable based on the current qualifications and training, does an accountant possess the professional skills required in discharging their duties?

### v. Preparation of Timely Financial Reports:

Accountants make it possible for business owners and custodians of national commonwealth to no longer be physically present with respect to activities and businesses of the organization for it to strive.

As such the expertise brought to the fore by the ethical and professional accountants in the preparation of financial statement, whether those of public and private sectors can serve as a veritable tool to further

drive the course of nation building, especially when this financial statement in line with the requisite IPSAS and IFRS standards and capable of giving a true and fair view of results of operations and statement of affairs.

### vi. Cost Saving Expertise:

There is an old adage that one does not get rich by earning and throwing away. Same goes to economic development. Costs must be minimized for the economy to grow and develop. It is the main role of accountants to lead the park of cost savers.

Therefore, the knowledge and expertise acquired from cost and management accounting, which can be brought to bear, is one of the most powerful tools that accountants need to provide the best advice on cost saving both at corporate or national governance layers.

### vii. Ability to fight fraud and corruption:

The world economy has lost so much from the activities of fraudsters.

If the activities of fraudsters are not put under check, economic development will be stalled as no meaningful economic development will take place in an environment where misappropriations and embezzlement is prevalent on regular basis.

The ethical accountant, who is trained in the areas of financial management and forensics, can contribute to nation building by being a strategic partner in the fight against fraud and corruption.

### viii. Rendering of Financial Services:

It is a well-known fact that economic development and growth will not be achieved if finances are not well managed.

Accounting can remain strategic and ethical influencers for nation building, through the rendering of financial services to business, the community and nation at large.

### ix. Investment Appraisal Function:

Without investments, the economy will not develop and grow. Investment appraisal is the process of evaluating an investment opportunity in the face of

both financial and other non-financial factors in order to determine the worthwhileness of the investment opportunity. This strategic function can be utilized effective as a tool for driving nation building by the contemporary and ethical accountant.

**x. Strategic Planning and Implementation:**

Accountants in their strategic roles help an economy to plan how to mobilize its resources because accountants utilize feasibility studies and reports in order to make informed decisions. If these activities of planning how to mobilize resources and utilize resources and ensuring the adequate reward system are in place, they will enable an economy to achieve the 3Es of- economy, effectiveness and efficiency.

**xi. Optimum Level Operation:**

Accountants generally help an economy to operate at optimum level. This is because accountants ensure that resources are obtained economically and used effectively and efficiently, thus representing an effective tool in the arsenals of the ethical accountant in executing the task of nation building.

**xii. Economic Integration Tool:**

There is a vital role of the accountant within the financial system, in promoting economic integration. By assisting the domestic country in having common economic policies, such as common trade, investment, commerce, transport co-ordination, employment legislation, pension, etc, the accountant can utilize the economic integration function as a strategic tool for nation building.

Overall, if Nigeria yearns for actualizing its dreams and improved living conditions, then such a future can hardly be decoupled from the profession of accountancy.

It is imperative for the contemporary accountants to stand up to the onerous challenges of becoming ethical in all respect, remain strategically focused by taking up the responsibility of achieving a Nigeria of our dream.

**F. Strategic Planning Tools and Models for 2021 and Beyond**

Strategic planning tools are techniques and models that business leaders use to determine where their business is at present, where they want it to be in the

future, and which key metrics and initiatives they should track and pursue to achieve that target state.

A few common examples of strategic planning tools include:

1. SWOT (Strengths, Weaknesses, Opportunities, Threats) Analysis.
2. OKR (Objectives and Key Results).
3. PEST (political, economic, socio-cultural, and technological) analysis.
4. Balanced scorecard.

**SWOT Analysis:**

In SWOT analysis, strategic planning teams brainstorm to come up with several strengths, weaknesses, opportunities, and threats for their business, then list those items in four quadrants.

For example, say your office cleaning service was considering expanding just before COVID-19. Using SWOT, you could come up with the following assessment:

- I. Strength: Efficient, established cleaning teams.
- ii. Weakness: Limited client base.
- iii. Opportunity: Expand services to home cleaning.
- iv. Threat: Market is nearly saturated with existing home cleaning services.

**Objectives and Key Results (okr):**

It is famously used for strategic planning by Google, Microsoft, and Intel, OKRs work by establishing a clearly defined goal (the objective) along with a handful of key pre-COVID-19 objective: Double the size of business post-COVID-19 objective: Increase business size by 150%.

**Key results**

Increase revenue by \$150k

Hire 10 new employees

Add three high-value clients

**Key results**

Increase revenue by \$100k

Hire seven new employees

Add two new high-value clients

**Pest Analysis:**

With PEST (political, economic, socio-cultural, and technological) analysis, strategic planning teams weigh socioeconomic factors into their business forecasting.

PEST analysis is also frequently modified to include

legal and environmental factors (PESTLE analysis). For PEST analysis to be used effectively, it helps to have representatives on the strategic planning team with a working knowledge of the component factors.

### Balanced Scorecard:

Balanced scorecard is a strategic planning model designed to incorporate both financial and non-financial (customer, internal, innovation) measures.

To use the balanced scorecard, strategic planning teams seek to answer the following four questions:

- i. How do customers see us?
- ii. What must we excel at?
- iii. Can we continue to improve and create value?
- iv. How do we look to shareholders?

Teams should answer those questions in four quadrants, linking them together where possible (similar to SWOT analysis), then translate those answers into operational strategy, individual performance goals, and business planning.

### G. Conclusion

There is barely any area of nation building we will look at that does not involve funds; hence the relevance of Accountants in the judicious allocation of the funds. As a strategic planner, the tools in his hand in exploring and successfully implementing new opportunities for nation building are germane in having a nation of our dream.

As a strategic planner, the ethical Accountant is expected to know ahead and see ahead to enable him be the head.

With professional ethics and strategic planning tools in his disposal, the ethical Accountant has the potentials to transform a land-locked country creating coastal waters to become a powerful State like Israel; he can transform a country like Japan devastated by World War II and devoid of natural resources, to become a leading industrialized nation; he has the potentials to convert a desert into an oasis, and a world-class tourist destination and international financial centre, like United Arab Emirates; the ethical accountant got what it takes to make a country transit from Third World to First within 20 to 30 years, like Singapore; he can transform a country from a backwater, commodity exporting country to become one of Asia Tiger's economies, like Malaysia.

The greatest need of the world today is the need of

men; men who can neither be bought nor sold, men who in their inmost souls are true and honest, men who are true to duty as the needle to the pole, men who will stand for the truth, even though the heavens fall. Our earnest prayer is that God should give us such professionals whose yeah will be yeah and whose nay will be nay.

We are the light the world is waiting for to beam our light on the darkness bed evilling our nation; we are the salt the nation is waiting for to preserve it from decadence. The world is awaiting our manifestations as the custodians and managers of the treasuries.

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# New Venture Creation in the Midst of Coronavirus Pandemic in Nigeria

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## Abstract

*Creating new venture has been a cyclical phenomenon especially in Nigeria where businesses were established by spirited, passionate and capable individuals, but many go into extinction within a short period of time. This incessant business failure exacerbated by the emergence of coronavirus disease in 2020 poses challenges to creating and sustaining new enterprise in the country. To address this tricky situation, the study adopted content analytical technique whereby the concept of new venture creation, identification, creators, dimensions, challenges and solutions to the problems of new venture creation in the midst of coronavirus disease in Nigeria were critically examined. The study revealed that new venture creation sagacity was drastically disrupted by the emergence of the bubonic plague, and that to create new venture requires unadulterated entrepreneur that has the wherewithal in terms of requisite skills resources, strategic knowledge and managerial acumen needed for creating and sustaining new venture. The study recommended that government should put in place emergent strategy that will forestall the disruption of the continued creation and sustenance of new ventures in Nigeria, and should at all time harvest and train genuine entrepreneurs who would be the pillars behind all new venture creation in the country. The implication of the finding is that individual, group and government that desire to create new enterprise must be entrepreneurially driven blended with apposite strategic initiatives and requisite skills required for creating and sustaining new venture.*

**Key words:** New Venture, Creation, Entrepreneurship, Skills, COVID-19, Nigeria

## 1. Introduction

In Nigeria industrial sector, creating new venture is a complex and multidimensional phenomenal process that has been of a historical trend in the annals of business formation. It is a thought-provoking exercise orchestrated by few but passionate, spirited, creative and capable individual (entrepreneur) who according to Hayes (2020) is an individual who creates new business, bearing most of the risks and enjoying most of the rewards. Entrepreneur is the pure and motivated individual (Desai, 2010); sometimes referred to as the risk taker (Cantillon, 1755); industrialist (Smith, 1776); creator of new economic enterprise (Say, 1803); change agent (Menger 1871); creative destroyer (Schumpeter, 1911); disrupter of status quo (Vesper, 1980); recognizer of opportunities where others see chaos and confusion (Kuratko & Hodgetts, 2004) and a radical thinker (Egwu, 2011), hence unadulterated entrepreneur is the solitary pillar behind all new venture creation triggered by motivation. Pure entrepreneur as one of the classifications of entrepreneurs grounded entirely on inspiration and growth driven is defined by Desai (2010) as one motivated by psychological and economic rewards by taking entrepreneurial activity for personal satisfaction in work, ego or value.

In entrepreneurship domain and other related fields, motivation as a concept describes the processes both instinctive and rational by which people seek to satisfy the basic drives, perceived need and personal goal which trigger human behaviour (Cole, 2004). Perceptibly and unequivocally, only an instinctive and motivated individual who is always plucky of business failure, with excellent combination of the requisite aptitudes and attributes can spot new business opportunity and utilize all available resources to pursue their goals with astuteness and enthusiasm to create and sustain new venture as an embodiment of entrepreneurship. Entrepreneurship is undeniably a matter of individual perception (Vesper, 1980), ostensibly demonstrated by immeasurable number of definitions that exist in the literature. For instance, Sarango-Lalangui, Santos and Hormiga (2018) declared that entrepreneurship is one of the most prosperous ways to create workplaces while Dollinger (2006) posits that entrepreneurship is all about the formation of new business enterprise, which is creating new venture. Low

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&MacMillan (1988) see entrepreneurship as the process of creating an innovative economic organisation or network of organisation for the purpose of gain or growth under conditions of risk and uncertainty. Fundamentally, creating new venture requires coordinated economic activists (entrepreneurs) as the fourth factor of production (Holt, 2006), who have the requisite skills either inherited or acquired with circumstantial proficiency in such areas as business knowledge, research, market responsiveness, information on competitive business environment, entrepreneurial orientation and philosophy, and personal competences to creating something new. In all efforts to creating new venture in Nigeria, observation indicates that the fundamental attributes required appear to be lacking in many individuals aggravated by the emergence and spread of coronavirus disease (COVID-19) in 2020 in the country. These deficient factors include: paucity of pure and motivated entrepreneurs, lack of entrepreneurial orientation and philosophy, fear of the unknown, unconducive business environment characterized by the activities of Boko Haram and Herders, Insurgency, Kidnapping, and Militancy that appear to forestall “few” but skilled, intelligent, ardent, creative, optimistic and serendipitous individuals who make bold by taking risks to launch new ventures.

On top of the indefatigable efforts of the few individuals in Nigeria to create new venture, both the Federal and State governments have infrequently complemented this laudable initiative by providing enabling environments such as training of the would-be new venture creators (pure entrepreneurs), giving financial support and fighting the prevailing COVID-19 pandemic that disrupted and hindered new venture creation across Nigeria. The whole scenario appears hysterically as many individuals consistently find it difficult spotting new business opportunity let alone creating new ventures while the extant ventures progressively fizzle day-in-day out.

This study, therefore, set by way of content analysis to explore and critically evaluate new venture creation in the midst of COVID-19 pandemic in Nigeria.

### **Concept of New Venture Creation**

New venture creation has been conceptualized by many writers in terms of new product, market or service businesses that are not known to particular firms, companies or customers previously (D’Aveni, 1995), synonymous with “new organisation” developed by the Strategic Planning Institute in 1978 (Weick, 1979).

Creating new venture is the process and ability of translating new idea into a business entity by pure entrepreneurs that can succeed and generate employment and gaining profit. It is all about entrepreneurship which is the formation of new business enterprise (Dollinger, 2006), and seen as a process of turning a new idea or technology into a business that can succeed and attract potential investors (<http://dictionary.Cambridge.org/dictionary/businessenglish/venture-creation>, 2012)

Infallibly, new venture simply implies originality and of a kind not seen before within the proximity. It may be novel to the locality or country where the firm is newly established, but may not be new to other countries of the world. For instance, a venture that is new in Nigeria may not be new in the United States of America where such venture has been in existence. Vijay (2003) argued that even if the venture is new to the firm and country, but not new to the world requires significant new learning for the company or firm to survive the prevailing global competition. Dollinger (2006) emphasized that the purchase of an existing firm or its transfer to new owners does not represent entrepreneurship new venture while Dougherty and Hardy (1996) posit that the common sense for calling some businesses new is that the entry is entirely new markets and requires much new learning about logistics, allocation channels, advertising etc. and that the development of an entirely new product requires similar new learning about design, development and manufacturing, hence new venture is entirely novel in all aspects of its creation. D’Aveni (1995) posits that new venture simply implies originality and of a kind not seen before within the proximity. It is a business created by a new product, service and/or a new market, new innovation whether or not it falls within the current concept of strategy adopted, whether or not it cannibalizes the existing sales. This can be within the existing business, commonly called corporate entrepreneurship, intra-corporate entrepreneurs (Vijay, 2003), or entirely different from the existing business. To create new venture requires pure entrepreneur who has the ability to recognize possible business initiative, be responsive to the whole processes and translate that to new idea generation as a first step towards business creation. However, it is not sufficient to have new idea, but there must also be compelling forces to creating new venture from the new idea that will translate to production of goods or services. The compelling forces invariably starts by individual taking decision to become an entrepreneur, the innovator that seizes the opportunity, mobilizes money and management skills, and takes calculated risks to open markets for new products, processes and services (UNPD, 1999). The decision to become an entrepreneur involves moving from one’s

present life condition of little or no economic risk to a new life condition of economic risk full of happiness and excitement (Udu, & Udu, 2015). In all situations, it would be agreed that an entirely new product and service for entirely new market constitute new venture (Markides, 1998).

### Identification of New Venture in the Midst of COVID-19 Pandemic

In Nigeria, numerous business opportunities abound in all nooks and crannies of the country, but the problems rest on the foresight, passion, ability, and persistence of individual or group to identify the opportunity and exploit them tenaciously without fear of possible failure. This situation was aggravated by the devastating impact of the emergence of coronavirus disease (COVID-19) that broke out in Wuhan, China in 2019 and spread globally like wild fire, Nigeria inclusive. The first case of COVID-19 was reported in Nigeria on the 27th of February, 2020 from a male foreigner from Milan, Italy who entered the country through Lagos State international airport (National Centre for Disease Control, 2020). The spread of the pandemic overwhelmed the country's economy arising from the unprepared lockdown of economic and social activities in many states in Nigeria. This unprecedented lockdown infallibly disrupted and instilled fear in many would-be new venture creators and created crisis, chaos and confusion in the economic system coupled and unwholesome government multifarious taxation.

Kuratko and Hodgetts (2004) posit that entrepreneur recognises business opportunities where others see chaos and confusion. In essence, new venture to be exploited exists as problem, crisis situation such as the prevailing dislocation of economic activities occasioned by COVID-19 and the hidden business opportunity that can only be identified by pure entrepreneurs who see where others cannot or seen as problem. Ama (2015) defines business opportunity as unsatisfied demand for goods and/or services which one can be conveniently served at a profit while Nwosu (2015) posits that business opportunity identifiable is a challenge to purposeful marketing action that is characterized by a generally favourable set of environmental circumstances and acceptable probability of success.

Essentially, business opportunities normally present themselves as problem relative to the individual's visionary ability, personal experience, awareness of the business and the power for action. In the midst of COVID-19, the ability to spot out new opportunity (idea conversion) invariably begins with the identification of problem or crisis (challenge) that needs to be tackled by

pure entrepreneurs. Egwu (2011) posits that the ability to convert an idea, however, quaint or outlandish, into a business opportunity is the plant upon which business creation rests while Hayes (2020) argued that through identification of a problem, an aspiring entrepreneur will be able to build a business opportunity around solving that problem. Business opportunity can be found in the areas of agriculture, transport, trade, services among others.

Udu and Udu (2015) pointed out that business opportunities in Nigeria could come from government economic policy, technological changes, crisis situation such as in the current health and economic sectors orchestrated by COVID-19 pandemic, natural disaster, discussion with the peers, over demand in areas of competences, advertisement in the media, failure of existing companies etc. Dollinger (2006) declared that entrepreneurial opportunities in the macro-environment can originate from unexpected, incongruous, process need, market structure, industry, demographics, changes in perceptions and new knowledge while Hisrich & Peters (1992) posit that business ideas and opportunities come from consumers, government activities, research and development, distributive channels and sundry activities.

In Nigeria, pure but 'few' entrepreneurs with exceptional ingenuity and innovative ability having the requisite nitty-gritty identify business ideas, surmount chaotic situations, convert them to business opportunity that results in new venture creation. Entrepreneur, the creative and innovative thinker moves beyond the identification of opportunity to its pursuit to a conclusion. Vesper (1980) sees entrepreneurs as pillars of industrial strength, the movers and shakers who constructively disrupt the status quo while Holt (2006) posits that entrepreneur tends to be "a strategic thinker" who recognizes changes and sees opportunities where others do not; displays the capacity for innovation (Schumpeter, 1934); needs for achievement (McClelland, 1961); risks taking propensity (Palmer, 1971); a displaced person (Shapiro, 1975); an aberrant "artist" with an "innate sense of impending change" (Hill, 1982), and all these distinguish entrepreneur (the identifier of new opportunities) from non-entrepreneur.

Unambiguously, the sole identifier of business opportunities whether COVID-19 or not, is the pure entrepreneur who dismantles all odds by taking all necessary actions to the whole process and converting that to new idea that subsequently translates to creating new venture. Carlin in 1977 cited in Nwosu (2015) declared that the only men who consistently cannot find opportunities to create venture are those who are unprepared to take risk and advantage of them. Potential



entrepreneurs strive to identify a possible business idea, pay attention to everything in the media that relates to venture creation ([Http://dictionary. Cambridge.org /dictionary/ businessenglish/venture-creation](http://dictionary.cambridge.org/dictionary/businessenglish/venture-creation), 2012). Emphatically, to identify new business opportunity in Nigeria may sometimes involve cannibalization of the existing businesses, products, markets and services to give chance for the creation of new ones expounded by Schumpeter in 1911 as 'creative destruction' when explaining entrepreneurs. In all circumstances, all those that avoid taking risks cannot in any way identify business opportunity let alone creating new venture.

### **Creators of New Venture in the Midst of COVID-19**

Creating new venture is predominantly all about entrepreneurship (Dollinger, 2006) which according to Khanka (2014) is an attempt to create value through recognition of business opportunity, the management of risk-taking propensity appropriate to the opportunity, and through the communicative and management skills to mobilize human, material and financial and material resources to bring a project to fruition. Kruger (2004) posits that entrepreneurship begins with action, the creation of new organisation including the antecedents to its creation inter alia: scanning the environment for opportunity, identification of the opportunity to be pursued, and evaluation of the feasibility and viability of the intending new venture.

In entrepreneurship domain are the pure entrepreneurs (Desai, 2010), the creators of new ventures who have the passion, aptitude and appropriate skills such as conceptual, analytical, technical, communication, human relations, managerial and even financial skills to willingly and doggedly assume risks of all dimensions and possibly cannibalizing the existing structure to create new venture. Emphasis has been placed on individuals who possess certain attributes as more likely to succeed as entrepreneurs than those who lack them (Onuoha, 1994; Obeleagu-Nzeribe, 1990); Rimler and Humphreys, 1980 and Baty, 1974). For instance, Aluko Dangote and Orji Uzor Kalu of Nigeria; Ted Turner and Bill Gate of America; Ardeshir Godrej and Ajay Mathur of India etc. possess distinctive attributes that made them successful venture creators in different fields of endeavor. One obvious fact is that no entrepreneurs create new venture without dint of hard-work, risk and through critical analysis of the environmental factors to unveil the opportunities and threats that could make or mar new venture creation.

In Nigeria, few but pure entrepreneurs are found in all professions such as industrialists, doctors, nurses, artists, lawyers, agriculturists, architects, managers etc. (Egwu, 2011), thus resulting in relative perception of the concept

'entrepreneurs'. For instance Hayes (2020) sees entrepreneur as the creator of new business bearing most of the risks and enjoying most of the rewards while Ogundele (2007) describes entrepreneur as the initiator and nurturer to growth of new business. Paradoxically, not all entrepreneurs are the creators of new venture as may be engrossed by unguided mind, for instance, "drone entrepreneur" normally refuses to adopt and use opportunity (Desai, 2010) while "Fabian entrepreneur" is always cautious and septic in practicing any change (Nwosu, 2015) and "criminal entrepreneur" does not have legal business activities (Udu and Udu, 2015) while "Obsessive entrepreneur" in the same vein get an idea into their head they cannot expunge (Zichermann, 2019), all these are entrepreneurs but cannot create new venture with the exception of pure entrepreneurs that can create new venture in the midst of COVID-19.

In creating new venture, is the pure and motivated entrepreneur with the composite skills, the consequential mix of many qualities and traits which include imagination, readiness to take risks, ability to bring together and put to use other factors of production, etc. (Desai, 2010). These qualities either congenital or acquired and aptly utilized by entrepreneurs will result in creating something new where others cannot be guided by 'entrepreneurial philosophy' which according to Udu and Udu, (2015) is a guiding principle for entrepreneur in accepting responsibilities for his actions or inactions in the pursuit for economic activities. Under this scenario, failure by pure entrepreneurs is regarded as an opportunity to start afresh more enthusiastically and astutely to overcome the obstacles arising from the process. Seth (2019) posits that entrepreneur is an individual who starts and runs a business with limited resources and planning, and is responsible for all the risks and rewards of his or her business venture while Nwosu (2015) asserts that entrepreneurs are those who give birth to new enterprises, new commercial activities and new economic sector. Indeed, unadulterated entrepreneur is a business magnate, catalytic agent of change and the creators of new ventures which according to Desai (2010) is a person or a group of persons responsible for the existence of new business enterprise.

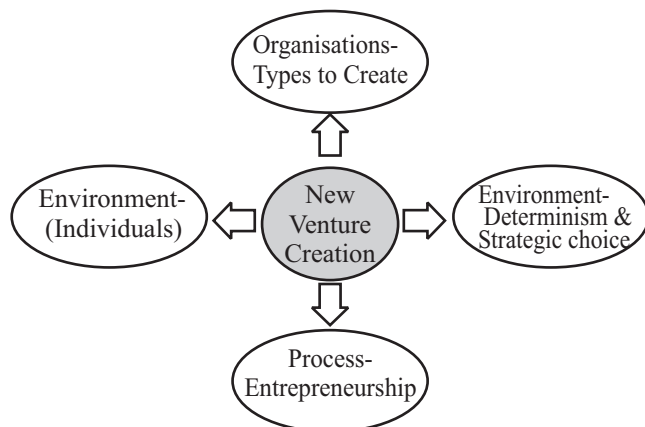
In the midst of COVID-19, pure entrepreneur with practical, theoretical and strategic knowledge is the pillar behind all new venture creation characterized by readiness to adopt flourishing innovation strategy through aggressive assemblage of information and analysis of result. With excellent thinking and all-encompassing ideas, pure entrepreneurs stirred by psychological and economic rewards, desire for self-fulfillment and with natural talents, create new ventures. This is in line with the



position of Gartner (1988) who stated that what distinguishes entrepreneurs from non-entrepreneurs is that entrepreneurs start new businesses and non-entrepreneurs do not, hence pure entrepreneurs are the creators of new ventures (Vega and Kidwell (2007), and the dismantler of obstacles within the environment in creating new enterprise.

### Dimension of New Venture Creation

New venture creation revolves around individual characteristics, environment, constraints and the organisation (Dollinger, 2006) while this framework lasts, it integrates four major perspectives of entrepreneurship as characteristics of individual(s) who start the venture, the organisation which they create, environment surrounding the new venture creation, and the process by which the new venture is started (Gartner, 1988 and Markides, 1998). In this context, the study adopted these four dimensions of new venture creation in terms of entrepreneurs as individuals, the process i.e. the antecedent to creating new venture, the prevailing environment-determinism and strategic choice, and the organisation to be created as depicted in Figure 1.



**Figure 1: Conceptual Framework for New Venture Creation**

Figure 1: depicts the four dimensions of new venture creation elaborated below:

(I) **Entrepreneurs:** - One of the foremost dimensions of new venture creation are the “individuals” (entrepreneurs) ‘with their distinctive ingenuity such as visionary ability and skills that come into play in the process of envisaging creating new venture. The entrepreneurs as individuals are characterized by the need for achievement (McClelland, (1961); locus of control (Rotter, 1966) and risk-taking propensity (Brockhaus, 1980) and strategic knowledge, and mentoring ability through their ingenuity and dexterity plays vital role in new venture creation. Entrepreneurs must first conceptualize business ideas

arising from creativity process in which new ideas are shaped into visions of useful products or services (Holt, 2006). The products or services arising from new venture created are the outcome of entrepreneuring venture by taking foremost risks in terms of equity, time, and /or career commitment to providing value for the society. Entrepreneurs cultivate new ideas, start enterprise based on new ideas, and provide value to the societal needs based on their self-determining creative abilities.

(ii) **Process:** - New venture creation starts with the process of locating business opportunity (Maidique, 1980; Vesper, 1980 and Cole, 1965); accumulation of resources (Vesper 1980; Kilby, 1971; Peterson and Berger, 1971); building an organisation (Leibenstein, 1968 and Schumpeter, 1911)); production of products or services (Maidique, 1980 and Peterson Berger, 1971); marketing the products and services (Vesper, 1980 and Schumpeter, 1911) and finally responding to government and the society (Kilby,1971). Idea generation is vital though not enough to have excellent new venture, but there must as well be a way to creating new venture from the new idea that would translate to production of goods or services. The process defines properly the concept of business startup, product-market study, financial planning, pre-start-up implementation strategies, and the appropriate location of the business (Shane, 1995; Dougherty and Heller, 1994; Stopford and Baden-Fuller, 1994; Guth and Ginsberg, 1990; and Galbraith, 1982). These are procedural so as to translate business idea and opportunity into visible and viable venture.

(iii) **Environment:** - This refers to the totality of conditions in proximity surrounding new venture creation which may be internal or external. Environment can be viewed from two perspectives (Gartner, 1985) as determinism, i.e. as an outside set of conditions to which the organisation must adapt to create new venture (Aldrich, 1979; Hannan and Freeman, 1977 and Aldrich and Pfeffer, 1976) and strategic choice that sees environment as a “reality” that organisations created is way of the selectivity of their own perceptions (Starbuck, 1976; Weick, 1979 and Child, 1972). For entrepreneurs to create new venture, they must be conversant with political, economic, socio-cultural, and technological ambiances. Emphatically, environment of business is ever changing and ever-evolving such that the only permanent thing about the business environment is change (Okafor, 2010), and this is characterized by complexities, turbulences and uncertainties capable of producing surprises and

shocks, for instance, the wave of COVID-19. In new venture creation, such environmental situation in some cases provides opportunities which may be in the form of new business, money, people and technology, and at times poses threats such as government policies, technological changes, socio-demographic and the ecosystem. Again, the threats could be government influences; over taxation, rivalry among existing competitors; pressures from substitute products; bargaining power of buyers; bargaining power of suppliers' resources in the environment; venture capital availability, and attitude of the area population and supporting services. These could make or mar new venture creation and should be guided jealously/appropriately to forestall pitfall.

- (iv) Organisation: - This is the systematic bringing together of independent parts for a united whole through which authority, coordination and control may be exercised to achieve a purpose, Dimmock 1977 cited in Desai (2010). Here, organisation emphasizes these critical sub-elements in terms of men with genuine business ideas, relevant materials, machines that are apt and the requisite amount of money to produce product or service according to plan. In new venture creation, entrepreneurs create different organisation of their choice with differing processes and material resources. This invariably reflects the relative nature and diversity of new venture creation.

### **Challenges of New Venture Creation in the midst of COVID-19 in Nigeria**

Creating new venture which is all about entrepreneurship in Nigeria is faced with a lot of defying factors that range from the outbreak of COVID-19, personal characteristic such as self-confidence, entrepreneurial philosophy, task-result orientation, risk-taking propensity, leadership quality to visionary ability and creative ideas. For instance, Vesper (1980) declares that some people may have the creative talent to generate new ideas but lack the ability to organize resource while Udu and Udu (2015) opined that others may have a compelling need to achieve but lack the resourcefulness to create a new venture. In the same vein, others may be lacking entrepreneurship orientation such as initiation of ideas, having entrepreneurial philosophy, proactive and innovative ability, competitive aggressiveness and autonomy etc. Schillo (2011), and problematic environmental factors such as political, business climate etc. Ihugba, Odii, and Njoku (2013) argued that development of personal qualities such as creativity, risk taking propensity, responsibility, technical and business skill are still not adequate in Nigeria. Specifically the challenges facing new venture creation in Nigeria include:

- (i) Lack of entrepreneurship orientation: - In Nigeria, majority of the would-be new venture creators lack entrepreneurship orientation and philosophy that guide in new venture creation. Until this phenomenon is aptly addressed by way of inculcation, indoctrination and acculturation of entrepreneurship norms, the idea of creating and sustaining new venture will always be limited in the hands of substantial few.
- (ii) Not visualizing novel business ideas: - The inability of many individuals in Nigeria to envisage viable business idea as a prerequisite for creating new venture especially for non-pure entrepreneurs appears to be a fantasy in Nigeria. Beside this trend, the relevance of vision is often ignored by many people as emphasized by Holt (2006) that a good way to fail in a new business is to start without a clear vision because it encompasses values that an entrepreneur will provide for customers.
- (iii) Fear of the unknown: - Many would-be new venture creators in Nigeria are gripped with fear when contemplating starting one especially with non-entrepreneurs. Egwu (2011) posits that many have planned for years to be free from paid employment and start their own companies but never did because of fear of failure. Uncertainty of the future in the business environment is very high in Nigeria exacerbated by COVID-19, the antecedents of incessant mortality rate of businesses and the prevailing insecurity across the country.
- (iv) Political climate: - The unconducive political climate prevalent in Nigeria masterminded by disgruntled politicians who are bent on winning election at all cost in most cases strangulates the laudable business initiative conceived by pure entrepreneurs to creating new venture for fear of destruction by political opponents and other associated pitfalls.
- (v) Interminable Criminal activities: - In Nigeria, the continued militancy in the Niger Delta and Insurgency, Boko Haram, banditry, herders activities, Radical Islamic State of West African Province (ISWAP) and Kidnapping ravaging the Northern part of the country have gradually pervaded the whole country and these constitute big threat to new venture creation in Nigeria.
- (vi) Raising seed capital: - Initial capital required for starting new venture is still not always readily available to pure entrepreneurs in Nigeria where it is mostly needed. In some cases government often promises to assist, but never did or that it comes late when given thereby resulting in fund diversion.

- (vii) Getting a good location: - Ogbu (2011) emphasized that business should be located in a particular place where all the factors which favour its establishment exists, but this is not always the case. Some people established new venture without concrete feasibility and possibility factors taken into consideration, and this sometimes culminate in venture failure.
- (viii) Finding good teams and employees: - The creator of new venture often operates in isolation of post idea generation but this requires team of experts with the requisite skill to assist in actualizing the dream of establishing new venture.
- (ix) Finding good customers: - The ability to identify potential customers by the would-be creators of new enterprise that would be patronizing the product of the new venture is a very big challenge in Nigeria. This is made worse by intense competition and internet that have made the market a global village thereby making it more expensive for new venture creators to compete favorably at the national level, and this often asphyxiates the novel ideas of creating new venture.
- (x) Government regulations: - In Nigeria, government as a regulatory authority in such areas as industry establishment, statutory provisions, legislation and high taxation policies often undermine the initiative for creating new venture when negative impacting policies are made that only favours government.
- (xi) Recession in the Economy: - The downturn in the economy as a result of bad governance in Nigeria resulted in economic meltdown, EndSARS protest across the country and the prevailing outbreak of coronavirus in 2020 that disrupted and dislodged economic activities in many States of Nigeria. With these ugly situations, it becomes improbable for entrepreneurs to pursue any idea of creating new venture but would prefer to stay action for conditions to recuperate before embarking on it, except in a high sensitive area and the resilience of pure entrepreneurs
- (ii) Eradication of fear among individuals and groups- Fear is the first step towards activity failure in all situations and this is the devil's workshop orchestrated by the paucity of entrepreneurs, and until these ugly syndrome is eliminated among individuals, no meaningful venture will be created let alone sustaining it.
- (iii) Appropriate government support: - This support should be in the form of grants, provision of social amenities, moderate taxation, and encouragement among others to motivate individuals who have the passion to establishing new ventures.
- (iv) Training: - Training, a legitimate weapon for creating passion and interest arousal among individuals need not be neglected in all situations. Efforts should be intensified in this regard to assist breed formidable entrepreneurs who would able to withstand all odds in all situations such as the outbreak of the COVID-19 presently ravaging the country.
- (v) Creating entrepreneurial team: - A conglomerate of experts makes better decision and management as substantiated by the adage that two heads are better than one. The venture creators need to incorporate other experts in the process of venture creation in order to make successful result.
- (vi) Ability to bear risk: - Emmanuel (2010) posits that an entrepreneur must possess entrepreneurial qualities which include the psychological and mental ability to bear risks and resist failures, being self-confidence, initiative and personally responsible for their actions or inactions.
- (vii) The hurry-hurry mentality of some individuals to establish new ventures especially where and when there is availability of fund without concrete perceptions of desirability and feasibility of the venture to be created need to be reversed in its entirety as this may result in failure.
- (viii) Institutionalization of apt strategy: - Putting in place emergent strategy that could forestall incessant venture failure is very vital, as the sustenance of already established ventures will invariably stimulate and encourage more entrepreneurs creating new enterprises.

### Possible Solutions to the Challenges of New Venture Creation in Nigeria

The problems inhibiting new venture creation and its sustenance in Nigeria could be solved using the following mechanisms:

- (i) Inculcating entrepreneurial spirit: - In Nigeria, imbibing the spirit of entrepreneurship orientation and philosophy that guides in new venture creation is highly required. Until this virtue is aptly addressed by way of indoctrination and acculturation, the idea of creating and sustaining new venture may continuously be limited in the hands of few.

### Findings

Based on the content analysis of the antecedents of new venture creation in Nigeria, the study unveiled that the



challenges hinge on privation of entrepreneurship orientation and philosophy, and environmental factors exacerbated by the outbreak of COVID-19. These resulted in the fear of the unknown orchestrated by incessant business failure, interminable criminal activities such as Insurgency, Boko Haram, banditry, herders activities and lack of appropriate training, inability to identifying business opportunity, political antagonism, inadequate government grants, multiple taxations, unconducive business climate, hurry-hurry mentality to establishing new venture without concrete perceptions of desirability and feasibility of the venture to be created.

### Conclusion

Based on the findings, the study concluded that the challenges facing new venture creation in the midst of COVID-19 in Nigeria are: lack of appropriate training that is highly needed to breed pure and motivate entrepreneurs who will be immersed with the visionary ability to spotting latent opportunities. Again, the study concluded that the incessant failure of the extant businesses was as a result of privation of genuine entrepreneurship orientation and philosophy, deficiency in administrative ability of the new venture creators, the devastating impact of COVID-19 pandemic, fear of the unknown, over taxation, inadequate government grants, the prevailing political antagonism in the country and unconducive business climate characterized by militancy and insurgency in the Niger Delta, herders activities, Boko Haram and the radical Islamic State of West African Province (ISWAP) operating in the Northern part of the country are individually and collectively forestalling new venture creation in Nigeria.

### Recommendations

On the strength of the above conclusion derived from the content analysis, the study recommended that:

- (i) Government at all levels should appropriately embark on aggressive identification and practical training of would-be new venture creators to enable them acquire the requisite expertise relevant to entrepreneurial activities as this will instill in them the apt entrepreneurial orientation and philosophy and as well put in place emergent strategy that will forestall the disruption of the continued creation and sustenance of new ventures.
- (ii) Financial support which is one of the fundamental ingredients for new venture creation should be made available by government as grants to genuine entrepreneurs at the appropriate time to enable them utilize the fund for creating new venture.

- (iii) Conducive business climate such as industrial location, electricity, and water among others should be provided and avoid unnecessary and over taxation to encourage the new venture creators to actualize their dreams.
- (iv) The political antagonism prevalent in the country especially at the Federal and State levels should be addressed by the government with relevant laws to avoid a situation whereby the property of political opponent acquired years back are destroyed by the incumbent in the name of politics.
- (v) The problems of fear orchestrated by incessant business failure, Militancy, Insurgency Boko Haram, herders' activities, radical Islamic State of West African Province (ISWAP), kidnapping and killing prevalent in the country should be tackled by government with genuineness and clear intent to defeating them to create atmosphere conducive for creating new venture.

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# Foreign Remittance And Human Capital Development in a Developing African Economy: A Study of Nigerian Economy 1987-2018

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## Abstracts

*The savings gaps in most developing economies orchestrated by their low incomes potentials necessitate their consistent quest and drive for international capital inflows to supplement the needed savings for investment purposes. Foreign remittance, a variant of international capital inflows has been used by countries in this regard. Foreign remittance refers to funds that are transferred by migrants to their home countries. They represent the personal savings of workers and families that are repatriated back home to improve the well being of their families and in the process, enhance their home economies. Remittances from citizens of developing and less developing countries provide valuable source of capital to fill the savings void in the countries. The conflicting findings in extant studies on the relationship between foreign remittance and human capital development necessitated this further study. The broad objective of this study is to determine the effect of foreign remittance on human capital development in Nigeria. The narrow objectives are to explore, determine, assess and examine the effects of remittances by migrant workers, international aid workers, military personnel abroad and embassy workers. The study adopted an ex-post facto research design and sourced data were analysed using Descriptive Statistics, Augmented Dicker Fuller tests for unit roots, Auto regressive Distributive Lag (ARDL) and Diagnostics tests. The study concluded that foreign remittance has short run positive and significant effect on human capital development and it is recommended that government should implement best in class performance reward and value system that would enhance the retention capacity of skilled human capital in Nigeria. This will not only discourage brain drain but also engender better economic growth and human capital development.*

**Keywords:** Foreign Remittance, Human Capital Development, Economic Growth, Economic Development, Migrant workers, International aid workers, Embassy workers and Military personnel abroad

## Introduction

According to the World Bank (2019), global remittances which include inflows to high income countries reached USD689billion in 2018 up from USD633billion in 2017. Out of this, USD72billion was received by African countries. As a recipient, Nigeria topped African countries at USD22billion and was also ranked among top five countries in world global remittance indicator. Puri & Ritzema (1999) defined remittances to be the fraction of a migrant workers income sent from the country of employment to the home country. Larsson & Angman (2014) defined remittances as money-transfers, earned by workers abroad and sent to persons in their country of origin. Tewolde (2005) as cited by Oluwafemi & Ayandibu (2014) saw remittances to be both monetary and physical resources that are earned and acquired by migrants as they ply their trade abroad. These are what make up what they send to their loved ones back home in their home countries. Human capital on its part refers to the abilities and

skills of human resources of a country, while human capital development refers to the process of acquiring and increasing the number of persons who have the skills, education and experience that are critical for economic growth and development of a country's economy (God'stime & Uchechi, 2014). Investment is an important factor for ensuring economic growth and welfare of the citizens as a nation's state of development depends largely on the quality of its workforce. By international measure, Nigeria is rated as a "less developed country" because its gross domestic product is low with poor standard of living, low literacy rate, poor health, high infant mortality rate and it is not surprising that economic growth and development is one of Nigeria's goals (Adegboye, Ogbebor, & Egharvba, 2014).

This study is anchored on the Pure Altruism and x-rays that the motive for a migrant remitting money

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home is out of his/her concern for the well being of his family and associates in his or her home country. This theory is anchored on three basic assumptions. Firstly, that remittance is a function of the immigrant income; secondly, that remittance is a function of the level of income of the migrant family and associates in the home country and thirdly, that remittance is the level of attachment to the family member by the migrant.

### Review of Related Literature

The human development index (HDI) measures the standard of living and provides a useful tool for a comparative evaluation of nations in terms of several indicators including education, literacy, average life expectancy and life quality.

It is very germane to expose and espouse economic growth in this study as it is practically impossible to carry out a study on foreign remittance and human capital development without discussing economic growth. Human capital development has tremendous impact on economic growth. Governments normally ensure that adequate capital resources are allocated to human capital development in order to enhance economic growth. Economic growth is the process by which a nation's wealth increases over time. It can also be referred to as the increase in per capita gross domestic product or other measures of aggregate income. It should be noted that economic growth is necessary but not a sufficient condition for development to take place.

Economic development refers to the process by which the economic well being and quality of life is improved. It seeks to achieve long-term sustainable development in a nation's standard of living, an increase in the per capita income of every citizen, adjusted for purchasing power parity (Porter, 1998). Furthermore, it encompasses progress in providing livelihood on a sustainable basis, access to education and basic healthcare for the majority of the population (Belshaw & Livingstone, 2002). There are different indicators that economists use to measure the level of economic development in a country. These include declining poverty rates, increasing literacy rate, declining infant mortality and increasing life expectancy.

International aid workers refers to workers from

different countries working in a foreign country as aids to humanitarian agencies.

Embassy workers refers to personnel of a particular country serving as staff in their embassies or high commissions in a foreign land.

Military Personnel abroad refers to the members of the military of a country serving in the country's embassies or high commissions abroad or serving in one military peace keeping mission or intervention abroad.

Migrant workers refers to citizen on a particular country living and working abroad on his own.

### Theoretical Framework

The theoretical framework of this study is anchored on the Optimist and the Pessimists schools of thought. The Optimist School of Thought propagated the classical and neoclassical theories in their school of thought. They opined that migration would lead to transfer of investment capital from advanced economies to developing economies (De Haas, 2007). This investment transfer would allow developing economies to be exposed to advanced technology, modern education and knowledge, free and democratic ideas. According to the proponent of this school of thought (Papademetriou, 1985), the theory states that industrialization and transfer of capital on a large scale can lead to economic development for developing economies. The general assumption is that remittance inflows, experience, skills and knowledge gained by migrant workers abroad will most likely improve development in recipient countries. Therefore these migrants are viewed as operators of progress, innovation and speculators.

The Optimist School of thought is however negated by the Pessimist School of thought which is supported by the structural and dependency theories. The theories proposed by Frank (1966) states that the resultant effect of migration would be reliance on the worldwide political monetary frameworks tyrannized by the influential Western States. According to this school of thought, migration is deleterious to developing economies and also the very cause of poor development in these economies. The pessimists



argue that migration makes the development of human capital seem unnecessary and also lead to the collapse of traditions and customs in developing economies. This would result in the development of acquiescent, remittance-dependent and impoverished countries. The pessimists likewise contended that remittances weren't really being expended on productive activities but utilization on wasteful investments like housing. This increase in consumption was reported to provoke inflationary pressures. They turned the optimists' view upside down.

### Empirical Review

The researcher reviewed various literatures to analyze the effect of foreign remittance on human capital development in Nigeria in order to establish their relationship. Samer & Ala' Bashayreh (2017) investigated whether remittances had a significant role in promoting economic growth in Jordan or not. For this purpose the study tested the unit root for the variables and applied the Co-integration Test besides the Error Correction Model using annual data for the period 1972 to 2016. Results revealed that, there was a stable long run relationship between GDP per capita and remittances in Jordan as well as in the short run. As a result, the study confirmed the positive significant effect of remittances on economic growth.

Peter & Mabel (2018), applied descriptive and quantitative techniques to evaluate the macroeconomic impact of remittances on economic development in Nigeria, specifically the study used Autoregressive Distributed Lag (ARDL) model to estimate the model. Based on the results, the positive coefficient of remittances implied that increased levels of remittances inflow into the country will spur economic development.

Okodua (2010) studied twenty one selected countries of Sub-Sahara Africa (SSA). the study employed the system Generalized Method of Moments (GMM) estimation technique within an extended neo-classical growth model framework on a set of three linear dynamic models in order to evaluate the relationship or the connection between the growth of output and remittances, remittances and domestic investment and remittances and external trade balance (proxied by real external balance). The period

in the study spanned from 2000 to 2007. The findings of this study were that, remittances had a significant negative impact on output growth, domestic investment and external trade balance. This implied that remittances were not put to productive uses; it crowded out domestic investment and depressed trade balance in these SSA countries.

Minta & Nikoi (2015) analysed the impact of migrant remittances on socio economic development in Ghana. They made use of regression analysis as well as annual time series data for the period 1992 to 2012 with emphasis or focus on growth and poverty. The variables of the study were economic growth (measured by GDP), remittances, HDI, poverty and inflation. The study found remittances and HDI to be positively related to economic growth in Ghana while inflation negatively influenced it. However, remittances did not have a huge impact on the reduction of poverty in Ghana. The study therefore concluded that remittances had both positive and negative impacts on the growth of Ghana's economy, and as such, migration in Ghana can be said to be a brain gain but not a brain drain.

Adenutsi (2010) analysed whether international remittances promote human development in poor countries: evidence from Sub Saharan Africa (SSA). He made use of Data for the period 1987-2007. Remittances were used as the dependent variable while investment, human capital, international trade openness, consumer price index and government expenditure were used as the independent variables. It was found that remittances had marginal positive effect on overall human development in SSA.

Bayar (2015) conducted a study on the impact of remittances on the economic growth in the transitional economies of the European Union. The main aim of the study was to appraise the causal relationship between variables like Real GDP per capita growth, personal remittances inflows and net Foreign Direct Investment, for the period 1996 to 2013. The study employed a panel regression and cointegration technique in determining the causality among the variables. A unidirectional relationship was observed from remittances to economic growth at one period lag, and at two and three lags from FDI net

inflow to economic growth. Consequently, the level of income growth in these countries can be hugely tied to the net inflows of remittances and FDI.

Beatrice & Samuel (2015) investigated the effect of remittances on economic growth in Kenya from 1993 to 2013, using the Granger causality test and the OLS estimation techniques. The variables in the model included; population, investment, openness, enrolment, inflation, net export, government consumption and remittances. The study found out that remittances impacted positively on economic growth, and also, a bi-directional causal relationship was established between remittances and economic growth. Apart from secondary enrolment and inflation which were both negatively related with economic growth, others impacted economic growth positively and significantly.

Adeyi (2015) in his study on remittances and economic growth in Nigeria and Sri Lanka examined the causal relationship between remittances and economic growth. The study employed the granger causality test under the Vector Auto Regression (VAR) on the time series annual data for 1985 to 2014. The variables included in the study were per capita remittances and per capita GDP. The result showed a unidirectional relationship between remittances and economic growth but the results for Sri Lanka, revealed a bi-directional link between remittances and economic growth.

Adarkwa (2015) examined the impact of remittances on economic growth in four West African countries namely: Cameroon, Cape Verde, Nigeria and Senegal over the period 2000-2010. Linear regression was used to estimate the relationship among the variables. The findings of the study demonstrated that the impact of remittances on the GDP of Senegal and Nigeria was positive while that of Cameroon and Cape Verde were negative.

Nyeadi, Yidana & Imoro (2014) found remittances to be effective in fostering household welfare and health care in developing countries. To determine whether remittances can lead to economic growth, the study set to ascertain what could be the causal relationship

between economic growth and remittances in the following remittance-receiving countries namely: Nigeria, Senegal and Togo. The study used Granger-causality and co-integration tests under Vector Auto Regression framework for the period of 33 years (1980-2012). The study realized that for Nigeria and Senegal, a unidirectional causal relationship existed implying that remittances led to economic growth but economic growth did not lead to remittances inflow. However, for Togo there was no causal link between remittances and economic growth.

Pradhan & Khan (2015) analysed the contribution of remittance earnings to the quality of life in Bangladesh. Human Development Index (HDI) was used to represent the quality of life. The period under study was from 1981 to 2011 using data for HDI and remittance earnings. The study employed the Vector Error Correction (VEC) model to analyse the desired relation between the variables. The results found a long run causal link between remittances to HDI, meaning that remittance earnings have a long run effect on the quality of life.

### Model Dimension

The study adopted the ex-post facto research design. The Secondary data used in this study were sourced from the archives of the World Bank Development Indicators and the Central Bank of Nigeria (CBN), Statistical Bulletin from 1987 to 2018.

The model used for this investigation is the adaptation and modification of the works of Peter and Mabel (2018) who analysed remittances and economic development in Nigeria: Macroeconomic Approach. Their study applied descriptive and quantitative techniques to evaluate the macroeconomic impact of remittances on economic development in Nigeria, specifically the study used Auto regressive Distributed Lag (ARDL) model to estimate the model. Their results showed positive coefficient of remittances which implied that increased levels of remittance inflow into the country will spur economic development.

**Their model is stated thus:**  $HDI = f(REM, LF, FDI)$  which is adapted and modified in this study thus:  $HDI = f(MW, MPA, IAW, EW)$ .

**The econometric equation for the modified model is:**

$$HDI = b_0 + b_1 MW + b_2 MPA + b_3 IAW + b_4 EW + Ut$$

Where:

HDI = Human capital development index

MPA = Military Personnel Serving Abroad

EW = Embassy Workers

$b_1$ - $b_4$  = The coefficients of the explanatory variables

MW = Migrant Workers

IAW = International Aid Workers

$b_0$  = Intercept of the relationship in the constant

$Ut$  = Stochastic Disturbance (Error Term)

**A priori Expectation**

The theoretical expectation of the study is that foreign remittance will have positive effect on human capital development. The relationship is  $\beta_1 > \beta_2 > \beta_3 > \beta_4 > 0 < \beta_5$

**Methods of Analysis**

The data was analyzed with econometric techniques using descriptive statistics, diagnostic test using Augmented Dickey Fuller test and the Auto Regressive Distributive Lag (ARDL test) (Bounds test). Descriptive statistics was used to describe the basic feature of the data in the study as they provide simple summaries about the samples and the measures. Augmented Dickey fuller test was applied to carryout diagnostic test for unit roots and the ARDL was used in testing the short run and long run relationships between the dependent and the independent variables.

**Descriptive Statistics**

|              | HDI      | REM      |
|--------------|----------|----------|
| Mean         | 0.453000 | 3.516338 |
| Median       | 0.475000 | 3.000530 |
| Maximum      | 0.500000 | 11.64283 |
| Minimum      | 0.350000 | 0.010418 |
| Std. Dev.    | 0.053759 | 3.345372 |
| Skewnes      | 1.241875 | 1.072105 |
| Kurtosis     | 2.913926 | 3.393579 |
| Jarque-Bera  | 2.573511 | 6.138704 |
| Probability  | 0.276165 | 0.046451 |
| Sum          | 4.530000 | 109.0065 |
| Sum Sq. Dev. | 0.026010 | 335.7454 |
| Observations | 31       | 31       |

The result of the mean shows that average growth rate of the human capital development in Nigeria is 0.453% while the maximum and minimum values for the variables showed 0.5000% and 0.350% for HDI respectively. The figures are low enough to insinuate that the level of human capital development Nigeria is not improving. Also the standard deviation 0.054% showed that there is a very wide variation in human capital development which signifies that human capital development is unstable in Nigeria. The mean of exchange rate (REM) showed that 5.16% of human capital development (HDI) in Nigeria is affected by foreign remittance.

**Augmented Dickey-Fuller Unit Root Test**

| Variables | ADFStatistic | Order Of Integration | Level of Significance |
|-----------|--------------|----------------------|-----------------------|
| HDI       | -4.668720    | 1(1)                 | 5%                    |
| MW        | -4.668720    | 1(1)                 | 5%                    |
| MPA       | -4.554952    | 1(0)                 | 5%                    |
| IAW       | 2.323468     | 1(0)                 | 5%                    |
| EW        | -3.152754    | 1(1)                 | 5%                    |

The variables used in the analysis were subjected to Augmented Dickey Fuller (ADF) Tests, to ascertain whether they are stationary series or non-stationary series. The test aimed to understand the state at which the variables could be held stable for regression analyses. The result of the ADF test indicated mixed stationarity as some of the variables were stationary at 5% level [1(0)] while others were stationarity at first difference [1(1)].

**Auto Regressive Distributive Lag Test (Bounds Test)**

The Auto Regressive Distributive Lag (ARDL) test is used because it is the most suitable tool of analyses that accommodates both the short and long run trends in testing the relationship between the dependent and independent variables.

**Auto Regressive Distributive Lag Test (Bounds) Test Result**

ARDL Bounds Test  
 Date: 10/18/19 Time: 15:33  
 Sample: 1987 2018  
 Included observations: 31  
 Null Hypothesis: No long-run relationships exist

| Test Statistic | Value   | K |
|----------------|---------|---|
| F-statistic    | 2.23575 | 4 |

| Critical Value Bounds |          |          |
|-----------------------|----------|----------|
| Significance          | l0 Bound | l1 Bound |
| 10%                   | 2.45     | 3.52     |
| 5%                    | 2.86     | 4.01     |
| 2.5%                  | 3.25     | 4.49     |
| 1%                    | 3.74     | 5.06     |

The result of the bound test reveals that the F-statistic is 2.235795 and is less than the lower bound at 1%, 2.5%, 5% and at 10% significant level which show a case of no cointegration between the variables. This implies that there is no long run relationship between foreign remittance and human capital development in Nigeria.

**Short Run Relationship Result**

Dependent Variable: HDI  
 Method: ARDL  
 Date: 10/18/19 Time: 15:32  
 Sample (adjusted): 1987 2018  
 Included observations: 31 after adjustments  
 Maximum dependent lags: 2 (Automatic selection)  
 Model selection method: Akaike info criterion (AIC)  
 Dynamic regressors (3 lags, automatic):  
 Fixed regressors: C

| Variable | Coefficient | Std. Error | t-Statistic | Prob.* |
|----------|-------------|------------|-------------|--------|
| HDI(-1)  | 1.193870    | 0.160995   | 5.415553    | 0.0000 |
| HDI(-2)  | 0.158059    | 0.173993   | 2.908421    | 0.0080 |
| MW       | -335.0290   | 1.696675   | -1.974620   | 0.6170 |
| MW(-1)   | 4.932647    | 2.727323   | 2.855660    | 0.0120 |
| MW(-2)   | -212.2841   | 12.56812   | -1.689069   | 0.1119 |
| MW(-3)   | 441.6968    | 109.0648   | 4.049858    | 0.0010 |
| MPA      | -4.213872   | 1.621922   | -0.598073   | 0.8202 |
| IAW      | -260.8788   | 151.1650   | -1.725788   | 0.1049 |
| IAW(-1)  | -335.3802   | 174.9579   | -1.916919   | 0.0745 |
| EWK      | 0.000120    | 0.000313   | 0.384695    | 0.7059 |
| EW(-1)   | -0.000740   | 0.000435   | -1.700982   | 0.1096 |
| EW(-2)   | 0.000993    | 0.000340   | 2.923417    | 0.0105 |
| C        | 1725.406    | 1028.297   | 1.677926    | 0.1141 |

|                    |           |                       |          |
|--------------------|-----------|-----------------------|----------|
| R-squared          | 0.799508  | Mean dependent var    | 32000.21 |
| Adjusted R-squared | 0.762114  | S.D. dependent var    | 36553.29 |
| S.E. of regression | 1088.163  | Akaike info criterion | 17.12679 |
| Sum squared resid  | 17761476  | Schwarz criterion     | 17.74531 |
| Log likelihood     | -226.7750 | Hannan-Quinn criter.  | 17.31588 |
| F-statistic        | 25.37662  | Durbin-Watson stat    | 2.140239 |
| Prob(F-statistic)  | 0.46272   |                       |          |

From the ARDL test result, the regression equation for foreign remittance and human capital development index can be presented thus:  $HDI = 1.193870 + 335.0290 MW + 4.213872 MPA + 260.8788 IAW + 0.000120 EW + U$ .

The ARDL revealed that the constant parameter (HDI) is positive at 1.193870 which implies that if all the independent variables are held constant, HDI as the dependent variable will grow by 1.193870 units. The result of the analysis indicates that human capital development is an endogenous variable in the model of the effect of foreign remittance on human capital development in Nigeria.

Migrant Workers (MW): The coefficient of MW is negative at 335.0290 with negative t-statistics of 1.974620 and probability value ( $p = 0.6170 > 0.05$ ) show that remittance from MW has negative and insignificant effect on HDI. The positive coefficient of 4.932647 with t-statistics of 2.855660 and probability value ( $p = 0.0120 < 0.05$ ) indicates that remittance by migrant workers has positive and significant effect on human capital development in Nigeria.

Military Personnel Abroad (MPA): The coefficient of MPA is negative at 4.213872 with negative t-statistics of 0.598073 and probability value ( $p = 0.8202 > 0.05$ ) shows that remittance from MPA has negative and insignificant effect on human capital development.

International Aid Workers (IAW): The coefficient of IAW is negative at 260.8788 with negative t-statistics of 1.725788 and probability value ( $p = 0.1049 > 0.05$ ) shows that remittance from IAW has negative and insignificant effect on human capital development.

Embassy Workers (EW): The coefficient of EW is positive at 0.000120 with t-statistics of 0.384695 and probability value ( $p = 0.7059 > 0.05$ ) shows that EW has negative and insignificant effect on human capital development.

**Diagnostic Tests:**

The result of the study indicates that all the Variance Inflation Factor (VIF) are below five (5) which means that there is absence of Multicollinearity in the model. The p. value of the model is greater than 0.05, which connotes that the model is serially correlated at 5%



significance level. The results show that the probability values are greater than 0.05. The study therefore submits that the model is not Heteroskedastic and the result obtained from the estimated model is unbiased. The RESET test result shows that the p. value is less than 0.05 which asserts that the model is well specified and is good for estimation.

### Test of Hypothesis

The test was carried out at 0.05 level of significance.

$H_{01}$ : Foreign remittance has no positive and significant effect on human capital development in Nigeria.

$H_{2}$ : Foreign remittance has positive and significant effects on human capital development in Nigeria.

The F-statistics for Bound test (2.23575) is less than the lower (2.45) and upper (3.52) critical bounds values indicating no long run effect in the model. The F-statistics for short run ARDL model is 25.37662 with p.value of 0.46272. The p.value is greater than 0.05. The study therefore concludes as follows:

\* Long Run Effect: Foreign remittance has no long run effect on human capital development in Nigeria.

" Short Run Effect: Foreign remittance has positive and significant short run effects on human capital development in Nigeria.

### Discussion of Findings

The findings are in tandem with the objectives of this study. The study revealed that foreign remittance has positive and significant Short Run Effect on human capital development in Nigeria. The implication is that government can rely on foreign remittance in its planning for development of human capital. The finding is in consonance with the works of Peter & Mabel (2018), Samer & Ala' Bashayreh (2017), Bayar (2015), Adenutsi (2010), Nyeadi, Yidana & Imoro (2014) and Pradhan & Khan (2015).

### Conclusion and Recommendations

The main objective of this study was to examine the effect of foreign remittance on human capital development in Nigeria: 1987-2018. The specific objective was to examine how remittance from migrant workers, international aid workers, military

personnel abroad and embassy workers affects human development in Nigeria. The analysis carried out included: Descriptive statistics, Augmented Dickey Fuller test for unit roots, Autoregressive Distributive Lag and Diagnostic tests. The results of the Augmented Dicker Fulley stationarity test indicate that both the dependent and independent variables attained stationarity at level 1(0) and first differences 1(1) of stationarity which necessitated the use of Autoregressive Distributive Lag (ARDL) for the analysis. Again the study carried out diagnostic test to analyse the reliability of the models with the Normality, Serial Correlation, Multicollinearity, Heteroskedasticity, and Ramsey RESET Tests. ARDL test showed existence of short run relationship. The adjusted R-Squared is 0.762114 which means that 76% of the total variables of Human Development Index (HDI) can be explained by the dependent variables of MW, IAW, MPA and EW while the remaining 24% is due to stochastic variables. The Durbin Watson at 2.140239 means the model is free from autocorrelation. The F-statistics is 25.37662 which implies that all the explanatory variables in the study have significant effect on human capital development in Nigeria.

Foreign remittance therefore has positive and significant short run effects on human capital development in Nigeria and can be a veritable and reliable policy instrument for boosting short term planning for human capital development sustainability in Nigeria.

Government should set up the structure and implementation of best in class performance reward and value system that would enhance the retention capacity of its skilled human capital in Nigeria. This dovetails from the fact that this study confirms the existence of only short run relationship between foreign remittance and human capital development which connotes brain drain on the part of migrants that stay long abroad. This recommendation will not only discourage brain drain but also engender healthy competition that would trigger economic growth and human capital development. Governments should also device means of recording its entire migrants and ensure that remittances from these migrants are duly received, captured, and compensated accordingly.

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# Macroeconomic Variables Nexus And Human Development Index In Nigeria: 1986-2018

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## Abstract

The study looked at the connection between macroeconomic variables and human development index in Nigeria for the period 1986-2018. The variables for the study which are money supply, government spending, price increases, exchange rate and interest rate are proxy for macroeconomic variables (the independent variable) and human development index (HDI) (the dependent variable). The data used for the study was sourced from Central Bank of Nigeria (CBN) statistical bulletin and World Bank Development Indicator. The data were analyzed with econometrics techniques involving descriptive statistics, Augmented Dickey Fuller and Philip Peron test for unit root. The auto regressive distributive lag (ARDL) was used to determine the effect of relationship between macroeconomic variable and human development index (HDI). The result obtained indicated that macroeconomic variables had a significant long run and short run effects on human development index (HDI) in Nigeria. Specifically money supply and interest rate have significant negative effect on human development index (HDI), government expenditure has a significant positive effect, whereas inflation rate and exchange rate have mixed dynamics shocks with negative and positive effects at varying short term periods in Nigeria. The study made some of the following recommendations: (a) That relevant policy instrument be put in place to increase human development index (HDI) through the creation of favourable socio-economic environment, (b) Government should increase the education budget to accommodate the poor children in the streets whose parents cannot afford school fees and finally government should encourage private sector investment to create employment opportunities so as to improve the quality of life and living standard of Nigeria people.

**Keywords:** Human development index, dependent variable, independent variables, macroeconomic variable, socio-economic environment

## Introduction

Individuals are the most priceless possessions in every financial system (Ogunleye, Owolabi, Sanyaolu and Lawal, 2017). To attain expansion, it is crucial for this asset to be managed appropriately and efficiently. One way this can be done is by making sure enough investment is made in human capital. Human capital is the ability and skills of human assets and human capital development is the process of getting and growing the number of person who have the skills, education and know-how which are vital for the economic advancement of the country (Adelekum, 2011).

Macroeconomic indices are pointers showing the existing trade in the economy. The macroeconomics indices affect the total action, makeup, behaviour and resolution of an economy as a whole (O' Sullivan and Sheffrin, 2003). Like all professionals, the government in order to administer the total economy, must do an investigation and comprehend the major indices that decide the present behaviour of macro-

economy (Beraharden, 2009). In today's world, we construe macroeconomic indices quite differently within the limit of the international economic crisis and other external economic shocks as they crop up and we cannot relate the directly observed macroeconomic indices in chaotic situations in the same way as we do in a serene period. The key macroeconomic pointers used in the study are money supply interest rate, inflation rate, government expenditure and exchange rate.

The human development index (HDI) is an arithmetical tool used to calculate a country's general accomplishment in its social and economic magnitude. The social and economic magnitude of a country is based on the health of people, their level of educational achievement and their style of living. The HDI was created to draw attention to the fact that

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people and their abilities should be the major deciding factor for assessing the progress of a country and not economic growth alone. The HDI can also be used to question national policy choices, asking how two countries with the same level of GNI per capita can end up with different human development outcomes. These dissimilarities can arouse arguments about government policy main concern.

The human development index (HDI) is a rundown measure of normal accomplishment in major aspects of human development. a long, hale and hearty life, well-informed and a good standard of living. The HDI is the geometric mean of standard measures for each of these trade magnitudes.

### Statement of the Problem

In the past macroeconomic indices and human development index (HDI) have drawn major concentration from finance and development professionals and have been argued at length. quite a lot of studies executed on macroeconomic indices and human development index are with diverse findings. For instance, Sullivan and Steven (2003) found that macroeconomic indices impact positively on human development index (HDI). Temitope and Bola (2013) and Eweren, Magbemens, Nwaogwugwu (2015) also relayed positive impacts on health care. Oluwatoye Adegboye and Fagebeminiyi (2018) reported a positive effect on education and mixed effect on gross national income per capita.

Again, empirical studies in Nigeria that employed time series data to calculate the consequence of macroeconomic indices on human development index (HDI) are little. Adding up, most of the studies did not think about the short run shocks on human development index (HDI). Also a good number of the studies lack consensus on their findings on macroeconomic indices nexus and human development (HDI). One of the reasons for this is the fact that these countries have different levels of macroeconomic indices and human development index(HDI) and their dimensions. This study therefore goes in line with the existing empirical studies by using yearly data for most recent year 2018 and autoregressive distributive lag model that is able of reporting both long run result and short run disturbances of macroeconomic indices on human development index in Nigeria.

### Objective of the Study

The main objective of the study is to investigate the effect of macroeconomic variables on human development index (HDI) in Nigeria.

However, other specific objectives include:

- i. Evaluate the effect of interest rate on human development index (HDI) in Nigeria.
- ii. Analyze the effect of inflation rate on human development index in Nigeria
- iii. Determine the effect of government expenditure on human development index in Nigeria.
- iv. Ascertain the effect of money supply on human development index (HDI) in Nigeria
- v. Examine the effect of exchange rate on human capital development (HDI) in Nigeria.

### Research Questions

The following research questions are raised in the course of this study:

- i. How does interest rate affect human development index (HDI) in Nigeria.
- ii. What are the effects of inflation rate on human development index (HDI) in Nigeria?
- iii. How does money supply affect human development index (HDI) in Nigeria?
- iv. How does government expenditure affect human development index (HDI) in Nigeria?
- v. What are the effects of exchange rate on human development index (HDI) in Nigeria?

### Research Hypothesis

The followings are the research hypotheses for the study stated in their null form.

- Ho<sub>1</sub>: Interest rate has no significant effect on human development index (HDI) in Nigeria.
- Ho<sub>2</sub>: Inflation rate has no significant effect on human development index (HDI) in Nigeria
- Ho<sub>3</sub>: Government expenditure has no significant effect on human development index (HDI) in Nigeria.
- Ho<sub>4</sub>: Money supply has significant effect on human development index in Nigeria.
- Ho<sub>5</sub>: Exchange rate has significant effect on human development index (HDI) in Nigeria

**Significance of the Study**

Findings from the study will be of great profit to different groups of person:

**Financial Sector.** The study will be helpful to the financial sector beneficiaries as they will know if they are making feasible decision based on macroeconomic indices. The study will be of significance to administration since they can tell the relationship between financial proceeds and macroeconomic pointers.

**Government:** The result of the study will enlighten the government on how to make ample provisions for health and education sector. The research will help the government of the day to know the condition of health and education sector of the country and how to perk it up especially in terms of budgetary allotments.

**Investor:** The study will make clear to them on how investment decisions are affected by changes in the macroeconomy and would significantly shed some leading lights on the part of intending investors on the investment chances and the effect of macroeconomics indices on investment resolution.

**Academics, Scholars and Researcher:** This study will open up a new area that has not been studied, hence stir up inquisitiveness in trying to dig deeper in this field particularly for those who may be fascinated in carrying out additional investigation in this field.

**Literature Review**

Macroeconomic indices are pointers that are important to broad economy at the local or the national level which affect a large population rather than a few individuals. The macroeconomic pointers such as inflation, money supply, government spending, exchange rate and interest rate substitutes for macroeconomic indices are used in this study and are deeply explained.

**Definition of Human Development Index**

**Definition:** The Human Development Index (HDI) is an arithmetic tool used to ascertain a country's generally accomplishment in its social and economic perspective. The social and economic perspectives of a country are based on the health of people, their level of education achievement and their style of living.

**Description:** Pakistani economist, MahbubulHaq created HDI in 1990 which was further used to ascertain the country's advancement by the United Nations Development Program (IJNDP). Estimation of the index combines four key pointers: life expectancy for health, expected years of schooling, mean of years of schooling for education and Gross National Income per capita for standard of living.

Every year UNDP grades countries based on the HDI report given in their yearly report. HDI is one of the greatest apparatus to keep trail of the level of development of a country, as it uses all key social and economic pointers that are accountable for economic development

**Human Development Index (HDI)**

The HDI was created to call attention to the fact that people and their capabilities should be the final decisive factor for appraising the development of a country, not economic growth alone. The HDI can also be used to query national guiding principle, asking how two countries with the same level of GNI per capita can end up with diverse human development results. These dissimilarities can arouse debate about government policy precedence.

The Human Development Index (HDI) is a rundown tool of standard attainment in major dimensions of human development: a long and healthy life, being well-informed and having a decent style of living. The HDI is the geometric mean of normalized indices for each of the three dimensions.

The health dimension is measured by life expectation at birth, the education dimension is calculated by mean of years of schooling for adults aged 25 years and more and expected years of schooling for children of school entering age. The standard of living dimension is measured by gross national income per capita. The HDI uses the logarithm of income, to reflect the reducing value of income with rising GNI. The scores for the three HDI dimension variables are then combined into a complex index using geometric mean.

The HDI makes clear and takes into consideration only part of what human development involves. It does not look at inequalities, lack, human safety,

empowerment, etc. The HDRO offers the other composite indices as broader proxy on some of the main subjects of human development, inequality, gender differences and lack.

### Interest Rate

Interest rate is the fee a borrower pays for the money loaned to him for business or other transaction intentions. Stakeholders lend money from banks and other financial institutions. The reaction of investment operating cost alters ardently with interest rate which is at the mind of money-making analysis Acha, &Acha, (2011). Interest rate is the other strong factors that influence financial laws as well as weaker financial payments in directing values of investors; it speeds up investment if the high interest rate is applicable on savings. Interest rate affects savings almost in all commercial banks commencing macroeconomic theories. The negative effect of higher investment rate prevents the macroeconomic impact of interest rate laws. In New York, loan and cash offers money as an assurance to the borrower of security. This is the most familiar form of reinvestment in business performance. This program takes the type of tailored term loan of a collection of securities. Because the business deal is personalized, it is hard to make general declaration regarding its use. That said, lender may bargain an yearly payments for rights to loan securities from valuable owners' complete collection.

The net outcome is a government spending on GNP which has been the residue to single important source of difference in excess of stabilization of interest rate laws. The aim of interest rate is in its reaction to money investment by looking forward to reducing the discrepancy relating to rate in effect of cost and interest rates in the commercial banks. The behaviour of interest rate lies on the basic substitutability of capital for other factors for investment to take place.

### Inflation

It is the continuous rise in the overall price level within the economy which affects the price of the domestic money (Fatukasi, 2012). It is not once and for all rising price movement but has to be continued over time and influence all goods and services in the economy. Many things are accountable for inflation in Nigeria. The inflation which falls out from excess

total demand is called fall inflation, the cost push inflation arises from upward movement in the cost of manufacturing while the structural inflation arises from some problems such as ineffective production, marketing and allocation systems in the industrial sectors of the economy. Other forms of inflation in developing country could be imported, open and seasonal inflation through globally traded goods and services. This is when the economy imports goods from country already, undergoing inflation.

The open inflation comes as an after effect of undisturbed market instruments and seasonal inflation is connected with seasons in production when supply problems invade the economy as a consequence of decrease in production particularly in farming produce. In Nigeria, other reasons can be linked to inflation such as the nature of the economy, its history, and fiscal and monetary policy direction. Inflation is defined as a widespread rise in the level of prices obtained over a long period in an economy (Lipsey and Chrystal, 2015), that is, a continual rise in the price levels of goods and services, leading to a decline in the currency's purchasing power. Although price rise is a household word in many market-charged economies, and there exists a body of empirical studies on the over-arching problem of inflation, yet only selected few seem to know about the causes, workings, and the real effect of inflation on national economic growth.

### Government Expenditure

Government expenditure is the total in cash terms of the federal, state and the local government spending together with transfers to the parastals and the three levels of the government (Anyato, 2016). Inasmuch as public spending is highly sought-after it however talks from of allotment and stabilization of resources (Musgrave and Musgrave 1989). The allotment function becomes essential so as to offer both private and in particular social goods in suitable mix with obtainable resources. The availability of social and physical amenities through public investment and expenditure on some commodities and services theoretical can directly perk up productivity in the private sector through more effective allotment of resources due to the unique features of social goods (spill over and extern lalties, non excludability). If they will be made available at all or where they are

produced the outcome will be insufficient and shockingly expensive if left in the hand of private individuals. Kellick (2009) also agreed that it is the duty of the state through spending, to make available the desirable services which the price mechanism cannot provide or produce at all or would only do so at high cost and with lesser social gain. The attitude of continuous spending is government expenditure made frequently from year to year, some examples include personal cost, operating cost, utility services, telephones, furniture and equipment.

On the other hand capital spendings are done on new construction, land and building acquirement, fixed assets which have projected working life more than one year. This splits aggregate spending into transfer and non-transfer spending generally; there is confident spending which does not bring about resultant transfer of real resources to the government, the payment on debt unemployment assistance is an example of this spending.

Here the governments typically move extra financial wealth to some segments of the society. On the other hand non transfer payment may comprise the exact spending undertaken by the government for the use of commodities and services, to a great level, the use of wealth gotten in exchange for non-transfer payment may also be for consumption or investment purpose. To this extent, one can say spending on defense, education energy, road, and amenities. They are typically referred to as real spending, with regards to public spending classification on section. It is because capital and recurring spending arise from different time of benefit that financing differences exist, because capital spending gives benefit over services in a year, it is prepared that the price should extend over the year of that benefit.

### Money Supply

Money is a compilation of liquid asset that is usually acknowledged as a means of exchange and for settlement of debts. Amongst its role, it serves to cut down the use of limited resource or increase it slowly. Committed to trade, increases resource for production, encourages trade, money promotes specialization, and contributes to a society's wellbeing (Singh et al 2011). The supply of currency at any time is the total amount of currency of the

economy at a point in time (Jhingan, 2006). In Nigeria, the narrow money supply (M1) is defined as currency outside bank plus demand of commercial banks plus domestic deposits with the central bank's less Federal Government deposits at commercial banks. In simple term, M1 is defined as:

$$M1 = C + D$$

Where:

M1 = Narrow money supply

C = Currency outside banks

D = Demand deposits.

Ajayi (2008) argues that M2 is the suitable description of money in Nigeria. M2 includes not only notes and coin and banks current accounts, but also 7-days bank deposits and some building society deposits. In the Nigerian circumstance broad money (M2) is defined as M1 plus quasi money. Quasi-money as used here is defined as the sum of savings and time deposits with commercial banks. Representatively shown as;  $M2 = C + D + T + S$

Where: M2 = Board money

T = Time deposit

S = Savings deposit

C and D as defined above. According to Anyanwu and Oikhenam (1997), broad money is that which can be easily changed to cash with little or no loss.

Monetary laws rest on the connection between the price at which money can be loaned and the aggregate supply of money in the economy. It is commonly referred to as being expansionary or contractionary, where an expansionary policy raises the supply of money in the economy speedily, and contractionary policy reduces the aggregate money supply.

### Exchange Rate

Theoretically, an exchange rate means the value of one currency in relation to another. Exchange rate is the proportion of a currency and the quantity of currency for which that unit can be exchanged at a given time (Ngerebo-a and Ibe, 2013). In other words, exchange rate is the value of one's currency (Mordi, 2006). Exchange rate of currency is the relationship between home and international prices of commodities and services. Also, exchange rate can either increase or decrease. An increase in the exchange rate takes place if fewer unit of domestic currency exchanges for a unit of foreign currency



while decrease in exchange rate takes place if extra unit of domestic currency exchanges for a unit of foreign currency.

The nominal exchange rate (NER) is a monetary notion which assesses the relative price of two countries' money or currencies, e.g., naira in relation to the U.S. dollar (e.g., N 360: US\$ 1.00) and vice versa. But the real exchange rate (RER), as the name suggests, is a real idea that checks the virtual price of two goods-tradable goods (exports and imports) (Obadan, 2016). Also, the nominal exchange rate is the quantity of domestic currency that must be traded to obtain a unit of foreign currency. Exchange rate is the quantity of local or home currency needed to buy one unit of a international currency. According to Schiller (2008), the exchange rate is evaluated by the demand and supply of the foreign currency, trade balance, current account balance and capital account balance.

### Theoretical Framework

The theoretical framework of the study is based on the Keynesian Model because the theory is linked with economic expansion, investment, productivity by human capital and change in style of living. The Keynesian economic theory of 1936 during the great melt down states that there was inadequate total demand and that an active stabilization law was needed to ensure good economic performance. Therefore, fiscal policy devices were stipulated as the solution to inadequate total demand to drive the economy. To the Keynesian the personal owned business economy needs stabilized and fiscal laws. The Keynesian noted that personal owned business was conservative in nature and opted for a detailed interference to fine-tune the economy in the neighborhood to full employment and low inflation. Keynesian Model stated the importance of government interference in business through expenditure and debt financing. It follows therefore, that the hypothesis is appropriate in the study on developing economies like Nigeria. Keynesian argued that if more money is put in the hands of government, more jobs will be made available thus, increasing the style of living of the people. There will be long and healthy life, means of schooling or education and gross national income per capita thus,

increasing the worth of human development index of the country.

### Empirical Review

Okafor and Ogbonna (2017) studied the long run connection between the macroeconomic indices and human development index in Nigeria. The indices were human development index, government expenditure on education sector in Nigeria. The outcome of VAR model depicts that the testing shows that HDI is essential in the current year (-1) but seems to convey that the current value of EDU and HTH are most important factors that show the current value of HDI (-1). It is economically confirmed that what affect human capital development in Nigeria are the nature pattern and level of government spending in education and health because the model reveals their significant direct impact on the HDI.

Onokero (2019) investigated the impact of fiscal laws on Nigeria human development index (HDI) during the democratic era (1999-2016). The study used the unit root, co-integration tests and error correction model on the time series data. The result showed that the HDI and selected fiscal policy indices incorporated in the model have a long run relationship during the periods. The study also showed that fiscal policy indices of domestic debt and tax have direct and important effect on Nigeria HDI both in the short and long run periods. Total government spending has opposite and insignificant impact on Nigeria HDI both in the short and long run. This meant that total government spending in the democratic period has not enhanced the wellbeing of Nigerians.

In addition, external debts had indirect and insignificant effect on Nigeria HDI in short and long run, this shows that budget deficit financing by external debt does not enhance the wellbeing of Nigerians. The total sum (CUSUM) and total sum of squares (cusum) of the remaining showed that Nigerian democratic system of government from 1999 to date is stable.

Al, Raza and Yousuf (2012) examined the role of fiscal law in the human development index of the Pakistan. The study used the autoregression distributed lags (ARDL) bounds testing approach of

co-integration on different macroeconomic indices from 1972 to 2010 to people in the country. The findings revealed a rise in per capita income and education development while that showed a negative and irrelevant effect on human development. Democratic government has negative impact on human development index. The study suggests that there is need for policy makers to decrease the level of corruption in the public expenditure for maximum benefits of human wellbeing.

Nwakan and Nnamdi (2018) studied the connection between taxes and human development index in Nigeria for the period 1970-2010. Based on the income tax and exercise tax respectively displayed a positive relationship with the level of HDI. Also a negative connection exists between corporate tax and human development index. The Johansen Maximum likelihood formula shows that a long run relationship exists among the variables. The study suggested that there is need to develop federal fiscal structure so as to ensure the full potential of taxation in realising HDI in Nigeria.

Edeme (2014) examined the impact of sectoral public expenditure and fiscal laws on human development index in Nigeria using data from 20 states for the period 1999-2012. Data on each state were obtained from several issues of Accountant-General's statements, CBN yearly statements and United Nations Development Programme (UNDP) statements. For soundness of the examination, total recurrent and capital public expenses on education, health, agriculture, rural development, energy, housing, environmental protection and manageable water were employed as indicator of human development. The findings revealed that there is a positive functional relationship between education, health, agriculture, rural development, energy, housing and portable water development spending and human development on these segments and concluded that the relative impact of capital spending in enhancing human development was greater than that of recurrent spending.

### Research Methodology

#### Research Design and Source of Data

The study used the ex-post facto researcher design to examine the effect of macroeconomic variable on

human development index (HDI) in Nigeria. The data for study was generated from the Central Bank of Nigeria (CBN) statistical bulletin and annual reports and Accounts and World Bank Development indicators. The time frame for the study is 32 years from 1986-2018.

### Model Specification

The model used in this study is a modification of the model used by Onokero (2019) who studied the effect of fiscal policy on human development index in Nigeria, model is specified below.

|     |   |                         |
|-----|---|-------------------------|
| HDI | = | f(DD, Tax, ED) where    |
| HDI | = | Human Development Index |
| DD  | = | Domestic debt           |
| Tax | = | Taxation                |
| ED  | = | External debt           |

The above model is modified in line with the objective of the study as follows:

|       |   |                               |
|-------|---|-------------------------------|
| HDI   | = | f (MS, EXR, INF, GOVEXP, INT) |
| where |   |                               |
| HDI   | = | Human Development Index       |
| MS    | = | Money Supply                  |
| EXR   | = | Exchange Rate                 |
| INF   | = | Inflation Rate                |
| GOV   | = | Government Expenditure        |
| INT   | = | Interest Rate                 |

The relationship can be explicitly formulated in a model thus:  $HDI = \alpha + a_1 MS + a_2 EXR + a_3 INF + a_4 GOV + a_5 INT + P$  where  $\alpha$  is a constant or interest,  $a_1, a_2, a_3, a_4,$  and  $a_5$  are the coefficient of the explanatory variables while  $P$  is stochastic error term.

### Method of Data Analysis

The multiple regression model was emphasized using the Autoregressive Distribution Lag (ARDL) method. The variables were first subjected to preliminary test including Descriptive Statistics and stationary test (unit & root) and then diagnostic test to confirm the reliability of the regression results. The e-view version of econometric software was used to perform in the analysis.

### Data Presentation and Analysis

Data presentation: The legal data for this study was presented in the appendix. The data was logged to present the data in the same base before it was use for

**Table 1: Descriptive Statistics**

|             | Macroeconomic Variables and Human Development Index |          |           |          |          |          |
|-------------|---|----------|-----------|----------|----------|----------|
|             | HDI   | LMS      | INF       | EXR      | LGOVT    | INT      |
| Mean        | 51.53387  | 6.547237 | 68.074474 | 90.09474 | 11.67463 | 17.61579 |
| Median      | 75.27050  | 6.611111 | 70.18000  | 97.40000 | 11.81725 | 17.68500 |
| Maximum     | 25.07972  | 10.12982 | 85.66000  | 360.5000 | 14.53615 | 29.80000 |
| Minimum     | 14.47000  | 2.672078 | 37.97000  | 0.610000 | 8.431766 | 7.750000 |
| Std. Dev.   | 7.536495  | 2.555846 | 12.61960  | 91.21405 | 2.287401 | 4.626646 |
| Observation | 32  | 32       | 32        | 32       | 32       | 32       |

Sources: Extract from EViews Output

The summary statistics show that the average of human development index is about 51.5, the average mean for money supply is 6.54, while average mean of inflation rate, exchange rate, government expenditure and interest rate were 6.547237, 68.07474, 11.67463 and 17.61579 respectively. The standard deviations of macroeconomic variables such as money supply inflation rate, exchange rate, government expenditure and interest rate are 2.55846, 12.61960, 91.21405, 2.287401 and 4.626646. The values of the standard deviation indicate that there is wide spread of human development index in Nigeria. This is also evident in the wide gap between the maximum and minimum values. For example, the maximum value of HDI is 25.07972 while the minimum is 14.47000, with difference 10.60977. Similarly, the maximum of money supply is 10.12983 while the minimum is 2.672078. These performance variations are rater at the high side. Even in the case of inflation rate the maximum is 85.66 and the minimum is 37.97. It is equally observed that exchange rate varied widely over time. For instance, exchange rate is 360.5 while its minimum value is 0.61. The wide variation over time indicates high level of fluctuation of macroeconomic Variables which affects human development index in Nigeria.

This study conducted some preliminary analysis such as Unit root test and co-integration. The variables for this analysis are subjected to two types of unit root test to determine whether they are unit root or stationary. The tests employed are the Augmented Dickey Fuller (ADF) test and the Philips-Perron test (PP) Test. The null in both the ADF and PP is the presence of unit root.

**Table 2: Augmented Dickey Fuller Test (ADF)**

| Variable | At Level    |        | First Difference |        | Order of Integration |
|----------|-------------|--------|------------------|--------|----------------------|
|          | t-Statistic | Prob   | t-Statistic      | Prob   |                      |
| MS       | -2.264016   | 0.1892 | -2.425122        | 0.1437 | 1(2)                 |
| INT      | -4.656213   | 0.0007 |                  |        | 1(0)                 |
| INF      | -4.323464   | 0.0025 |                  |        | 1(0)                 |
| EXR      | 1.753328    | 0.995  | -4.934566        | 0.0004 | 1(0)                 |
| HDI      | -0.730834   | 0.8247 | -5.378259        | 0.0050 | 1(1)                 |
| GOVT     | -2.046787   | 0.2665 | -4.355259        | 0.0050 | 1(1)                 |

**Table 3: Philips-Perron Test (PP)**

| Variable | At Level    |        | First Difference |        | Order of Integration |
|----------|-------------|--------|------------------|--------|----------------------|
|          | t-Statistic | Prob   | t-Statistic      | Prob   |                      |
| MS       | -2.264016   | 0.1892 | -4.575709        | 0.0010 | 1(1)                 |
| INT      | -4.774825   | 0.0005 |                  |        | 1(0)                 |
| INF      | -2.775847   | 0.0730 |                  |        | 1(0)                 |
| EXR      | 1.753328    | 0.9995 | -4.927991        | 0.0004 | 1(1)                 |
| HDI      | -0.730834   | 0.8247 | -5.378115        | 0.001  | 1(1)                 |
| GOVT     | -1.995253   | 0.2873 | -3.355259        | 0.0150 | 1(1)                 |

The analysis of the stationary of the variables were performed using the ADF and PP Tests. Both tests showed similar result outcome. The ADF results are shown in Table 2 while the PP results were in Table 3 from both tables, the results for INT and INF were integrated at levels. This suggests that the variables are stationary at their levels [1(0)], but were found stationary in the first differences 1(1). It is worthy of note that MS was not stationary at 1(0) and 1(1) using the ADF but was found stationary at 1(1) using the PP. Thus the result of the PP was taken to imply that MS is stationary at 1(1).

These results of Unit root tests (stationary test) showed that some of the variables (INT and INF) are stationary at level 1(0) while others including MS, EXR, HDI and GOVT are found stationary at first difference 1(1). The stationary found at level suggests that the variable cannot be affected by changes in times series when they are employed in regression analysis. On the other hand, the variables that are stationary at first difference showed that they respond to change in time series. Based on the nature of the variables having a combination of 1(0) and 1(1) stationeries, the most suitable tool of analysis is the Autoregressive Distributive Lag (ARDL) technique.

**Estimation of the Specified Models**

The Autoregressive Distributive Lag (ARDL) technique was used to investigate the effect of macroeconomic variables on human development in Nigeria. The two forms of regression analysis

conducted are the Bound test and ARDL Short run regression estimation.

**Estimation of Long run Effect**

The estimation of long run relationship in the specified models are shown on Table 4. The analysis is the Bound test to determine the long run relationship macroeconomic variable and each of the human capital development indices. The ARDL results compared the bound critical values with the F-statistics values. The decision rule is: If the F-statistic is above the upper and lower critical bound values, then there is a long run relationship in the model; but where the F-statistics is below the upper and lower bound critical values, it is inferred that there is no long- run effect (relationship). The null hypothesis is that "No long-run relationship exists".

Table 4: ARDL Bounds Test for long Run Effect of Macroeconomic Variables on Human Development

| Models                         | F-Statistic | Lower Critical Value Bound at 5% level | Upper Critical Value Bound at 5% level |
|--------------------------------|-------------|--|--|
| Model: Human Development Index | 26.2993*    | 2.62                                   | 3.79                                   |

Significant at 5%

From the results in Table 4 the critical bound values were computed at 5% level of significance. The lower critical bound value is 2.62 while the upper critical value is 3.79. The F-statistics is 26,2993. The results showed that HDI have F0-statistic greater than the Upper (3.79) and Lower (2.62) critical bound values.

This model with F-statitics that falls outside the critical bound values, suggests rejection of the null hypotheses. The results are summarized as follows:

- \* Macroeconomic variables (money supply, exchange rate, inflation rate, government expenditure and interest rate) have a significant long-run effect on human development index in Nigeria.
- \* Since a long run relationship is found, further analyses have been carried out to determine and explain the nature of the long run relationship that exists.

**Analyses of AROL Long Run Coefficients and Error Correction**

Four out of the five models proved to .have long run relationships in a macroeconomic variables and human capital development nexus. Thus, healthcare, unemployment, per capita income and human

development index receive long run macroeconomic shocks within the periods under study. This section explained the nature of the relationship as well as the speed of adjustment to long-run equilibrium. The results from CointEq (-I) from the cointegrating form is used to explain the speed of adjustment. The nature of the relationship is explained by the Long Run

Table 5: Model of the long Run Relationship between Macroeconomic Variables and Human Development Index in Nigeria

| Variables    | Coefficient | Std. Error | t-Statistic | Prob.  |
|--------------|-------------|------------|-------------|--------|
| D(LMS)       | -0.154350   | 0.051171   | -3.016371   | 0.0295 |
| D(LMS(-1))   | 0.062427    | 0.062871   | 0.992931    | 0.3663 |
| D(EXR)       | 0.000514    | 0.000201   | 2.556409    | 0.0509 |
| D(EXR(-1))   | 0.000787    | 0.000401   | 1.962034    | 0.1070 |
| D(EXR(-2))   | -0.001794   | 0.000457   | -3.926837   | 0.0111 |
| D(EXR(-3))   | -0.004163   | 0.000525   | -7.930150   | 0.0005 |
| DCNF         | 0.004066    | 0.001104   | 3.682865    | 0.0143 |
| D(INF)       | 0.002854    | 0.000835   | 3.419043    | 0.0189 |
| DCNF         | -0.001530   | 0.000562   | -2.719402   | 0.0418 |
| D(LGOVT)     | -0.029313   | .016479    | -1.778815   | 0.1354 |
| D(LGOVT(-1)) | -0.138581   | 0.066400   | -2.087062   | 0.0912 |
| D(LGOVT(-2)) | -0.099730   | 0.042392   | -2.352540   | 0.0654 |
| D(LGOVT(-3)) | -0.219927   | 0.054374   | -4.044733   | 0.0099 |
| D(INT)       | -0.008930   | 0.003572   | -2.499788   | 0.0545 |
| D(INT(-1))   | -0.003608   | 0.002351   | -1.534454   | 0.1855 |
| D(INT(-2))   | 0.012579    | 0.004672   | 2.692091    | 0.0432 |
| D(INT(-3))   | 0.013987    | 0.002754   | 5.079578    | 0.0038 |
| CointEq(-1)  | -0.646336   | 0.128168   | -12.845134  | 0.0001 |

**Long-Run Coefficients**

| Variables | Coefficient | Std. Error | t-Statistic | Prob.  |
|-----------|-------------|------------|-------------|--------|
| LMS       | 0.294426    | 0.037034   | 7.950173    | 0.0005 |
| EXR       | 0.003109    | 0.000217   | 14.298188   | 0.0000 |
| LNF       | 0.003523    | 0.000679   | 5.191510    | 0.0035 |
| LGOVT     | 0.317265    | 0.084166   | 9.286090    | 0.0002 |
| INT       | -0.016397   | 0.006323   | -2.593143   | 0.0487 |
| C         | -1.408786   | 0.171869   | -8.196838   | 0.0004 |

The result on Table 5 is the coefficient error correction (-0.646336) and the corresponding probability value (0.0004). The coefficient is rightly signed (negative) with p.value less than 0.05 level, indicating a statistically significant speed of adjustment. This means that changes in the human development index trend in Nigeria will eventually return on a growing normal trend over the long run period. The coefficient indicates about 65% of the dynamism in human development index in Nigeria due to macroeconomic instability can be corrected within a year. This implies that the selected macroeconomic variables (MS, TNF, EXR, GOVT and TNT) can be used to stabilise the human development index in Nigeria.



The nature of the long run relationship is explained by the coefficient of the long run models.  $HDI = -0.2944 * LMS + 0.0031 * EXR + 0.0035 * INF \pm 0.3173 * LGOVT - 0.0164 * INT - 0.4088$  The results show the coefficients of Money Supply (MS), Exchange Rate (EXR), Inflation Rate (INFL), and Government Expenditure have positive relationships with human development index while interest rate shows a negative relationship in Nigeria. The probability values for MS, EXR, INF, GOVT and INT are all less than 0.05 indicating significant effects. Thus, the study posits that money supply, exchange rate, inflation rate and government expenditure have positive and significant effect on human development index in Nigeria. However, interest rate has negative and significant effect on human development index in Nigeria.

**Hypotheses Testing:** Ho - Macroeconomic variables have no significant effect on Human Development index in Nigeria

Table 6: Short Run Model of the Relationship between Macroeconomic Variables and Human development Index in Nigeria

Method: ARDL

Sample (adjusted): 1990-2018

Dynamic regressors (4 lags, automatic): LMS EXR INF LGDVT INT

| Variables         | Coefficient | Std. Error         | t-Statistic | Prob.    |
|-------------------|-------------|--------------------|-------------|----------|
| HDI(-1)           | -0.646336   | 0.128168           | -5.042880   | 0.0040   |
| LMS               | -0.154350   | 0.051171           | -3.016371   | 0.0295   |
| LMS(- 1)          | -0.267948   | 0.075554           | -3.546451   | 0.0164   |
| LMS(-2)           | -0.062427   | 0.062871           | -0.992931   | 0.3663   |
| EXR               | 0.000514    | 0.000201           | 2.756409    | 0.0409   |
| EXR(-1)           | -0.000565   | 0.000223           | -2.583926   | 0.0423   |
| EXR(-2)           | 0.000787    | 0.000401           | -1.962034   | 0.1070   |
| EXR(-3)           | 0.001794    | 0.000457           | 3.926837    | 0.0111   |
| EXR(-4)           | 0.004163    | 0.000525           | 7.930150    | 0.0005   |
| INF               | 0.004066    | 0.001104           | 3.682865    | 0.0143   |
| INF(-1)           | 0.003059    | 0.000926           | 3.303332    | 0.0214   |
| INF(-2)           | -0.002854   | 0.000835           | -3.419043   | 0.0189   |
| LN(-3)            | 0.001530    | 0.000562           | 2.719402    | 0.0418   |
| LGOVT             | -0.0293,13  | 0.016479           | -1.778815   | 0.1354   |
| LGOVT(-1)         | 0.093400    | 0.040912           | 2.282968    | 0.0713   |
| LGOVT(-2)         | 0.138581    | 0.066400           | 2.087062    | 0.0912   |
| LGOVT(-3)         | 0.099730    | 0.042392           | 2.352540    | 0.0654   |
| LGOVT(-4)         | 0.219927    | 0.054374           | 4.044733    | 0.0099   |
| INT               | -0.008930   | 0.003572           | -2.499788   | 0.0445   |
| INT(-1)           | 0.004892    | 0.002384           | 2.051577    | 0.0955   |
| INT(-2)           | 0.003608    | 0.002351           | 1.534454    | 0.1855   |
| INT(-3)           | -0.012579   | 0.004672           | -2.692091   | 0.0432   |
| INT(-4)           | -0.013987   | 0.002754           | -5.079578   | 11.0038  |
| C                 | -2.319336   | 0.349553           | -6.635151   | 0.0012   |
| R- squared        | 0.999387    |                    |             |          |
| F- statistic      | 354.3397    | Durbin-Waston Stat |             | 2.410421 |
| Prob(F-statistic) | 0.000001    |                    |             |          |

From the ARDL, the coefficient of the dependent variable (HD) introduced as an endogenous variable in the model showed a negative value at lag 1, with probability value less than Q.05, This means that human development index is an endogenous variable in the model.

Table 6 further revealed that Money Supply (M2) has negative relationships at all the short run periods from current period to lags 1 and 2, respectively. However, the coefficients are statistically significant with p.values less than 0.05 in the current year and at lag 1, respectively. This means that money supply has a significant negative effect on human development index in Nigeria.

More so, Inflation rate (INFL) showed a positive relationship at from current year, lags 1, and 3, and negative relationship in the lag 2. The t-statistics has p.value less than 0.05 in the current year, lag 1, 2 and 3, respectively. This indicates that inflation rate has a significant positive short run effect on human development index in Nigeria in the current year, lags 1 and 3 and a reversed negative effect in lag 2. This means that inflation rate has mixed effect on human development index in Nigeria.

Again Exchange Rate (EXR) was found to have a positive relationship with human development index in the current year, lags 3, and 4; and negative relationship at lags 1, and 2, respectively. The p.values show that the coefficients are statistically significant in the current year, lags 1, 3 and 4, respectively. This suggests that exchange rate has significant positive effects on human development index in Nigeria in current year, lags 3 and 4, and a reversed significant negative effect at the elapse first year. This means that exchange rate has mixed effect on human development index in Nigeria.

However, Government Expenditure (GOVT) showed negative relationship with human development index at current year; and positive relationships in their lags 1, 2, 3 and 4, respectively. The probability values are less than 0.05 in periods of lags 4. This indicates that government expenditure has a significant positive effect on human development index at elapse of the fourth year. This means that government expenditure has significant positive affect on human development index in Nigeria.

The result of the Interest Rate (INTR) revealed negative effects in the current year, and lags 3 and 4, respectively. The periods in lags 1 and 2 have positive relationships with human development index in Nigeria. However, the probability values showed significant effects in the current year, lag 3 and 4, respectively. This means that interest rate has negative and significant short run effect on effect on human development index in Nigeria.

On the overall, the coefficient of determination (R<sup>2</sup>) revealed that about 99% of the change in human development index can be explained by macroeconomic variables in Nigeria. This is confirmed by a significant p.value of 0.000001 from the t-statistics (354.3397). The Durbin Watson statistics of 2.410421 suggests that the result is reliable.

The results have shown that macroeconomic variables have a short run significant effect on human development in Nigeria. Specifically, money supply, and interest rate have a significant negative effect on human development index, government expenditure has a significant positive effect; whereas inflation rate and exchange rate have mixed dynamics shocks with negative and positive effects at varying short term periods in Nigeria.

### Discussion of the Findings

The study analyzed macroeconomic indices and human development index nexus. The data for the study were sourced from CBN statistical bulletin and World Bank development in digital 2018. The data sourced were subjected to statistical and econometric investigation and the findings revealed that macroeconomic indices have a significant positive effect on human development index (HDI) in Nigeria. The resultant effect is that stable macroeconomic index can make human development index (HDI) in Nigeria. The study is in agreement with Antwi, Mills and Zhao (2013) which studied the impact of chosen macroeconomic indices on human development index in Nigeria using co-integration tests. Findings showed a longer relationship between macroeconomic indices and human development index. This is also in line with the work of Ismaila and Imoughele, (2015) who found positive important relationship between macroeconomic indices and Human Development Index (HDI) in Nigeria.

### Summary of Findings, Conclusion and Recommendations

The study examined the impact of macroeconomic indices on human development index (HDI) in Nigeria for the period 1986-2018. The data for the study was studied using ARDL techniques. The findings of the study are stated as follows:

Macroeconomic indices represented by money supply, inflation rate, exchange rate, government spending and interest rate have an important long run and short run impacts on human development index (HDI) in Nigeria. In particular, money supply and interest rate have an important negative impact on human development index. Government spending has an important positive impacts while dynamics shock with negative and positive impacts at different short term period in Nigeria.

The study therefore agreed that macroeconomics indices as substitutes are valid policy instrument for short and long run management of human development index (HDI) in Nigeria. A combined management of money supply, inflation rate, exchange rate, government spending and interest rate are enough policy tool in administering the style of living, public health and human development index of a developing economy like Nigeria.

The study therefore suggests among other things that pertinent policy instruments be put in place to improve life expectancy in pattern of living and raise tertiary school enrolment thus improving the value of human development index in Nigeria. This can be obtained through efficient management of the important policy instrument such as redistribution of income and diversification of the economy away from oil.

Private sector investment should be encouraged by the government at all levels to generate more employment opportunity for the people in order to enhance the living pattern and quality of life of the people.

Government should raise the money allocated for education to take into consideration the poor children in the street whose parents cannot pay for school fees. This will in the long run enhance the quality of life and

the living style of the people. Government should ensure steady macroeconomic laws to prevent policy summersault and raise its spending in the area of amenities development as a way to provide more jobs and enhance the living pattern of the people.

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# Environmental Disclosure and Sustainability Development in Nigerian Manufacturing Firms during COVID-19 period

*Dr. Emmanuel O. Emenyi\**

## Abstract

*This study is an empirical examination of environmental disclosures and sustainability development among Nigerian manufacturing firms during Covid-19 period. The Stark reductions in business operations and travel as a result of COVID-19 will likely reduce companies' environmental impacts or greenhouse gas emissions and hasten progress towards sustainability development in Nigeria. Past studies show that the level of disclosures of environmental impact in the financial reports has been deficient over time. The objective was to ascertain the level of differences of environmental disclosure among manufacturing firms in Nigeria and Ex-post facto research design was adopted and a sample of 10 manufacturing firms was purposively selected for a period of 10 years. The data were collected through content analysis method. Descriptive statistics were used to analyse collated data. Findings revealed that there is no significant differences in the level of environmental disclosure among manufacturing firms (showing low F statistics with a p-value of 0.451). Thus,  $H_0$  is therefore accepted and  $H_1$  is rejected. The mean disclosures of the various companies were not that dissimilar from one another while the level of dispersion tilted towards the same level. The study concluded that the level of the disclosure of environmental restoration, environmental donations and sponsorship, environmental fines and penalties and environmental compensation among manufacturing firms in Nigeria were insignificant. It was recommended that policy makers should work with the Ministry of Environment to consider introducing mandatory disclosures which are consistent and environmental. Accounting information components should be charged separately from other expenditures.*

**Key words:** Environmental Disclosure, Sustainability and Covid-19

## 1.1 Introduction

COVID-19 also known as Corona virus, is a transmittable virus produced by the new kind of corona virus SARS-CoV-2, causing destruction around the globe (Emenyi & Effiong, 2020). COVID-19 has dealt with all businesses, causing some to delay or scale back their formal environmental disclosure. Companies that recently released a 2019 report or are in the final approval stages are primarily acknowledging COVID-19 in one of three places: the CEO letter, as a call-out box or case study within the report itself, or in the report's corresponding press release. Environmental disclosure in the financial reports of manufacturing firms plays a key role in the

decision-making requirements of stakeholders. Environmental impacts are of increasing significance and the contents of financial reports on environmental matters are more than just a matter of compliance with the laws. Environmental disclosure in the sustainability reporting has significant impact on the quality of financial reports. Stakeholders are very concerned of the environmental performance of manufacturing organizations in Nigeria during the COVID-19 period. The COVID-19 pandemic has made extraordinary measures to be taken by many nations, for example, travel limitations and limitations on parties (WHO, 2020). However,

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adequate provision of environmental disclosure would create room for transparency, accountability and by extension sustainable environmental practices during the period. The Environmental issues that investors were looking at prior to COVID-19 still hold—indeed, the current crisis has amplified their importance to investors' decision-making. Notwithstanding the worrying health prospects as COVID-19 spreads within the country, it is clear that the economic impact of the virus will be long and severe for Nigeria (Emenyi & Effiong, 2020).

The Stark reductions in business operations and travel as a result of COVID-19 will likely reduce companies' environmental impacts or greenhouse gas emissions and hasten progress towards sustainability development in Nigeria. Honest and timely communications are more important now than ever. Reporting is about meeting the information needs of external stakeholders, and in the current crisis, that may entail disclosure outside the boundaries of the formal sustainability/annual report, such as dedicated COVID-19 pages. According to Fishan, Hatch and Allison, (2020), sustainability reporting exists so that stakeholders can make informed judgments about how companies impact the world around them and understand how the changing world impacts the sustainability performance of companies. In this sense, environmental disclosure and sustainability development is more important now than it has ever been, and looking forward, it will be critical to understand how COVID-19 may impact sustainability reporting over the long term (Fishan, Hatch and Allison, 2020). The main objective of this study was to ascertain the impact of environmental disclosure in the sustainability development among Nigerian manufacturing firms during the Covid-19 outbreak in period. Specifically, the study investigated the level of differences of environmental disclosure among manufacturing firms in Nigeria during covid-19 period.

## **2.1 Environmental Disclosure**

Environmental disclosure is a process whereby a firm has to disclose company's policies toward environmental impact, pollution, emissions, planting and energy efficiency. A key function of the environmental disclosure is to transport costs linking environmental impacts to the management of the company, therefore, encouraging them to find out means to lessen and evade economic costs and also reduce the company's environmental emission (Emenyi, 2018). It must, therefore, be planned so that it provides information allowing users access to the environmental behaviour of a firm and its economic consequence. The information of the environmental accounting system is made from two perspectives: in monetary units or financial information and in physical units or non-financial information (Emenyi, 2018).

Industrial pollutions have destroyed the Nigerian coastal areas, large areas of the mangrove ecosystem. Emission has also destroyed Nigerian farmlands, polluted the ground and drinkable water. As a result of these environmental evils, there is a great need for manufacturing firms in Nigeria that are involved in waste disposal to deal with these problems in a way that will preserve the ecosystem. Methods of recording this effect, analyzing and reporting environmental impacts will reduce these problems in the ecosystem. In the long run, these will help in the accurate pricing of products in the company. The Stark reductions in business operations and travel as a result of COVID-19 will likely reduce companies' environmental impacts or greenhouse gas emissions and hasten progress towards sustainability growth in Nigeria. Honest and timely communications are more important now than ever.

This study theory anchored on Voluntary disclosure. Voluntary disclosure theory is relatively associated with the agency theory, and the proponents are Brammer and Pavelin (2008). Voluntary disclosures

are prerequisite for the removal of information asymmetries between an organization and stakeholders in the operational environment. This theory establishes a threshold on the level of disclosure of information. It makes a forecast on the outcome of firms that are responsive to being a good corporate firm that reports on their environmental engagement and performances. Brammer and Pavelin, (2008) affirmed that inherent information risk to investors can be adequately minimized through voluntary disclosure. Highlights on environmental fines and penalties as well as activities carried out on environmental restoration and waste management among others constitute voluntary disclosure that can position and endear an organization to stakeholders for a job well-done, thereby leading to a competitive advantage. It represents transparency and the achievability of sustainable development to the country. This is because it portrays the organization as being environmentally conscious of resource usage and environmental degradation.

### **2.1.1 Environmental Disclosure for Quality Sustainability Reporting**

Dragomir and Anghel-ilcu (2011) point out the basic components of environmental disclosure. However, there is no sole best method of good environmental disclosures that can be adopted by all companies. Firms should design and implement strategies in the light of regulatory framework that will produce a resourceful, qualitative and result-oriented result, for quality financial reporting in the interest of stakeholders.

Efficient and effective environmental information disclosure should be designed in line with the condition surrounding each entity and continuously reviewed according to the changing situation of the time (Emenyi, 2018). But, for organizations which intend to compete internationally, the following are recommended as essential environmental disclosures components: Environmental restoration,

environmental fines and penalties, environmental donations and sponsorship, environmental compensation and environmental waste management.

#### **(I) Environmental Restoration (ER)**

Environmental Restoration cost is when the company undertakes restoration, rehabilitation and environmental work, especially, when environmental disturbance is caused by the development or on-going production at the company's site. These overheads are predicted at the beginning of the assets useful life and in line with IAS 37. The expenses at the restoration site may also be derived as a consequence of the continuous use of an asset whose environmental impact is not insignificant. Nevertheless, Pricewaterhouse Coopers (2004) considers that, when environmental pollution is outside the industrial parameters for the use of a certain asset, the supplementary expenses should be incurred immediately. Provisions for clean-up costs are persistent elements, that is, they are known at one point in time and may be found unchanged for quite a lot of financial years in the statement of financial position (balance sheet).

#### **(ii) Environmental Fines and Penalties (EFP)**

Environmental fines and penalties are costs borne by companies for breaching the rule and regulation guiding a particular environmental issue. Fines and Penalty costs incurred as expense should be fully disclosed in the company's financial reports. It has an inverse relationship with organizational performance by reducing the profit and return on assets.

#### **(iii) Environmental Donations and Sponsorship (EDS)**

Environmental donations and sponsorship involve companies showing voluntary commitments towards the community, associations and the natural

environment. However, taxes paid for environmental purposes should be disclosed separately in the financial reports in a manner that demonstrates extreme attention for the company's public image. These costs are compulsory for improving the companies' public image.

#### **(iv) Environmental Compensation**

In environmental compensation, firms may be compelled by law to pay for compensation of damages suffered by individuals, their property, businesses and host communities due to the use and release of toxic substances. Even with the company fulfilling all the applicable environmental laws these costs may still occur. Subcategories of compensation liability include personal injury like wrongful death, bodily injury, medical monitoring, pain and suffering. Property damage like the diminished value of buildings and loss of crops and economic loss like lost profits, cost of renting substitute equipment. Compensation costs can be fairly sizeable or quite much, depending on the nature of their claims and numbers.

Additionally, compensation claims can consume management time and require expenses in order to control damage for the company's public image. Environmental compensation also involves costs for remediation of polluted property as well as the provision of alternative water supplies. Payments to compensate employees for occupational exposure and injury from hazardous substances are not generally determined through litigation against the employer or considered environmental liabilities because of workers/employer liability laws of compensation. Management will want to know the possible costs of occupational exposure and injuries, because actions taken to prevent or reduce environmental costs may also reduce compensations' liability.

#### **(v) Environmental Waste Management**

Environmental waste management entails a reduction in what is there, sorting, separating, transforming, returning to service what can be used and properly disposing what is left (Rose, 2002). According to Ghush, (2009), waste is unavoidable human activities. They arise as a by-product of a production process and they arise when the materials are disposed after they have been used. Discarding of waste in a system has a massive environmental impact and can cause a serious environmental hazard. Novick (2009), specifies that waste management in any place is associated with cost reduction in the speed of sanitation-related diseases, reduction on the occurrence of non- communicable diseases and reduction on environmental emissions. All manufacturing firms in Nigeria are expected to make a report on the related cost incurred in the management of waste. This will enable the stakeholders to make informed decisions in evaluating the organization's response to environmental matters and the activities the organization must have engaged in to avoid environmental degradation. Environmental waste management costs incurred as an expense should be fully disclosed in the company's financial reports. This has an inverse relationship with organizational performance by reducing the profit and return on assets of the company.

#### **2.2 Sustainability Growth**

Sustainability report is a report published by a company or organization about the economic, environmental and social impacts caused by its everyday activities. A sustainability report also presents the organization's values and governance model, and demonstrates the link between its strategy and its commitment to a sustainable global economy. Developments in businesses worldwide particularly in relation to sustainable development indicate the importance for companies to integrate sustainability aspects into their corporate reporting mechanism

(Nwobu, 2017). The accountability side of companies is not complete without the reporting mechanism, hence the release of sustainability reports and inclusion of sustainability disclosures in corporate annual reports. The contents of sustainability reports either published as stand-alone reports or integrated into corporate annual reports in Nigerian companies have received some attention in recent years. A sustainability report provides an annual account of how a company responds to issues of material significance to stakeholders and serves as a reference point where companies can provide a formal description of their strategy, approach, and performance. Asaolu et al. (2011) view that sustainability reporting is voluntarily practiced by companies in Nigeria and the reporting was deficient as companies were not guided by any legislation on what to report. The accountability that financial results of companies communicate is an important aspect of their transparency that cannot be ignored: but financial results alone cannot communicate a company's social and environmental impacts. These impacts are redefining the meaning of business value. Therefore, in order to improve the content of sustainability reports, external pressures and organizational context have roles to play in the transformation process(Nwobu,2017).

Sustainability reporting could also be influenced by the organizational context or process depicted by attitudes of key decision makers, board of directors' committee on sustainability issues, stakeholder engagement, sustainability framework and assurance. Another issue is whether the organizational context leads to more or less sustainability reporting, or, whether they lead to situations where business organizations report on sustainability without improving on their internal processes. This kind of situation creates a decoupling between sustainability reporting and internal processes, and could result in less accountability from sustainability reporting and disclosures. Stakeholders today benefit from

companies using the Global Reporting Initiative (GRI) recommendations. These frameworks enable companies to provide reasonably comparable and useful information. However, no such template exists to compare how companies have responded to COVID-19. Rather than every company creating their own report in their own way, companies can look for opportunities to work with industry peers to create consistent COVID-19 reporting taxonomies, disclosures, and metrics so that investors, stakeholders, and policy makers can make easier comparisons. Though COVID-19 has caused unprecedented disruption for many companies, we believe that more integrated, comparable, and standardized reporting will be needed to "build back better." Such reporting can both meet the new information needs brought to light by COVID-19 and strengthen companies decision-making, risk management processes, and overall performance in the long term. Based on the literature reviewed, there is no empirical study that has focused on the environmental disclosure and the sustainability development of manufacturing firms in Nigeria from this perspective. Therefore, this study focused on the level of environmental disclosure in the sustainability reports in Nigeria Manufacturing firms.

## **2.4 Empirical Review**

Ofoegbu (2016) investigated the corporation's environmental accounting information disclosure in the manufacturing firms in Nigeria. The researcher used ex-post facto and content analysis research design for 10 quoted selected manufacturing firms from 2008-2014. The annual reports were used in the study and findings showed that the company's financial performance has a significant impact on the quality of environmental accounting information disclosure of companies. However, the size of the firm had no impact on the quality of environmental accounting information disclosure.



Onyali et al., (2014) in their study on consideration of the practice of environmental information disclosure of selected manufacturing firm in Nigeria. They adopted content analysis in analyzing the financial reports of the studied firms with respect to their environmental disclosure practices. Furthermore, a survey statistics were carried out to find out whether the practice of environmental disclosure in Nigerian companies has improved. In the findings, it was discovered that the practice of environmental disclosure in Nigerian companies is still in the elementary stage and contains little or no monetary data.

Cna et al., (2013), carried out research on "the impact of environmental cost on corporate performance: A study of oil firms in Nigeria". The study's main objective was to investigate environmental cost impacts on the corporate performance of oil firms in the Niger Delta State. The methodology adopted was a field survey involving a sample of 12 oil firms. Findings revealed that the practice of sustainability in business and company's performance is significantly related. In its recommendations, the study opines that a well-articulated environmental costing system should be developed by the management of oil firms in the Niger Delta State in order to assure a crisis-free working atmosphere by managers and this will lead to staff maximum productivity as well as improve companies performance.

Anyanwu (2015), in an empirical study titled "Environmental Management Accounting Techniques and Quality Financial Reporting" undertook to assess and explain the level to which environmental reporting disclosures quality take place in listed firms in Nigeria. The study as well identified and discussed the likely basis for the quality of reporting level. The study adopted a descriptive statistical research method. It revealed that firms in Nigeria are stepping up in environmental

disclosures compared to what it was five (5) years ago. In addition, the study disclosed that greater parts of the firms are reporting on environmental accounting information voluntarily. The study concluded that many firms in Nigeria do not efficiently disclose environmental matters. The companies that disclosed on few environmental accounting information are inconsistent. The study recommended that Nigerian firms have to do more to show their seriousness in improving environmental pollution by means of better quality disclosures in the financial reports of companies to build healthier value for all stakeholders.

Noodezh and Moghimi (2015), carried out a study on environmental costs information disclosure in the company's accounting systems. The study was aimed at examining the extent to which companies evaluate and report the negative environmental waste. The study adopted a descriptive statistical research method. The study revealed that the greater part of firms is not keen on reporting the information related to environmental accounting information components in their financial reports. This is because they consider that its disclosure would impose financial commitments on them. The study recommended that firms' managers should disclose environmental accounting information as a means of lifting a company's prestige and environmental reputation and legitimating their activities for effective and efficient decision making.

Uwuike (2012), looked at the utilization of the internet for communicating companies' environmental information by quoted financial and non-financial firms in Nigeria. The study used a sample of 30 companies listed on the Nigerian stock exchange and t-test statistics was used. Linear regression method was used to examine whether there is a relationship between the financial performance of

companies and the level of corporate environmental disclosures in Nigerian firms. The findings of the study showed that the level of the web-based corporate environmental disclosure has no significant difference between financial and non-financial firms in the Nigerian Stock Exchange.

### 3.1 Methodology

The study adopted the Ex-post facto design. The reason for this design was based on the fact that it is not easy to directly or indirectly influence or control any of the independent variables. The population of this research consists of 55 listed manufacturing firms on the Nigerian Stock Exchange between 2011 and 2020. They were listed firms operating in the consumer goods, industrial, conglomerates and healthcare sectors. From the population of 55 manufacturing firms listed on the Nigerian Stock Exchange between 2011 and 2020. The sample size was selected, using Yamene (1967) formula:

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

Where:

n = the sample size

n = the population

e = error term

Thus,

$$n = \frac{55}{1 + 55(0.05)^2}$$

$$n = 48$$

**Table 3.1 Sample Size and Selection Procedure**

| Description   | 2011 – 2020 |
|---|-------------|
| Sample size determined, using Yamene (1967) formula | 48          |
| Manufacturing firms with insufficient Data          | (38)        |
| Final sample  | 10          |

Source: Compiled by the Researcher, (2020).

The figures in Table 3.1 include only healthy manufacturing firms with data. This selection was to ensure unbiased estimation. Therefore, in addition to unhealthiness, those with insufficient data were also excluded from the study. Environmental disclosure, such as the environmental fine and penalty, donations and sponsorship, restoration, waste management and compensation were considered very vital in the study. Therefore, the number of manufacturing firms in the sample was filtered down to ten (10) and all the filtered manufacturing firms were used in the study. Purposive sampling technique was used for the research. The procedure helps in the selection of manufacturing firms that disclosed environmental related information. The sample firms are: Dangote Cement Plc, Dangote Sugar Plc, Nestle Foods Nigeria Plc, Dangote Flour Mill Plc, Cadbury Nigeria Plc, Guinness Nigeria Plc, Berger Paints Plc, Chellarams Plc, Fidson healthcare and Unilever Nigeria Plc. Secondary data were the main source of data for the research. The data were obtained from financial reports of selected firms for the study. Particularly, data from director's reports, sustainability reports, statement of financial positions, statement of profit or loss and other comprehensive income, notes to the financial statement. The financial reports and accounts were extracted, examined, coded, questioned and computed for the needed data. Secondary data were obtained through reviewing relevant text books, journals, GRI guideline (2006) and other relevant documents.

Descriptive statistical system was used to analyse the information in the study. The data for the dependent and independent variables were extracted from the financial reports using contents analysis method and collated with the aid of Microsoft Excel software. In order to determine the level of environmental

disclosures engaged by the listed manufacturing firms in Nigeria, a disclosure index techniques (Checklist) of 28 items was developed. The data was captured using a disclosure checklist with the scale 0-2, where 0 = none disclosure, 1 = partial disclosure and 2 = Full disclosure.

**4.1 Test of Hypothesis**

The hypothesis of the study was that there are no significant differences in the level of environmental disclosure among manufacturing firms in Nigeria. This test was conducted using the Univariate Analysis of Variance and the result of the analysis is presented thus;

**Table: 4.4 Levene’s Test of Equality of Error Variances<sup>a</sup>**

Dependent Variable: Total

| F     | df1 | df2 | Sig. |
|-------|-----|-----|------|
| 1.328 | 9   | 90  | .234 |

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + COMP

Table 4.4 shows the result of the Univariate Analysis of Variance conducted to determine the level of significant differences in the environmental disclosure among manufacturing firms in Nigeria. The Levene's test for equality of variances indicates a significant value of .234. This data does not violate the assumption of equal variance since it is larger than .05.

**Table 4.5 Between-Subjects Factors**

| Companies         | Mean    | N   | Std. Deviation |
|-------------------|---------|-----|----------------|
| Dangote Cement    | 23.8000 | 10  | 2.52982        |
| Dangote Sugar     | 23.4000 | 10  | .96609         |
| Nestle Foods      | 22.5000 | 10  | 1.43372        |
| Dangote Flour     | 22.5000 | 10  | 1.71594        |
| Guinness Nigeria  | 23.1000 | 10  | 1.28668        |
| Cadbury Nigeria   | 22.7000 | 10  | 1.56702        |
| Berger Paint      | 23.2000 | 10  | 1.61933        |
| ChellaramsP       | 23.6000 | 10  | 1.07497        |
| Fidson Healthcare | 23.6000 | 10  | 1.17379        |
| Unilever Nigeria  | 23.4000 | 10  | .84327         |
| Total             | 23.1800 | 100 | 1.49328        |

Source: Data Processing,(2020).

The mean disclosure effects of the companies used falls within 22.5 to 23.8.

The mean disclosure reveals that Dangote Cement had a mean disclosure of 23.800 with a high level of dispersion (standard deviation) of 2.529; Dangote Sugar had a mean disclosure of 23.800 and Standard Deviation of 0.966. The mean disclosure of Nestle Foods Plc stood at 22.50 with a Standard deviation of 1.433. Dangote flour had a mean disclosure of 22.50 with a std. deviation of 1.716. Guinness Nigeria had a mean disclosure of 23.10 with a std deviation 1.28. Cadbury Nigeria had a mean disclosure of 22.70 and a standard deviation of 1.56. Berger Paint had a mean disclosure of 23.20 with a std. deviation of 1.53. Chellarams had a mean disclosure of 23.600 with a standard deviation of 1.075. Fidson healthcare had a mean disclosure of 23.600 with a standard deviation of 1.173. Unilever Nigeria had a mean disclosure of 23.400 with a standard deviation of 0.843.

The company with the highest mean disclosure was Dangote Cement with 23.8 while the lowest were Nestle Foods and Dangote with 22.5. This shows a meager difference level among them. The standard deviations of the individual companies also unveil that the level of dispersion was tilting towards the same level.

**Table 4.6 Tests of Between-Subjects Effects**  
 Dependent Variable: COMPANIES

|          |               |            | Sum of Squares | Df | Mean Square | F    | Sig. | Partial Eta Squared |
|----------|---------------|------------|----------------|----|-------------|------|------|---------------------|
| TOTAL *  | Between       | (Combined) | 19.960         | 9  | 2.218       | .994 | .451 | .090                |
| COMPANIE | Groups        |            |                |    |             |      |      |                     |
| S        | Within Groups |            | 200.800        | 90 | 2.231       |      |      |                     |
|          | Total         |            | 220.760        | 99 |             |      |      |                     |

Source: Researchers' Computation, (2020).

The F tests the effect of COMPANIES. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

Table 4.6 shows the result of the Univariate Analysis of Variance conducted to determine the level of significant differences in the environmental disclosure among manufacturing firms in Nigeria. The result reveals a low F statistics with a p-value of 0.451. It follows therefore that, there are no significant differences in the level of environmental disclosure among manufacturing firms in Nigeria.  $F(99) = 0.994, p = .451$ . The magnitude of the differences in the mean is of little effect (eta squared = 0.090).  $H_0$  is therefore accepted and  $H_1$  is rejected.

**4.2 Discussion of the Findings**  
**Comparing the level of Environmental Disclosure among Manufacturing Firms in Nigeria**

The study ascertains the level of differences of environmental disclosure among manufacturing firms in Nigeria. The results presented in Table 4.6 show a low F statistics with a p-value of 0.451, it follows therefore that, there are no significant differences in the level of environmental disclosure among manufacturing firms in Nigeria.  $F(99) = 0.994, p = .451$ . The magnitude of the differences in the means is of little effect (eta squared = 0.090).  $H_0$  is therefore accepted and  $H_1$  is rejected. The mean disclosures of the various companies were not that dissimilar from one another while the level of dispersion tilted towards the same level. This finding is in line with the study of Uwuigbe (2012), who concluded that the level of corporate environmental disclosure has no significant difference between listed firms.

**5.1 Conclusion**

This study was on the environmental disclosure and the sustainability development in Nigerian manufacturing firms. The study applied one sample T-test, Univariate Analysis of Variance. One important result of the study is that the level of environmental disclosure in Nigeria is high when compared to other countries of the world.

The implication of this result is that an improvement in accounting and disclosure of these components will ultimately improve the quality of sustainability reports prepared by the manufacturing firms in Nigeria. Reports should provide an enduring account of how companies are responding to the COVID-19 crisis (Fishan, Hatch and Allison, 2020). The extent to which companies do this now or in the future depends on where they are in their reporting cycle: reports near completion today (e.g. by companies that operate on a calendar-year basis) will provide less insight than those with more time available (e.g. by companies with a fiscal year that doesn't match the calendar year and report later in the year). Regardless of reporting calendar, companies will need to explain decisions made during this time and make forward-looking statements about how they intend to help "build back better" in the future (Fishan, Hatch and Allison, 2020). Sustainability reports will become an essential venue for accountability when looking back at company actions during COVID-19.

**5.2 Recommendations**

In line with the findings and conclusions of this study, as discussed in the previous sections, the following recommendations are proffered towards enhancing the environmental disclosure and improving the sustainability reports in Nigerian Manufacturing firms:

- i. Standard setters and policy makers should work with the Ministry of Environment to consider introducing mandatory disclosures which are consistent and standardised.
- ii. Environmental accounting information components should be tracked and charged separately from other expenditures by manufacturing firms. This will provide more accountability and transparency on the organizations reporting its impact on the environment.



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# Ecological Processing Cost Efficiency and Petroleum Output

Ahakiri, Francis Idiege\*

## Abstract

*This study was undertaken to assess the effect of processing cost on eco-efficiency of oil and gas productiveness in Nigeria for fifteen years. The research adopted ex-post facto research design. Data were gathered from relevant secondary sources and were subsequently subjected to statistical test using the multiple regression analytical technique. It was discovered that processing activities have a positive effect on the level of eco-efficiency measured as the environmental cost per unit of output of oil and gas corporations in Nigeria. It was concluded that costs of gas not utilized, oil produced and gas utilized have a positive relationship with the output of oil and gas produced. Hence, it was recommended that oil and gas companies should adopt modern techniques and equipment to reduce the effect of their exploration activities on the ecosystem and the host communities.*

**Keywords:** Eco-efficiency, Environmental cost, Oil and gas produced, corporate social responsibility, Exploration activities

## 1. Introduction

Oil and gas exploration and/ or processing activities in Nigeria recently are increasing in a geometric progression due to the crash experienced in the price of crude oil in the global oil market as regulated by the Organization of Petroleum Exporting Countries (OPEC). This is because government, oil and gas industries, petroleum marketers are increasing the volume of oil produced, marketed and exported even at the low price, with the aim of meeting up with increasing government expenditure in their respective countries. This has also exerted pressure on oil companies who increase their search for and production of more crude oil, thus excreting negative impact or externalities on both the host communities and the ecosystem in general. Besides, companies are gearing up efforts to ensure continuous maintenance of a higher level of commercial reserves of oil, especially within this period under review, with great expectations that the price of oil would spank up in the near future. The oil and gas sector was and is still the main stay of the Nigerian economy (which is import driven) over the decades, so oil is therefore the major source of income, since it contributes to about 90% of our export, it also plays a vital part in the structuring of the economic, business and political structures of Nigeria (Adati, 2012 & Asuquo, 2012).

Recently, there has been an increase quest for the environmental and sustainable development within international bodies and business fields. There is an increasing requirement for the identification and application of an effective and efficient instrument that could be used to measure and interpret the sustainable level of business operations especially within the oil and gas industry of the Nigerian economic and social environment and also the need to translate them into specific indices with the aim of protecting the ecosystem, ensuring ecological balance and enhancing socio-geographical progress while carrying out business (oil and gas) operations profitably. (Olujimi, Emmanuel & Sogbon, 2011; Asuquo, Dada & Onyeogaziri, 2018). Consequently, this step gave rise to the concept of eco-efficiency, and its application in the oil and gas sector.

Eco-efficiency is thus a new dimension of environmental management accounting. It considers the environmental consideration and the cost analysis geared at improving products, services and technological innovations used in businesses, institutions and governmental bodies. It is also a tool for sustainability reporting as well as strategic

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environmental development and sustainability (Asuquo, 2012; Asuquo, Dada & Onyeogaziri, 2018).

Many environmental issues involving the disturbance of the forest and ground surface from petroleum activities take place; such as clearing of marked sites, construction of roads, tank farms, and other storage facilities, oil platforms, installations of oil pipelines, modification of land and ground surface. Other activities necessary for the exploration of production oil wells and also the building of other production facilities have awakened a major environmental concern amongst oil and gas industries, with the major aim of reducing the impact of negative externalities, environmental cost, while maintaining a higher level of output. Other environmental issues arising from oil and gas production activities include poor discharge of large volume of hazardous waste streams like toxic and oily sludge, gas flaring, oil spillage, free leakages from vandalized pipelines, discharges of oil and gas derived chemical waste, contamination of water sources, increased destruction of soil and aquatic habitats, accidental discharges from abandoned oil wells, oil bunkering, stealing of exploration and production assets, kidnapping of exploration expatriates, high cost of exploration licenses, among other issues. These issues are therefore summed up by companies and included in the production cost as either cost of oil and gas utilized or cost of oil and gas not utilized. Companies are therefore interested in reducing the cost expended to reduce these externalities while carrying out their businesses profitably. Besides these, many firms are still gearing towards the execution of corporate social responsibility (CSR) with the aim of maintaining a sustainable business environment that would respond to the financial need of the organization (Asuquo, 2012).

Therefore, this paper attempted to examine the challenges faced by oil and gas companies in measuring these environmental costs that impinge on the company's output produced, and how those expenditures incurred during exploration for evaluation and production of mineral resources affect Eco-efficiency of oil and gas companies.

## **2. Review of Related Literature**

### **2.1 Theoretical Framework**

**2.1.1 Resource Dependence Theory:** Resource dependence theory has been examined and greatly supported in studies of inter-organizational relationships (Oliver and Elmers 1998). The assumption of resource dependence theory is that the firm cannot be independent with regard to critical resources for its survivors. It depends on resources from outside parties to be competitive (Wathne & Heide, 2004) thereby develops a need to manage this dependence with other firms for sustainable development (Ulrich & Barney, 1984). Firms that lack the required resources to achieve their goals are left with no choice but to partner with others to acquire these resources. Where partnership and resource sharing are beneficial for environmental and productivity improvement this leads to diffusion of environmental practices between the partners (Sarkis, Gonzalez-Torre & Adenso-Diaz, 2010). Eco-design practices require firms' partnerships to ensure performance benefits (Sarkis et al., 2010). Interorganizational relationship is crucial for environmental management to gain performance outcomes, where partnership and resource sharing are important for environmental and productivity improvements (Zhu & Sarkis, 2004). Resource dependence argues for the diffusion of environmental practices among the partners involved. Lack of self-sufficiency creates dependence on suppliers by the customer organization. Thus, integration of supply chain management with quality management helps an organization establishing a competitive advantage. The principal idea of the RBV is that for a firm to achieve competitive advantage then it all depends on its heterogeneous resources, which are inimitable, valuable and non-substitutable. It is perhaps one of the most influential frameworks in environmental management (Barney, 1991). Environmental innovations may as well lead to complex, environmentally friendly technologies, products, and processes. These in turn lower overall company costs, ensure long-term competitive advantage and finally boost financial performance (Christmann, 2000). Researchers should use resource-based view to investigate green issues (Dowell, Hart & Yeung,

2000; Hart, 1995). Proactive environmental strategies that go beyond regulatory compliance have a positive effect on firm performance when mediated by valuable firm capabilities (GaldeanoGo´mez et al., 2008; Russo & Fouts, 1997; Sharma & Vredenburg, 1998; Wagner, 2005)

**2.1.2 Resource-Based View (RBV):** RBV provides a good theoretical foundation to discuss the contribution of resources and capabilities to firm's performance. The theory gives an insight on the relations among internal resources, capabilities, and performance. The principal idea of the RBV is that for a firm to achieve competitive advantage then it all depends on its heterogeneous resources, which are inimitable, valuable and non- substitutable. It is perhaps one of the most influential frameworks in environmental management (Barney, 1991). Environmental innovations may as well lead to complex, environmentally friendly technologies, products, and processes. These in turn lower overall company costs ensure long-term competitive advantage and finally boost financial performance (Christmann, 2000). Researchers should use resource-based view to investigate green issues (Dowell, Hart & Yeung, 2000; Hart, 1995). Proactive environmental strategies that go beyond regulatory compliance have a positive effect on firm performance when mediated by valuable firm capabilities (GaldeanoGo´mez et al., 2008; Russo & Fouts, 1997; Sharma & Vredenburg, 1998; Wagner, 2005)

**2.2 Conceptual framework:** Environmental management accounting theory is management information system that makes available relevant information which is aimed at helping management in making informed decisions on the environment. Environmental management accounting serves same objective, it gives information on the costs and benefits associated with environmental management, measured in monetary or in physical values. Environmental management accounting (EMA) gives details that would assist in operations and workability of the environmental information management system. It makes available both non-financial and also financial information for making important managerial decisions. Although EMA complements other relevant conventional methods of

managerial accounting, it does not take their place. The key applications of environmental management accounting include;

Providing estimates on yearly environmental costs (E.g. costs of waste control, cost of mopping up oil spilled and gas flared including the fines paid), Target settings/ budgeting for improvements in environmental performance, Product pricing/pricing system evaluation, Appraising of investment (e.g., estimating the costs of cleaning up at the termination of a life cycle of a product and evaluation of the cost associated with the environment in a given project).

Eco-efficiency accounting is a new conception in the accounting and environmental field which takes into consideration the economic analysis with the aim of improving products, outputs, while leaving the environment unharmed (Akpan, Ahakiri & Etibensi 2019). Eco-efficiency theory was developed by a body called World Business Council for Sustainable development in 1991 during which they attempted to define it as a provision of goods and services that are competitively priced but that would meet human needs while eliminating or limiting negative externalities and intensity of the resource throughout the life cycle of the products, services up to a level that it comes in terms with the sustaining capacity of the ecosystem (Akpan, Ahakiri & Etibensi 2019). According to Czaplicka, Burchart-korol & Krawczyk (2010) companies can produce useful products while at the same time reducing negative externalities on the environment, reduce consumption of resource and also the cost. Winfree and Druller (2000) also opined that eco-efficiency focuses on the improvement of ecological and economic performance. It is therefore seen as a strategic tool that is geared at sustainable development, strategic planning, peace keeping; non-violence environment and as well as resource and cost utilization (Asuquo, Dickson, Emechebe & Ebri, 2016).

Eco-efficiency allows financial and environmental analysts to find the most effective solutions and proffer an applicable piece of advice, taking into account the economic aspect and environmental compatibility of products and their impact on the environment. Eco-efficiency measures the level of environmental impact against economic performance. While environmental impact is



expected to be as low as possible, economic performance is expected and should be kept as high as possible.

Eco-efficiency is thus a management tool used in targeting a reduction in the consumption of natural and other resources, reduction in the environmental impact, while increasing the value of product added, economic efficiency in production. Eco-efficiency is also a business and accounting tool for sustainability evaluation which indicates the relation in business and economic activities, and also between environmental cost or/and value and other environmental effects. It holds that instead of focusing on the externalities, attention should rather be given to addressing its underlying causes (Asuquo, 2012).

Commenting on the value of business and environmental evaluation tool like eco-efficiency, Bidwell & Verfaillie (2002) in their works were of the view that businesses should set targets and monitor performance with the aim of having indicators as an acceptable managerial tool of evaluating its corporate progress. This therefore supports the fact that eco-efficiency is therefore a management tool for measuring the level of the impact of business activities and environmental cost on the level of output (Asuquo, 2012).

In the cause of this work, eco-efficiency is viewed both from the quantitative and qualitative approach. It is determined in term of cost per unit of environmental value added (Huppel, Hunkler, Rebitzer, & Lichtenvort, 2005). It is quantitatively defined as follows:

Eco-efficiency = Total environmental cost (TEC)/total output (TO) = TEC/TO.

The implication for the above quantitative definition is that, in quantifying Eco-efficiency, both the denominator and the numerator require their own defined indicator or measurable metric, and the researcher adheres to the requirement of ISO 14042:2000: Environmental management -life cycle assessment - Life cycle impact assessment now revised as: ISO 14040:2006. Under section 6.4 Weighting. As mentioned earlier the eco-efficiency

attempts to bring together the two variables, ecology and economy. Therefore, eco-efficiency-index evaluates the performance of companies in relations to its environmental performance as it concerns product or operations and also with considerations to its financial performance. It is an index measured as a ratio of environmental variables against their economic variables (i.e. Financial) (Sturm, Muller & Upasena, 2002) this could be represented as:  
Environmental influence/ Product and service value  
(as presented in formula 2 above)

### 2.3 Empirical Review

Klassen and McLaughlin (1996) proposed a theoretical model aimed at establishing a linkage between strong environmental management and improved future financial performance. Using empirical methods, their findings discovered significant positive financial returns which were measured for strong environmental management, while significant negative financial returns were measured for weak environmental management.

King and Lenox (2001) investigated whether a causal relationship existed between firm's environmental management practices and firm financial performance. Their objective was to study whether other underlying firm attributes had a direct effect on this relationship. Applying empirical methods, King and Lenox (2001) discovered a link between a measure of environmental management practices and firm financial performance.

Horváthová (2010) was of a contrary opinion. He argued that the inconclusiveness of results regarding the impact of environmental performance on financial performance was due to underlying factors. The results from her research showed that the probability of obtaining a negative association between environmental management practices and financial performance reasonably increases when using correlation coefficients while the use of panel data techniques and multiple regressions had a neutral effect on the outcomes. A study by Yang, Hong, and Modi (2011) on the impact of lean manufacturing and environmental management on business performance, reveals a relationship between lean manufacturing and environmental management.

Iwata and Okada (2011) carried out a comprehensive study on the impact of carbon emissions on firm financial performance. They examined this relationship in Japanese manufacturing firms for a five-year period. They employed return on equity as one of their measures of firm financial performance and discovered that carbon emission reductions increase longrun firm financial performance.

**3. Methodology**

The researcher adopted the ex-post facto design since this does not provide the researcher the opportunity to control the variables mainly because they have already occurred or cannot be manipulated. The researchers adopted this design since the independent variable which is the exploratory cost to be tested had already been incurred and reported, and as such the researcher can do nothing to manipulate the reported figures. The researcher further adopted a descriptive research design to enable us describe the phenomenon in context of exploratory cost and eco-efficiency and also to establish a functional relationship between the dependent and independent variables within a 15-year span, and also because quantitative analysis of the collected data are involved.

**3.1 Model specification**

The following econometric models were formulated and stated below:

1.  $EE = f(PC)$

Therefore  $EE = f(G, S, U.)$

Further  $EE = a + b1G + b2S + b3U + e ..$  Equation (1)

Where

EE = Eco-efficiency

EC = Exploration Cost (further represented by G, S, U.)

U = Cost of gas processed and utilized

G = Cost of gas not utilized.

S = Cost of Oil processed.

e = Error term.

a = Constant

b1, b2, b3 > 0

b1. - bn. = equation coefficient.

2. Also in a bid to clear the confusion in the inverse ratio as used in the quantitative definition and also the complexity in the quantitative definition by different

authors, the following quantitative model is proffered for eco-efficiency for use in this work.

Eco-efficiency

Therefore  $EE = \frac{\sum EC}{n \cdot O}$

**Where EE = Eco-efficien**

EC = Environmental Cost

n = Numbers of years

O = Output.

**4. Results / Findings**

Data obtained were subjected to appropriate statistical analysis, interpreted and discussed accordingly. The hypotheses that were formulated earlier are also tested at a 0.05 significance level. Discussions resulting from the analysis was also presented. The raw data from different companies used in the presentations are presented in appendix while the summarized data are presented below.

**TABLE A: Extracted regression result on gas unutilized, oil produced, gas utilized and eco-efficiency of oil and gas companies in Nigeria.**

| Variables | Coefficient | Std. errors | T-statistics | Prob   |
|-----------|-------------|-------------|--------------|--------|
| C         | -12.38430   | 21.74661    | -0.569482    | 0.5805 |
| GASNT     | 5.78E-09    | 1.68E-08    | 0.343829     | 0.7375 |
| GASUT     | 3.02E-09    | 8.04E-09    | 0.376036     | 0.7140 |
| OILPD     | 4.76E-05    | 1.35E-05    | 3.522519     | 0.0048 |

R2 0.617505

Adjusted R2 0.513188

F-statistic 5.919517

Prob. (F-statistic) 0.011744

Durbin-Watson stat 1.128529

From Table A, the R2 is 62 percent. This indicates that up to 62 percent of the variations in the dependent variable, (i.e. eco-efficiency) are being explained by the different independent variables tested, leaving about 38 percent to be reflected in the other variables that are likely to affect eco-efficiency, but which is not captured by the researcher in the model. The adjusted R2 of 51 percent shows a positive goodness of fit of the parameter estimates. This could be explained to mean that the variables in the regression equation accounted for 51 percent variations in eco-efficiency, thus the variations noticed in cost of gas not utilized, cost of oil produced and gas utilized could jointly be

explained as the measure of the effect of production cost variations with regards to the variations in eco-efficiency, while the remaining 49 percent is accounted for by the stochastic error term in the model. The constant term indicates a negative position of all other factors that could impact on eco-efficiency as such it could be said to be insignificant. While other coefficients like the cost of gas unutilized, gas utilized and oil unutilized indicated a positive significance at five percent confidence level. The f-statistic value of 5.91 was positive and greater than the table value of f-statistic of 3.95, indicating the significance of the independent variables, confirming that the high level of the models predictability did not occur by chance, and that the model used fits the data. The t-statistic result indicated that individual independent variables significantly contributed to the variance in the dependent variables, but that of oil produced had a far more greater than significance as its value of 3.5 +ve was greater than the tabulated t-statistic value of 1.771 with a degree of freedom  $n-2$  (i.e.  $15-2$ ) = 13 at a one tailed five percent level of significance. The economic implication of the t-statistic is that one percent increase in cost gas unutilized will also lead to about 34% increase in eco-efficiency, and also a percentage increase in gas utilized would lead to about 37 percent increase in eco-efficiency.

The Durbin-Watson (DW) statistic is used to test for the existence of auto correlation in the residual, and the calculated result is compared to the tabulated value. Thus, it is expected that there is no autocorrelation if the calculated DW value is greater than the tabulated DW. From table 4.12, the calculated DW value is 1.128529 while the  $dL=0.685$  and  $du = 1.977$  (where  $n=15$  years and  $k = 4$  variables) therefore since 1.128 is greater than  $dL$  therefore an indication of non-auto-correlated error in favor of the hypothesis of positive first order autocorrelation

#### 4.1 Discussion of Findings

##### Hypothesis I

H0 Cost of gas not utilized does not have any significant impact on the petroleum output of oil and gas companies in Nigeria.

From the e-view result, the calculated value of 7.3 is greater than the figure from the f-statistic table which is 3.9, therefore the null hypothesis is rejected and the alternative adopted and put to further use. Thus, costs of gas not utilized have significant impact on the petroleum output.

##### Hypothesis II

H0: Cost of gas utilized does not significantly affect the output of oil and gas industries in Nigeria.

From the e-view result as shown in the hypothesis 11, the calculated value of 7.1 is greater than the figure from the f-statistic table which is 3.59, therefore the null hypothesis is rejected and the alternative adopted for consideration

Hence, production cost is deemed to have significant impact on the petroleum output.

##### Hypothesis III

Cost of oil produced has no significant relationship with the petroleum output of oil and gas companies in Nigeria.

Also, from the calculated value as shown, 0.48 is less than the figure from the f-statistic table which is 3.59, therefore the null hypothesis is accepted and the alternative adopted. This implies a relationship between cost of oil produced and petroleum output of Nigeria oil and gas companies but not significant.

##### Recommendations

1. Government should ensure adherence is given to flaring regulation presently in place which in essence will guarantee eco-efficiency and on a long run improve productivity.
2. Existing environmental legislations which are presently outdated should be reviewed to accommodate eco-efficiency need of companies.
3. Oil and gas companies should carry out investigation to find out methods, machines and processes that reduce the negative impact of their activities on the Environment (externalities) and use them effectively.

## Conclusion

After an in depth study, it was concluded that exploration and / or production activities influenced the level of eco-efficiency in the oil and gas industry of Nigeria; and these activities involved heavy sunk cost in addition to cost involvement associated with keeping peace in the environment which ensures conducive work place for productive activities to thrive (Asuquo, Dickson, Emechebe, & Ebri, 2016). The need of establishing a model for the measurement of eco-efficiency levels of different companies in order to assess their contribution to environmental sustainability is imperative, as this study has revealed that eco-efficiency model that was proffered in this study could be used by anybody (public or private) to place a benchmark on companies who stand to face reputational risk if they fall below the benchmark. It was therefore concluded that the oil and gas production have a positive relationship with the environmental cost and output of oil and gas companies.

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## Communiqué of the 26th Annual National Conference of Certified National Accountants

### Preamble

The 26th Annual National Conference of Certified National Accountants took place from Monday 6th to Thursday 9th September, 2021, at the International Conference Centre, Abuja. The Conference with the Theme *Strategic Options for Economic Recovery: Role of the Accountants* was attended by more than 4,000 registered delegates.

The Conference was declared open by His Excellency, Alhaji Ramalan Yero, FCNA, former Governor of Kaduna State. Goodwill messages were delivered at the opening ceremony by top government functionaries and their representatives, including the Minister of FCT, Mohammed Musa Bello, the Accountant General of the Federation, Alhaji Ahmed Idris, FCNA, the Auditor General for the Federation, Mr. Adolphus A. Aghughu, FCNA, the Executive Chairman FIRS, Muhammad Nami, FCNA, and the Executive Secretary Financial Reporting Council of Nigeria, Ambassador Shuaibu A. Ahmed, FCA. Goodwill messages were received from the Presidents of professional bodies, including Surv. Akin Oyegbola (APBN), Mrs Comfort O. Eyitayo, FCA (ICAN), Mr. Adesina Adedayo, FCTI (CITN), Dr. I.B. Gashinbaki (CIFCFEN) and Bldr. Kunle Awobodu, (NIOB).

Hon. (Dr.) Yusuf Buba Yakub, Chairman of House Committee on Foreign Affairs, House of Representatives chaired the opening ceremony, while Prof. Egwu U. Egwu, Director of Entrepreneurship Development Centre and former Deputy Vice Chancellor, Ebonyi State University presented the keynote address. Also, Ms Alta Prinsloo, the CEO of Pan African Federation of Accountants (PAFA), addressed the conference.

The Theme of the Conference was exhaustively deliberated by various discussion panels under the following sub-themes:

I. Ethical Financial Inclusion for Economic Recovery

- II. Exploring New Opportunities for Nation Building: Ethical Accountant as a Strategic Planner
- III. Earning and Sustaining Public Trust: The Accountants' Challenges and Options
- IV. Wealth and Value Creation: Perspectives in Nation Building.

### General Observations

Participants at the Conference observed that:

- \* Nigeria is the most populous nation in Africa and 7th in the world, yet 55.4% of her youths are unemployed.
- \* Government, financial institutions, professional accountancy bodies and professionals have the major responsibility to the drive of economic recovery in Nigeria.
- \* Financial inclusion is a key enabler for economic recovery and a basic strategy for economic growth with the potential for poverty alleviation. It enables unbanked and undeserved (rural) communities to access financial services that will enhance their economic opportunities, boost productivity in various sectors and contribute to economic development.
- \* Nigeria is endowed with an array of material and human resources, yet majority of her citizens live in abject poverty due to lack of entrepreneurial skills, physical infrastructure, executive capacity, and political will.
- \* Key potential components of strategic options and new opportunities for economic recovery mainly depend on coordinated activities in harnessing new frontiers and opportunities, corporate transformation, entrepreneurship, health care development, tax and income planning, and, more importantly, diversification of the economy away from oil.

- \* Accountants are the conscience of a nation that wants to get things right. Accountants must make public interest protection paramount as a safeguard to unethical issues.
- \* Ethical Accountants need to participate in national politics by contesting in elections which will afford them the opportunity to build the nation.
- \* Accountants play key roles in business and practice. These roles can only be effective through their ability to earn and sustain public trust through collective resolve to shun vices such as misuse of power, incompetence and complacency. Public trust is the degree to which the public has confidence in the services provided by the accounting profession.
- \* Accountants face a lot of challenges and dilemmas in the course of discharge of their duties, such as being compromised by their bosses or chief executives, conflict of interest, family and peer pressure, greed and avarice, earnings management and corruption.
- \* Wealth creation and value addition are springboards to development and nation building which ensure that the living conditions of the citizens are improved overtime.
- \* Integrated thinking and sustainability reporting as adopted by accountants will advance the value creation of a nation.

## Recommendations

The Conference therefore recommends as follows:

1. Professional Accountants, as key partners in addressing the challenges of nation-building in Nigeria, must not only be ethical in their approaches to accounting practices, but must also adopt corporate transparency as a blueprint for nation building.
2. Professional Accountants should use their financial expertise to proffer policy solutions on various economic and financial measures towards economic recovery. This can be enhanced through continuous policy dialogue among accountants, key government agencies and other stakeholders in form of workshops, working groups and round table discussions.
3. Code of Ethics for Professional Accountants should be made more functional and applicable to contemporary times. Professional accountants should adhere to the Code of Ethics in order to build public trust in the accountancy profession.
4. Professional Accountants should identify likely areas of ethical dilemmas and workplace challenges with a view to addressing them professionally. This may entail entrenchment of a continuous system of conversation on matters relating to work place challenges aimed at addressing the ethical dilemma facing the accountants and the accountancy profession.
5. Professional Accounting Organisations, in collaboration with Small and Medium Enterprises Development Agency (SMEDAN) should promote financial literacy and education for small business owners and enterprises towards business development and greater financial inclusion.
6. Ethical accountants must continue to earn and sustain public trust by displaying behavior that goes beyond the ordinary standards in order to boost the current drive towards financial inclusion and poverty eradication in Nigeria.
7. Government at all levels should focus on Value Chain Development and Global Integration. Our nation is highly endowed with basic inputs and commodities that would normally form the foundation for Global Value Chain (GVC) and sustainable wealth creation towards improving the livelihood of Nigerians.
8. The Federal Government should articulate a clear National Policy on Value Chain Development that is effectively integrated with the national trade, industrial development and competitive strategies. Government at all levels and private sector players should give priority to investment in Research & Development with a view to achieving technology, entrepreneurship and skills upgrade.

9. Financial services should be extended to remote areas towards strengthening the financial inclusion drive thereby increasing economic growth in Nigeria. Rural bank branches should be more innovative in ways of creating platforms that would make customer deposits easier and accessible thereby boosting the economic growth of Nigeria.
10. Banks should design their business models to cope with disruptions in their quest to deliver value to stakeholders, particularly rural dwellers. Non-interest banking should be encouraged as it is a very useful instrument to financial inclusion.
11. Government at all levels should encourage private sector participation and commit more resources to the improvement of infrastructural facilities (markets, roads, water supply, electricity etc.) in the rural areas. More so, Government should invest to improve the digital infrastructure deficit in order to optimize the 5G broad bandwidth towards boosting economic activities into the rural areas.

On behalf of the President, Professor Benjamin Chuka Osisioma, FCNA, Council, Management and staff of Association of National Accountants of Nigeria, we express our profound appreciation to all guests and members of the Association for finding time to grace the 26th Annual Conference of Certified National Accountants in Abuja.

***Signed***

***Dr. Nuruddeen Abba Abdullahi, mni, FCNA***  
***Chief Executive Officer***



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