



# Osuolale Peter Popoola The New World Order and the Challenges of Official Statistics in Nigeria

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#### Introduction

In this new world order of Globalization of ICT revolution, Climate Change, Cyber Crime, Big Data evolution and COVID-19. There is an unprecedented need for data to not only enable decision makers to inform policies and planning but to also minimize the risk for all especially the vulnerable population groups in Nigeria. Data is an important driver to all round development; Data is needed to bring about development in Nigeria. Twelve out of the seventeen sustainable development goals (SDGs) are data driven goals. Official Statistics are produced, collated, and disseminated by the federal governments of Nigeria through the Nigeria Bureau of Statistics (NBS). Is the present NBS in Nigeria able to meet Data need that could drive all round development expected between now and the year 2030? How do we revolutionize official statistics in Nigeria? What are the opportunities for obtaining Official Statistics in Nigeria? Should Official Statistics go into competition with new data eco-system? How do we build robust collaboration between the users and the producers of official statistics in Nigeria? From the point of view of the global data community, is NBS ready for such a huge challenge of data need? This session is to provide answers to the various questions posed and provide frame work in which NBS and other National Statistical Organizations NSOs in Africa should operate so as to meet the data need for Africa development in the new normal era.

# Speaker 1: Iyabode Favour Oyenuga

# THE STRUCTURE OF NATIONAL BUREAU OF STATISTICS AND DATA PROCUREMENT IN NIGERIA

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#### **ABSTRACT**

For many years, the Statistics department was largely unknown and undervalued and many Statistics users viewed the data as unreliable, undependable and of only limited use. With the supports from World Bank's International Development Association (IDA) and Britain's Department for International Development (DFID), National Bureau of Statistics (NBS) came into existence with the merger of Federal Office of Statistics (FOS) and the National Data Bank (NDB) which since inception has conducted many functional surveys and studies on Nigeria's development. The creation of NBS was part of the implementation of the Statistical Master Plan (SMP), a programme document of the Federal Government of Nigeria (FGN).

The positive transformation of NBS to expand its scope through National Strategy for the Development of Statistics (NSDS) to cover both Federal and State producers of Statistics. The objective is to make the National Statistical System in Nigeria one of the foremost and modern knowledge-based National Statistical Offices in Africa and the World at large.

NBS is expected to oversees and coordinate Statistical operations of the National Statistics System in the production of Official Statistics in the Federal Ministries Departments and Agencies (MDAs), State Statistical Agencies (SSAs) and Local Government Councils (LGCs). This is achieved by creating the highly Integrated Nigeria Data Nervous System (NDNS) which would bring all data producers and users agencies together through a Virtual Private Network (VPN).

Keywords: Official Statistics, IDA, DFID, FOS, NDB, NSDS, SMP

#### 1.0 Introduction:

Statistics is an indispensable tool for national development, growth and planning. Government without viable infrastructure for information generation, dissemination and usage are severely handicapped in doing proper planning, monitoring and evaluation of development programme and projects and also in arriving at good decisions with respect to government policy formal.

Reliable, independent and trustworthy information on all aspects of society is therefore needed for policy makers to make evidence-based planning and policy decisions, researchers to analyse, society and citizens to form opinions and hold government accountable for their

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actions. The success of development plans is measured by the quantum of data, information Progeedings 63rd ISI World Statistics Congress 11 - 16 July 2021 Virtual tics lie in the core of the development planning and the absence of such data makes it impossible to ensure future development and welfare of the society.

The importance of Statistics in planning of macro, micro and unit levels cannot be overemphasized as no meaningful development can take place at any of these levels without accurate and reliable data. Over the years, the demand for statistics continued to increase as, policymakers, administrators, civil society, business, researchers and the general public increasingly need statistics to inform their decisions. The Paris21 and the Marrakech Action Plan for Statistics development drew attention to, and proposed a roadmap to overcome one of the greatest development challenges of developing countries, including Nigeria. Therefore, National Statistical Master Plans (NSMP) and Nigeria's National Strategy for the Development of Statistics (NSDS) were developed to address the Statistics challenges in Nigeria.

## 2.0 National Statistical System (NSS)

A National Statistical System is a system that has a coherent body of data. The essence of a NSS is to bring together players in the data production industry and ensure continuous cooperation among producers and users of Official Statistics in order to advance standardization, quality, consistency, comparability and avoid unnecessary and costly duplications. Among participants in the system are producers, users, suppliers of Statistics and Research /Training institution. A NSS is a partnership between those responsible for policy formulation and those implementing so that the latter know precisely what the former wish to achieve and thereby facilitate production of relevant information to reinforce planning cycle.

#### 2.1 Vision of NSS

The vision of NSS is to be a proactive, coordinated well-managed and resourceful system, capable of meeting Statistical data and information needs of society through sustainable national development

# 2.2 Components of NSS

Under the Statistics Act, 2007 of Nigeria, the NSS constituted by the following:

## 1. Data Producers

In Nigeria, producers of official Statistics include the following

- a. National Bureau of Statistics (NBS)
- b. State Statistical Agency (SSAs)
- c. National Population Commission (NPC)
- d. Central Bank of Nigeria (CBN) and
- e. host of Ministries, Departments and Agencies (MDAs).

The role of data producers is to ensure that there is a continuous flow of high quality and accessible Statistical data and information over an extended range of economic and social subject matter required by the users for a host of purposes.

#### 2. Data Users

It is important that Statistical data and information are user-focused, user-friendly and demand-driven. Data can be used in the following ways:

- a. Policy and Decision makers in government, MDAs and other Public Sector Institutions.
- b. State and Local Government Authorities

- c. Researchers and Academicians Proceedings 63rd ISI World Statistics Congress, 11-16 July 2021 Circus and Community Based Organisations (NGOs) and Community Based Organisations
- (CBOs).
  - e. Private Sector Organisations (PSOs)
  - f. Development Partners and International Organisations.
  - g. The Media
  - h. The General Public

The role of Data Users is to advancing a common understanding of policy issues and related data requirements, setting data priorities, classifying the objectives for data collection and agreeing on the best methods for collecting data.

## 3. Data Suppliers

These are very important but not adequately acknowledged. They are as follows:

- b. Individuals and groups within specified organisation.
- c. Establishments and Institutions.

The role of data suppliers is to co-operate with data collecting agencies in providing accurate data and information when requested in the form required and on timely basis.

# 4. Research and Training Institution

#### **Research Institution**

To add value to data or engage in definitive and policy-related analysis, researchers, academician and subject-matter specialists are invited to bring their knowledge to bear on the process of data analysis and provision of informed comments on the usability of data products. Some of the Research Institutions in Nigeria are Nigerian Institute for Social and Economic Research (NISER), Centre for Econometrics and Allied Research (CEAR), Federal Institute of Industrial Research, Oshodi (FIIRO), Institute of Agricultural Research and Training (IART) and so on.

# **Training Institutions**

This uses life data for teaching and illustration purposes. It also play a major role in meeting the training needs of NSS, and in developing and promoting appropriate data collection methodologies and analysis techniques. These institutions contribute significantly to Statistical building and overall development of the NSS. The Training institutions are NBS Schools of Statistics, Departments of Statistics and related subjects in Nigerian Polytechnics and Universities.

## 3.0 National Bureau of Statistics (NBS)

The Statistics Act, 2007 (Act No. 9 of 2007) established for Nigeria a 'National Statistical System' (NSS) with the objectives to raise public awareness about the importance of Statistics; collect, process, analyse and disseminate quality data, promote the use of Statistics; and build capacity for the production and use of data.

The Act has in addition established a National Statistics Office, the 'National Bureau of Statistics' (NBS) which is the merger of the Federal Office Statistics (FOS) and the National Data Bank (NDB). The merger was to give the agency a National outlook as the apex Statistical agency for the tiers of Government.

The NBS plays the role of coordinator of the NSS with the powers to collect, request and be provided with data throughout the country on a wide range of matters.

The NBS serves as an institution responsible for the production of Official Statistics that is required to sharpen the apparatus for economic growth and development. It is to adopt a suitable and acceptable methodology, definitions and standards (compendium Proceedings 63rd ISL World Statistics Congress 111-16 July 2021 Virtual Methodologies) across all agents of Statistics in the country at both the State (SSA) and Local Government levels, in an effort to make Statistics usable.

## 3.1 Organization Structure of National Bureau of Statistics

Nigeria operates Federal System of Government with 36 States and Federal Capital Territory (FCT) with 774 Local Government Areas (LGAs). At the Federal level, each Ministry, Department and Agency has Director of Statistics. Each State has Director of Statistics and Head of Statistics Unit at the Local Government Areas.

The governing board of NBS comprises of 15 members of which 6 are political representatives from each geo-political zone (South West, South East, South South, North West, North Central and North East) of the country appointed by the President and approved by the Senate. The remaining 9 Institutional members are as follows:

- 1. The Minister of National Planning Commission (NPC).
- 2. The Governor of Central Bank of Nigeria (CBN).
- 3. The Minister of Finance.
- 4. The Minister of Agriculture.
- 5. The Minister of Education.
- 6. The group Managing Director of Nigerian National Petroleum Corporation (NNPC).
- 7. The President Manufacturer Association of Nigeria (MAN).
- 8. The President of Nigeria Statistical Association (NSA).
- 9. Statistician General and General Executive of the NSO as the Secretary.

There are eight (8) departments in NBS, namely: Corporate Planning and Technical Coordination, Demographic and Social Statistics, Macro-Economic Statistics, Real Sector and Household Statistics, Field Services and Methodology, Finance and Accounts, Administration, Information and Communication Technology.

There are also seven (7) units, namely: Legal, Procurement and Budget, Internal Audit, Project Implementation Task Team, Public Affairs and International Relation, SERVICOM and Anti-Corruption and Transparency. There are many divisions namely: Household survey, Social Sector Statistics, Price and Trade e.t.c. and several branches; Agric Statistics, Training and Staff welfare, Networking and Maintenance e.t.c

## 3.2 The Role of NBS

- a. It promotes coordination of Statistics among producers of Official Statistics in the country with a view to advance the quality and quantity for optimum use and to serve as an apparatus for standards, classifications and procedures for producing Official data.
- b. It collects, compiles, analyses, interprets, publishes and disseminating Statistical information with respect to the nation and part thereof alone or in collaboration with other agencies both governmental and non-governmental agencies.
- c. It develops and maintains a comprehensive national data bank by encouraging relevant units in ministries and agencies to develop their sectoral data banks and lucking them up with National Data Centre (NDC) at the Bureau.
- d. It promotes and promotes use of Statistical standards and appropriate methodologies on the system.

- e. It advises the Federal, States and Local Governments on all matters relating to Proceedings 63rd ISI World Statistics Congress, 11 16 July 2021, Virtual P. 001199 Statistical development.
  - f. It provides a focal point of contact with international agencies on Statistical matters.
  - g. It carries out all other functions relating to Statistics as the Federal Government may assign to Bureau.

## 3.3 Ways to improve Data Procurement in Nigeria

- a. Sensitization programmes should be undertaken to create greater awareness about the role and importance of Statistics in the society, enlist the cooperation of the data suppliers in providing needed information and create demand for Statistical products and services.
- b. A review of accuracy, reliability, spatial and temporal consistency of existing data should be undertaken focusing on soundness of source data and Statistical techniques and whether statistical sufficiently portray reality.
- c. NBS should develop and promote use of statistical standards and appropriate methodologies.
- d. All data producing agencies should be strengthened, so that they can better meet user needs.
- e. Teaching of Official Statistics in our Tertiary institutions should be promoted.

## 4.0 Conclusion:

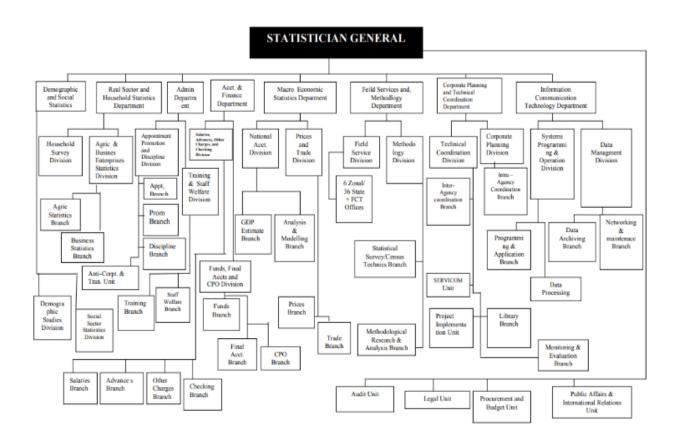
Production of good Statistics is only possible if the users carried out analysis of supplied data and the suppliers of the data cooperate in Statistical Surveys in giving out the information which is vital to quality data for socio-economic growth. Government should also budget for data and integrate data priorities into national development.

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#### ORGANIZATIONAL STRUCTURE OF NATIONAL BUREAU OF STATISTICS (NBS)



## Speaker 2

## Kelechi Chigozie Acha

## **Revolutionizing Official Statistics in Nigeria**

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#### **Abstract**

The main purpose of this paper is to identify and discuss the problems of official statistics in Nigeria with the view to recommending approaches that will help in revamping and revolutionizing its conduct. The problem of official statistics is endemic in Nigeria and ingrained in all sectors. This paper identified key problems of official statistics in Nigeria include: national identity problem, unqualified personnel, poor ICT infrastructure and appreciation, poor data handling and storage, absence of strong data bank, ignorance, high level poverty, lack of adequate training and re-training of staff, difficulty in obtaining data, delay in data publication, lack of data integrity, skewed policies, political considerations/ nepotism, poor quality data collection, high level insecurity, lack of equipment, facilities and materials, low incentives/motivation. This paper concluded that the proper assessing the current situation of official statistics and the 5W's and a structural H questions have the capacity to revolutionize official statistics given their success in places that have adopted them. It however recommended that frantic efforts must be made to address the following: Knowing the number of citizens in Nigeria should be paramount, employing personnel that are qualified with statistics background in sensitive positions is of essence, ample ICT infrastructure and appreciation, collection, processing and dissemination of official statistics should be rigorously re-engineered, adequate training and re-training of staff on how to handle big data, proper handling and storage of data, sufficient funding should be made available, the present high level of insecurity should be addressed, skewed policies and political considerations should be avoided, functional equipments, facilities and materials should be provided, motivation, timely payment of salaries, incentives for staff and artificial intelligence should be integrated into the data generation, collation and analysis process.

**Keywords**: Artificial intelligence, Data analysis, Data bank, Storage, Collation

## 1. Introduction:

Official statistics are statistics published by government agencies from local and international organizations in order to provide quantitative and/or qualitative information on all major areas of citizens' lives, such as economic and social development, living conditions, health, education, and the environment. It provides comprehensive, timely, relevant, responsive and

focused statistical Information relating to all activities as well as conditions of the inhabitants Proceedings 63rd ISI World Statistics Congress, 11 - 16 July 2021, Virtual P. 001202 of Nigeria. The Federal Official statistics vigorously collaborates with all the tiers of Government and their agencies in the production of administrative statistics; coordinate statistical orderliness; and promote general use of statistical standards. It also consistently improves on the information that leads to better decision making.

United Nations Statistics Division (2021) report on country profile of Nigeria states that prior to 1947, there was no recognised body responsible for statistical activities in Nigeria although the population census, the most important and oldest statistical exercise in Nigeria, was conducted in 1866 for the municipality of Lagos, based on the Act enacted for that purpose in 1863. Population census and external trade statistics were the first set of official statistics to be developed in Nigeria.

Also in the 1980s, the Federal Office of Statistics through Decree 42 of 1988 (the civil service review) was organised into 7 departments and 3 units with a Director General. By that Decree, statistical units were supposed to be established in every government agency as a corporate body of that establishment thereby relieving the FOS the task of pooling statisticians at the FOS.

The National Bureau of Statistics (NBS) came into being with the merger of the Federal Office of Statistics (FOS) and the National Data Bank (NDB). The creation is part of the implementation of the Statistical Master Plan (SMP), a programme document of the Federal Government of Nigeria (FGN). The document's preparation was funded by the World Bank in 2003. The implementation is designed to span five years, 2005-2009. The Internal Organisation of the bureau is built on Statistics Act of 2007 which is the Legal Instrument established by the Acts of Parliament. Other producers of official statistics are the Central Bank of Nigeria, the National Population Commission, and the relevant line ministries.

The main purpose of this paper is to identify and discuss the problems of official statistics in Nigeria with the view to recommending approaches that will help in revamping and revolutionizing its conduct.

## 2. Methodology:

To properly assess the current situation of official statistics in Nigeria archival retrieval method focussed on the 5W's and a structural H questions was adopted. This has the capacity to revolutionize official statistics given their success in places that have adopted them.

#### 3. Result:

Since 1947, Federal Office of Statistics had failed to meet its mandate of producing adequate, accurate and timely data needed for decision making. Falling into decay in much of the 1990s, the agency's performance got to its lowest ebb between 2000 and 2003. Among the reasons for this appalling state were the poor attention from Government, bad management, a bloated and low quality workforce, preponderance of non-professional staff (particularly administrative

and accounting personnel), archaic data production and management technologies, and low Proceedings 63rd ISI World Statistics Congress, 11 - 16 July 2021, Virtual P. 001203 morale and productivity of workers. All these manifested in non-production of relevant statistics for planning and evidence-based policy formulation, implementation, monitoring and evaluation, or, at best, the production of data that were untimely and often without any iota of integrity. This situation necessitated the current process of reforms in the NBS.

The broad objective of the reforms in the NBS is to implement the SMP and also transform the Bureau along the dictates of the ongoing Federal Government Public Service Reform Programme. The Agency is involved in the Economic Reform and Governance Programme (ERGP) of the World Bank and the European Union's (EU's) EMCAP programme, which are both managed through the Federal Ministry of Finance. The goal of the entire reform programme for NBS is to transform the Agency into a world class National Statistical Office (NSO), which will be able to produce adequate, high quality and timely data relevant to the demands of users in Government, the universities and research Institutes, private sector organizations and international agencies.

The problem of official statistics is endemic in Nigeria and ingrained in all sectors. This paper identified key problems of official statistics in Nigeria to include:

- National identity problem: This makes the number of citizens in the country uncertain for effective planning.
- 2. Unqualified personnel: employing the wrong people. When you don't know the job requirements, how can you function well?
- Poor ICT infrastructure and appreciation: The main problems are high cost of getting, installing, operating, maintaining, and replacing ICT systems, use of unlicensed software, outdated hardware and software systems, lack of technical support for maintenance of systems (Balasubramanian et al., 2009).
- 4. Poor data handling and storage: This can lead to lost revenue in many ways, for example, imputing of incorrect data, human error, getting data from wrong source, targeting the wrong population to generate data, due to detrimental in multichannel selling.
- 5. Absence of strong data bank: Not having a strong data bank to store previously generated data.
- 6. Ignorance: Not knowing what to do and how to do it.
- 7. High level poverty: Untimely, delayed and small salary of workers which prompts them to look for other quick means of likelihood
- 8. Lack of adequate training and re-training of staff: Workshops, symposiums and seminars need to be organize for staff on work ethics, artificial intelligence, machine learning and so on.

- 9. Difficulty in obtaining data: Many things are involved here like inability of the Proceedings 63rd ISI World Statistics Congress, 11 16 July 2021, Virtual P. 001204 respondents to release information, lack of access road, unavailability of materials, lack of fund, etcetera.
  - 10. Delay in data publication: Nonchalant behaviour, lazier faire attitude, too much familiarity, lack of fund,
  - 11. Skewed policies: In Nigeria, the higher the number of people in a state, the higher the allocation money for that particular state which leads to bias statistics
  - 12. Political considerations/ nepotism: This is wanting a particular outcome. It is also, the practice among those with power or influence of favouring relatives or friends, especially by giving them jobs.
  - 13. Poor quality data collection: There are many potential reasons for poor quality data collection, these include: excess amount of data to be collected with unlimited time interval to execute the project and "shortcuts" to finish reporting. Human error due to many manual steps; moving figures, summing up, etcetera.
  - 14. High level insecurity: The current state of the country is so terrible that no worker is ready to search for information, no enumerator is ready to go to field and this results to bias and uncertain ethical means to get the information
  - 15. Lack of equipment, Facilities and materials: Providing and maintenance of this equipment Facilities and materials with qualified personnel to operate the equipment and Facilities leads to effective running of the system.
  - 16. Low incentives/motivation: Incentive measures, such as salaries, secondary benefits, and intangible rewards, recognition or sanctions have traditionally been used to motivate employees to increase performance.
  - 17. Lack of data integrity: A typical example will be illustrated using breakdown of the 2006 Census Figures in Lagos State as reported in table 1, 2, and 3 by National Population Commission (NPC), Lagos State and Federal Republic of Nigeria (FRN) Official Gazette respectively.

Table 1: Breakdown of the 2006 Census Figures by NPC			
Lagos State	Males	Females	Total
	4,678,020	4,335,514	9,013,534
Source: National Population Commission 2006 Census Figures			

Table 2: Breakdown of the 2006 Census Figures by Lagos State

Lagos State Proceedings 63rd ISI World Sta	<b>Males</b> atistics Congress, 11 - 16 July 2	Females 2021, Virtual	Total P. 001:	205	
	9,115,041	8,437,901	17,552,942		
Source: Lagos State Government reported in the Punch (Lagos) February 6, pp. 3.					

Table 2: Breakdown of the 2006 Census Figures by FRN			
Lagos State	Males	Females	Total
	4,719,125	4394,480	9,113,605
Source: Federal Republic of Nigeria Official Gazette No. 2 Abuja — 2nd February,			
2009 Vol. 96, p. B35 for Lagos State			

The difference in the three reports are so high to be overlooked. Looking at the table 1 and 2, we have four million, four hundred and thirty seven thousand and twenty one (4,437,021) difference for males and four million, one hundred and two thousand, three hundred and eight seven (4,02,387) difference for females. The total number of males alone in table 2 is greater than the whole population of Lagos state as reported by National Population Commission (NPC). In the same year, the Lagos state government put the state's population at more than 17.5million as against 9 million by National Population Commission, a difference of 94.7%. for table 2 and 3 is having the same issues as seen in table 1 and 2 but table 1 and 3 which are from NPC and FRN have approximately the same figures, that can be explained. NPC and FRN difference may due to time interval, immigrate or emigration unlike difference between NPC and Lagos State (table 1 and 2) or Lagos State and FRN (table 2 and 3) reports.

The three different reports from the same year shows the level of poor quality data collection and management that exist in Nigeria. The tremendous variations between the two census reports indicates fundamental flaws in the collation, collection, design, techniques, approaches, analysis of the data sets.

This is a very big issue that needs to be addressed which brings us to the big question: **How Do We Revolutionize Official Statistics In Nigeria?** 

#### 4. Discussion and Conclusion:

All these issues and challenges listed in the previous section leads to the consequences of poor quality information which includes: loss of business, increased liability, low productivity, and heightened costs etcetera, just to mention but a few. Also with the fast rate of decay in country, if nothing is done, we cannot join in the list of countries to achieve the 17 sustainable development goals (No poverty, Zero hunger, Good health, Education, Gender equality, clean water, clean energy, Economy growth, industry and infrastructure, no inequality, sustainability,

Apart from the proper assessing the current situation of official statistics, the 5W's and a structural H questions which are part of the basic steps for reforming official statistics:

- +++ Who will need or act on the information
- +++ What has been done before? What is important and current state? What do the populace need to know?
- +++ Where do we get accurate and reliable data?
- +++ When will the set project be achieved?
- +++ Why is the project going on?
- +++How to overcome the problems encountered?

The next step is to follow strictly the data production process of official statistics which comprises of 8 phases, as documented in the Generic Statistical Business Process Model, which are; Specify needs, design, build, collect, process, analyse, disseminate and evaluate. Also to be noted are the quality criteria to be respected when collecting information which are: relevance, impartiality, dissemination, independence, transparency, confidentiality, international standards (special data dissemination standards and general data dissemination system). All these have the capacity to revolutionize official statistics given their success in places that have adopted them.

It is however, suggested that efforts must be made to address the following: knowing the number of citizens in the country should be paramount, employing personnel that are qualified with statistics background in sensitive positions is of essence, ample ICT infrastructure and appreciation, collection, processing and dissemination of official statistics should be rigorously re-engineered, adequate training and re-training of staff on how to handle big data, proper handling and storage of data, sufficient funding should be made available, the present high level of insecurity should be addressed, skewed policies and political considerations should be avoided, functional equipment, facilities and materials should be provided, motivation, timely payment of salaries, incentives for staff and artificial intelligence should be integrated into the data generation, collation and analysis process. It is pertinent to note that when an information is porous due to error in collection, organization, analysis, and management, then it is said to be of poor quality information and leads to skewed planning, weak policy formulation and inept policy execution. All hope is not lost in Nigeria, in the sense that there are a lot and lot of room for improvements and is at that point, we know we are ready to have workable official statistics and achieve the 17 sustainable development goals by 2030.

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#### Speaker 3:

## Nureni Olawale Adeboye

# Building Robust Collaboration between the Producers and the Users of the Official Statistics in Africa

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#### **Abstract**

Statistical information has become a vital and indispensable tool world over. The use of harmonized and reliable statistics in all fields of political, social, economic and cultural activity is recommended for the monitoring of the implementation of the integration process in the African continent and across the world. According to the African Union charter, Statistics authorities should be endowed with a clear legal mandate empowering them to collect data for production of African statistics. Data production may need to cover emerging areas that require or are likely to require brand new data collections tools, and it is important to consider users' priorities for new statistical outputs. The relationship between the producers and users of official statistics will involve each partner building on and contributing different strengths and will likely result in flexible networks.

Keywords: Data Producer, Data Consumer, Collaboration, Reliable Statistics.

#### 1.0 Introduction

Official Statistics are the body of statistical information produced, validated, compiled and disseminated by Statistics Authorities, such as national statistics institutes and/or other statistics organizations in charge of official statistics production and dissemination at national, regional and continental levels. In Nigeria, official statistics are being coordinated and disseminated by the federal governments of Nigeria through the Nigeria Bureau of Statistics (NBS). According to the Statistics Act of 2007, NBS is the main National Agency responsible for the development and management of official statistics, and the agency is the authoritative source and custodian of official statistics in Nigeria.

The use of harmonized and reliable statistics in all fields of political, social, economic and cultural activity is recommended for the monitoring of the implementation of the ongoing integration process in the continent on which African States embarked several years back. This will make it possible for the process to achieve its objectives and for its outcomes to be assessed. Statistical information has become a vital and indispensable tool in the regional and continental integration process. Although there has been significant progress in Africa's

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statistical system over the last years with the advent of several initiatives, such as the African Proceedings 63rd ISI World Statistics Congress, 11 - 16 July 2021, Virtual Proceedings 63rd ISI World Statistics Congress, 11 - 16 July 2021, Virtual Proceedings 63rd ISI World Statistics Congress, 11 - 16 July 2021, Virtual Proceedings 63rd ISI World Statistics Congress, 11 - 16 July 2021, Virtual Proceedings 63rd ISI World Statistics Congress, 11 - 16 July 2021, Virtual Proceedings 63rd ISI World Statistics Congress, 11 - 16 July 2021, Virtual Proceedings 63rd ISI World Statistics of 1991, with the aim of promoting economic, social, cultural and self-sustained development, as well as integration of African economies; the adoption of the Addis Ababa Plan of Action for Statistical Development in Africa by the Conference of Ministers in charge of Social and Economic Development in Addis Ababa, Ethiopia, in May 1990; the United Nations Statistical Commission's Resolution on the Fundamental Principles of Official Statistics adopted in April 1994; the professional code of ethics adopted by the International Statistics Institute (ISI) at its 45th session in August 1985; the declaration on good practices in technical cooperation in statistical matters adopted by the United Nations Commission for Statistics during its session of March 1999.

The African Union (2000) charter has put in place a common legal framework for statistics development on the African continent. The union emphasized the need to enhance coordination of statistical activities in the continent, and that the quality of the official statistical information available to public administrations and other activity areas largely depends to a large extent on effective collaboration between statistical data providers, producers and users. The professional and social responsibility as well as the credibility of African statisticians' demand not only technical skills and capacities, but also respect for the fundamental principles of official statistics, professional ethics and good practices. It is of note that statistical information is vital for decision-making by all components of the society, particularly policy makers as well as economic and social players, and is therefore essential for the continent's integration and sustainable development. Popoola and Adeboye (2020) emphasized that the data published as official statistics are almost invariably nationally representative, because they are obtained from complete censuses or very large-scale national sample surveys, and they usually seek to present definitive information conforming to international standards and classifications or other well-established conventions.

The volumes of official data and the rate at which these data are produced have given rise to the concept of 'Big Data'. This new data formative has changed completely the context in which statistical agencies operate globally. According to Adeboye and Oyedunsi (2020), large data repositories or database management still remain a mirage and tough challenge to accomplish by most developing countries and establishments around the globe. This necessitates the need to improvise on the gathering of suitable data with good spread that provides opportunities for timely gathering with minimum resources, higher precision, completeness and less burden data by users. However, in order to make optimal use of Big Data for official statistics, there must be in existence, sustainable synergy between numerous data producers and users. This presentation thus outlines the prospects and challenges of data production, coordination and usage within the African continent, as well as fill in the synergy gaps between the producers and the users of official data.

# 2.0 Producers of Official Statistics

Proceedings 63rd ISI World Statistics Congress, 11 - 16 July 2021, Virtual Data production is an administrative process that includes acquiring, validating, storing, protecting, and processing required data to ensure the accessibility, reliability, and timeliness of the data for its users. Organizations and enterprises are making use of Data more than ever before to inform business decisions and gain deep insights into customer behavior, trends, and opportunities for creating extraordinary customer experiences. In modern managerial usage, the term data is increasingly replaced by information or even knowledge in a nontechnical context. According to the African Union charter, Statistics authorities should be endowed with a clear legal mandate empowering them to collect data for production of African statistics. At the request of statistics authorities, public administrations, business establishments, households and the general public may be compelled by domestic law to allow access to the data in their possession or provide data for the purpose of compilation of African statistics. Adeboye and Oyefunsi (2020) listed the following sectors as producers of official statistics:

- Government
- International development
- Manufacturing
- Healthcare.
- Education
- Media
- Information technology

The required stages for effective running of a data production system are as follows:

- Administrative Process
- Acquisition of Required Data
- Data Validation
- Data Storage
- Data Protection
- Data Accessibility
- Data Reliability

The necessary skills required to be an efficient data producer are:

- Competence
- Analytical mind
- Administrative skills
- Analytical (Statistical) skills
- Computer skills

#### 2.1 Challenges of Data Production

While some companies are good at collecting data, they are not managing it well enough to make sense of it. Simply collecting data is not enough; enterprises and organizations need to

understand from the start that data production will only be successful when priority is given Proceedings 63rd ISI World Statistics Congress, 11 - 16 July 2021, Virtual P. 001211 first into how they will gain value from their raw data. They can then move beyond raw data collection with efficient systems for processing, storing, and validating data, as well as effective analysis strategies.

Another challenge of data production occurs when companies categorize data and organize it without first considering the information they hope to glean from the data. Each step of data collection and management must lead toward acquiring the right data and analyzing it in order to get the actionable intelligence necessary for making truly data-driven business decisions.

#### 3.0 Users of Official Statistics

Various approaches are possible to understanding what users really require and some might work better with some users than with others. It is often useful to discuss each broad area of social statistics (crime, health, education, labour etc.) on its own, with different groups of users. This process is the most natural to manage, and easier than to discuss globally on "social statistics".

Two sets of conversations are fundamental. The first set relates to users' views on the current statistics available in each area. These dialogues can be organized around the quality dimensions: Are statistics relevant, timely, accessible, and so on, and what do users mean by those terms? Which of the quality dimensions are important to each user? Which statistical outputs are used most and least (bearing in mind that resources are limited and additions in one area might lead to cuts elsewhere)? It is likely that many potential users will not know the information exists in the first place (and informing this group about existing data can be an added benefit of the dialogue). The sorts of questions one might ask will depend on the circumstances. A different set of questions will be needed within the context of a regular user-producer forum compared to those in response to ad hoc requests. For statistical areas in which no regular forum exists, an ad hoc approach is needed. Moreover, different styles of dialogue will suit different types of users. These might range from a structured survey of users' views to an open dialogue.

A second set of dialogues should consider users' priorities for new statistical outputs. This might cover emerging areas that require or are likely to require brand new data collections tools (such as a time use survey), refinements to existing collections (to produce more highly disaggregated data for example), new products or tools that help users to better get the data they require, new methods of communication, data access, or dissemination. The dialogue on "new" needs has an importance beyond stocktaking of demands and existing data. It is also about discussing the place and value of new data within the overall output of official statistics (bearing in mind that official statistics are a public good, especially when they are financed through public funds).

## 3.1 Synergy between Producers and Consumers of Official Statistics

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It is of note that there is an immense gap between the supply and demand for statistical information needed for development and for the African integration process. For the moment, quality statistical data produced by the African statistical system is virtually inexistent. It is to remedy this shortfall, which is a setback to Africa's integration and development processes, that the decision-making organs of the African Union took the historic step to call for the elaboration of an African Charter on Statistics, which will serve not only as a legal instrument to regulate statistical activity but also as a tool for advocacy and the development of statistics in Africa.

The initiatives already undertaken by various concerned statistics organizations at national, regional and international levels for statistics development, particularly the strengthening of national legislations; adoption and implementation of National Strategies for the Development of Statistics (NSDS) for the conduct of statistical activities; the development of harmonized statistical tools by the Regional Economic Communities (RECs); the adoption in 2007 of the Regional Strategic Reference Framework for Statistical Capacity Building in Africa (RRSF) by the Conference of African Ministers of Finance, Planning and Economic development and the establishment of the Statistical Commission for Africa (STATCOM-Africa) in 2007.

They should also strengthen the independence and status of national institutes of statistics as well as regional and continental statistics services. The effective implementation of the Charter should make it possible to enhance the coordination of statistics and the effective functioning of Africa's statistical system as well as to avoid duplication in African statistical programs.

African statisticians and all those operating in the field of statistics at the national, regional and continental levels should respect the principles enshrined in the resolution of African charter, on the fundamental principles of official statistics adopted by the United Nations Commission for Statistics in April 1994. African statistics shall meet the needs of users and they should also apply the best practices principles as listed hereunder:

- Scientific independence: Statistics authorities must be able to carry out their activities
  according to the principle of scientific independence, particularly vis-à-vis the political
  authorities or any interest group; this means that the methods, concepts and
  nomenclatures used in statistical operation shall be selected only by the Statistics
  authorities without any interference whatsoever and in accordance with the rules of
  ethics and good practice.
- Impartiality: Statistics authorities should produce, analyze, disseminate, and comment on African statistics in line with the principle of scientific independence, and in an objective, professional and transparent manner.
- Responsibility: Statistics authorities and African statisticians shall employ unambiguous and relevant methods in the collection, processing, analysis and presentation of statistical data. Statistical authorities should also have the right and duty to make observations on erroneous interpretation and improper use of the statistical information that they disseminate.

- Transparency: To facilitate proper interpretation of data, Statistics authorities should
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  Provide information on their sources, methods and procedures that have been used in line with scientific standards. The domestic law governing operation of the statistical systems must be made available to the public.
  - Sustainability: African statistics should be conserved in as detailed as possible a form
    to ensure their use by future generations, while preserving the principles of
    confidentiality and protection of respondents.
  - Data sources: Data used for statistical purposes may be collected from diverse sources such as censuses, statistics surveys and/or administrative records. The statistics Organizations should choose their sources in consideration of the quality of data offered by such sources and their topicality, particularly the costs incurred by the respondents and sponsors. The use by statistics authorities of administrative records for statistical purposes should be guaranteed by domestic law, provided that confidentiality is preserved.
  - Accuracy and reliability: African statistics should be an accurate and reliable reflection of the reality.
  - Continuity: Statistics authorities should ensure continuity and comparability of statistical information over time.
  - Coherence and comparability: African statistics should be internally coherent over time
    and allow for comparison between regions and countries. To this end, these statistics
    should make combined use of related data derived from different sources. It should
    employ internationally recognized and accepted concepts, classifications,
    terminologies and methods.
  - Confidentiality: National Statistics authorities, African statisticians and all those
    operating in the field of statistics in Africa should absolutely guarantee the protection
    of the private life and business secrets of data providers (households, companies,
    public institutions and other respondents), the confidentiality of the information so
    provided and the use of such information for strictly statistical purposes.
  - Timeliness: African statistics should be disseminated in good time and, as far as possible, according to pre-determined calendar.
  - Universal adoption of Medstat III. Medstat III is designed to strengthen the national statistics institutes and national statistical systems in the Mediterranean Partner Countries by improving their capacity to collect timely, relevant, and high-quality data necessary for political decision-making and good governance. Furthermore, it promotes the harmonization of statistical data with European and international standards, and consolidates the exchange of data between partners.

#### 4.0: Conclusion:

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The relationship between the producers and users of official statistics will involve each partner building on and contributing different strengths and will likely result in flexible networks.

Coordination and collaboration amongst Statistics authorities in a given country are essential in ensuring unicity, quality and harmonious statistical information. Similarly, coordination and dialogue amongst all Members of the African Statistical System are vital for harmonization, production and use of African statistics. Bilateral and multilateral statistics cooperation shall be encouraged with a view to upgrading African statistics production systems, thereby encouraging the users and beneficiaries of official data.

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Speaker 4: Aliyu Usman

Official Statistics That Leave No one Behind: An Opportunity for Nigeria.

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#### **Abstract**

In simple terms, official statistics are simply the statistics produced by offices, agencies and departments. In any case, little importance is attributed to the question by the academic representatives of the scientific discipline of statistics since they regard official statistics as nothing other than the application of methodology in one field of practice. However, the rapid growth of statistics in modern times has shown that official statistics is far beyond that. The critical role of accurate and reliable official statistics in the formulation, implementation, monitoring and evaluation of government policies in Nigeria cannot be overemphasized. The duo of the National Population Commission (NPC) and the National Bureau of Statistics (NBS) usually provide a substantial amount of official statistics that are essential to monitor the level of implementation of the activities of the Federal Government as well as other ties of government in Nigeria. The NPC and NBS usually anchor the collection and dissemination of official statistics as their constitutional mandate to conduct periodic censuses and surveys in Nigeria. The aim herein is to empirically assess how Nigeria could grab the global opportunities in official statistics. Hence, a rapid assessment was conducted on stakeholders in the NPC and NBS. The duo agencies are the statutory stakeholder of official statistics in Nigeria. In order words, to explore the opportunities and the needs to scale up the process, technology and resources for the collection and dissemination of official statistics in Nigeria. A rapid assessment (RA) was conducted in order to assess how official statistics could be scaled up in Nigeria given the global scenario. The data were collected via stratified random sampling method of 50 stakeholders. The intervention scalability assessment tool based on reliability and effectiveness score of the intervention was used. Hence, almost all the respondents agreed that the collection and dissemination of officials statistics in Nigeria needs improvement and scaled up. Again, almost all the respondents have the mean score of 1. This could be used to further affirm that that the collection and dissemination of officials statistics in Nigeria could be improved and scaled up. Nigeria had the vast opportunities for improve its official statistics vis-a-viz the global scenario.

**Keywords:** Intervention Scalability tool, reliability, concordance, Scalability, rapid assessment, strata

#### 1. Introduction

Generally, official statistics are simply the statistics produced by offices. In any case, little importance is attributed to the question by the academic representatives of the scientific discipline of statistics since they regard official statistics as nothing other than the application

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of methodology in one field of practice (Eurostat, 2016). In this paper, the exclusive focus is Proceedings 63rd ISI World Statistics Congress, 11 - 16 July 2021, Virtual P. 001216 placed on what official statistics is, how it came into being, its growth over time, what significance it has for sociopolitical processes and where the developments will lead in the near future in Nigeria.

The critical role of accurate and reliable official statistics in the formulation, implementation, monitoring and evaluation of government policies in Nigeria cannot be overemphasized. The National Population Commission (NPC) and the National Bureau of Statistics (NBS) usually provide a substantial amount of official statistics that are essential to monitor the level of implementation of the activities of the Federal Government of Nigeria. The NPC and NBS usually anchor the collection and dissemination of official statistics as their constitutional mandate to conduct periodic censuses and surveys in Nigeria. Essentially, these official statistics combined with other sources of Government data will enhance robust decision making on planning and policies. Globally, the use of official statistics is all encompassing and essential for planning. However, Nigeria needs to scale up the process, technology and resources for the collection and dissemination of official statistics. In fact, official statistics is a representative of the "Statistical Mind in Modern Society", closely related to social progress and scientific work (Stamhuis et al. 2008). The objectives are to explore Nigeria's opportunities in official statistics and how official statistics could be scaled up Nigeria.

## 2. Methodology

Official statistics experienced a first phase of growth and development at the beginning of the nineteenth century during the Industrial Revolution. Moreover, in the twentieth century, three methodological and technical innovations have changed the world of official statistics: "sampling surveys, national accounts and computers" (Desrosières, 2008). After a first phase of growth of official statistics, the second phase of the its prosperity of was mainly initiated by major scientific innovations particularly in inferential statistics. Also, closely connected with myriad political conditions, crises and the attempts to solve them through the development of macroeconomic statistics.

In a third phase, new possibilities were opened as a result of using modern computer systems for the processes of statistics. There were explosions in the amount of data and the variety of its processing tools in all areas of economics, commerce, administration, politics. In this third era, under these conditions, official statistics were fundamentally reformed by switching from tailor-made to industrial production processes.

Furthermore, we are currently in the fourth phase in which the digitization of all areas of life will continue at high speed. The handling of 'Big Data' will dominate the near future of official statistics in recent years. In addition, the effects of globalization will increasingly demand political responses, which will then be directly linked to a new need for official statistics.

A rapid assessment (RA) was conducted in order to assess how official statistics could be Proceedings 63rd ISI World Statistics Congress, 11 - 16 July 2021, Virtual Pr. 001217 scaled up in Nigeria given the global scenario using some empirical data. The stratified random sampling method with equal allocation was used to select a sample of 50 staff from NPC and NBS were selected. The sampling design has the two statutory official statistics agencies in Nigeria; the NPC and NBS as strata.

Furthermore, The Intervention Scalability Assessment Tool (ISAT) is the concordance (agreement) in reliability and effectiveness score of the intervention. Once the reliability and effectiveness measures are obtained, we therefore compare and contrast the concordance on the following table.

## 3. Analysis

**Table 1: ISAT Rules** 

ISAT Domains	Scores	Remarks
Reliability of NPC Instrument	Above 0.8	Needs Scale up
Reliability of NBS Instrument	Above 0.8	Needs Scale up
Need for Improving Official Statistics	Above 0.7	Needs Improvement

## **Results**

The results of the need for improving and scaling official statistics up in Nigeria are as follows.

Table 2: Responses

Questions		Responses			
		Yes		No	
	No.	%	No.	%	
Is there need to improve the process of collecting official statistics in Nigeria?	50	100%	0	0%	
Is there need to improve the methods of collecting official statistics in Nigeria?	50	100%	0	0%	
Is there need to improve the funding for collecting official statistics in Nigeria?	50	100%	0	0%	
Is there need to improve the technology of collecting official statistics in Nigeria?	50	100%	0	0%	
Is there need to improve the technology of collecting official statistics in Nigeria?	50	100%	0	0%	
Is there need to improve the personnel of collecting official statistics in Nigeria?	46	92%	4	8%	
Is there need to expand the offices of collecting official statistics in Nigeria?	50	100%	0	0%	

From the table above, almost all the respondents agreed that the collection and dissemination of officials statistics in Nigeria needs improvement and scaled up, among others.

**Table 3: Descriptive Statistics** 

Questions	Mean
Is there need to improve the process of collecting official statistics in Nigeria?	1.00
Is there need to improve the methods of collecting official statistics in Nigeria?	1.00
Is there need to improve the funding for collecting official statistics in Nigeria?	1.00
Is there need to improve the technology of collecting official statistics in Nigeria?	1.00
Is there need to improve the technology of collecting official statistics in Nigeria?	1.00
Is there need to improve the personnel of collecting official statistics in Nigeria?	0.92
Is there need to expand the offices of collecting official statistics in Nigeria?	1.00
Is there need to improve the accuracy of official statistics in Nigeria?	1.00
Grand Mean	0.99

From the table above, almost all the respondents have the mean score. This could be used to further affirm that that the collection and dissemination of officials statistics in Nigeria needs improvement and scaled up, among others.

**Table 4: ISAT Statistics** 

ISAT Domains	Scores	Remarks
Reliability of NPC Instrument	Above 0.92	Needs Scale up
Reliability of NBS Instrument	Above 0.91	Needs Scale up
Need for Improving Official Statistics	Above 0.99	Needs Improvement

From the table above, all the ISAT domains have high scores. Therefore, the collection and dissemination of officials statistics in Nigeria needs improvement and scaled up.

#### 4. Discussion and Conclusion

In order to empirically assess how Nigeria could grab the global opportunities in official statistics, a rapid assessment was conducted in the NPC and NBS. The duo are statutory stakeholder of official statistics in Nigeria. In order words, to explore the opportunities and the needs to scale up the process, technology and resources for the collection and dissemination of official statistics in Nigeria.

A rapid assessment (RA) was conducted in order to assess how official statistics could be Proceedings 63rd ISI World Statistics Congress, 11 - 16 July 2021, Virtual Scaled up in Nigeria given the global scenario using some empirical data. The data were collected via stratified random sampling method of 50 stakeholders. The Intervention Scalability Assessment Tool based on reliability and effectiveness score of the intervention was used. Hence, almost all the respondents agreed that the collection and dissemination of officials statistics in Nigeria needs improvement and scaled up, among others. Again, almost all the respondents have the mean score of 1. This could be used to further affirm that that the collection and dissemination of officials statistics in Nigeria needs improvement and scaled up. Nigeria had the vast opportunities and the room for improving its official statistics vis-a-viz the global scenario.

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