

Case Study Report on Investigation of the Use of the Online National Budget of Nigeria

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ACRONYMS

AIT – Africa Independent Television

CISLAC – Civil Society Legislative Advocacy Council

CSJ – Centre for Social Justice

DFID – United Kingdom Department for International Development

FMF – Federal Ministry of Finance

FOI – Freedom of Information

FOIA – Freedom of Information Act

FOMWAN – Federation of Muslim Women’s Association of Nigeria

MDA – Ministry Department and Agency

NACIMA - Nigeria Association of Chambers, Industries, Mine and Agriculture

NGO – Non Governmental Organization

NITDA – Nigeria Information Technology Development Agency

NTA – Nigeria Television Authority

ODDC – Open Data for Developing Countries

OGD – Open Government Data

ODR – Open Data Research

SPSS – Statistical Package for the Social Sciences

UNDP – U.N. Development Programme

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THE PROJECT PARTNERS

The World Wide Web Foundation

Established by Sir Tim Berners-Lee in 2009, the World Wide Web Foundation (webfoundation.org) seeks to establish the open Web as a global public good and a basic right, creating a world where everyone, everywhere can use the Web to communicate, collaborate and innovate freely. The Web Foundation have been active in the development of open data initiatives across the world, supporting open government data initiatives building communities, developing sustainability models, and exploring impact assessment of open data. The Web Foundation was lead coordinator for this programme.

The International Development Research Centre (IDRC)

The International Development Research Centre (IDRC) is a Crown corporation created in 1970 by the Parliament of Canada. IDRC builds the capacity of people and institutions in developing countries to undertake the research that they identify as most urgent. It works with researchers as they confront contemporary challenges within their own countries and contribute to global advances in their fields. In particular, the Information and Networks (I&N) projects of IDRC explore the positive and negative impacts of widespread access to mobile telephones and the Internet in developing countries. IDRC are the primary funder of this programme, through their Information and Networks programme.

The University of Ilorin

The University of Ilorin was one of the seven institutions of higher learning established by a decree of the Federal Military Government in August, 1975. This step, taken to implement one of the educational directives of the country's Third National Development Plan, was aimed at providing more opportunities for Nigerians aspiring to acquire university education and to generate high level man-power, so vital for the rapidly expanding economy. The vision of the University is "To be an international centre of excellence in learning, research, probity and service to humanity." All the researchers associated with this work are part of the faculty at University of Ilorin.

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EXECUTIVE SUMMARY

Nigeria continues to rank high in most corruption and transparency indices and low in the open budget ratings¹ as well as in the 2013 Open Data Barometer². Open data, which is thought to act as a catalyst for improved transparency and accountability, is an initiative that Nigeria could greatly benefit from. Although the national budget data has been online since 2007, little is known by way of empirical research about the data or how citizens use it. It is against this background that this case study investigating the use of the online budget data in Nigeria, and the availability of this as open data, was designed. Since commencing the study in March 2013, open data and open government data issues have increasingly become the focus of activities and discourse in Nigeria. Edo State in Nigeria became the first to create an open government data portal in September 2013. Also, in January 2014, the Federal Ministry of Communication and Technology, led by the Honourable Minister Mobola Johnson, kicked off proceedings for the implementation of a national OGD with support of the World Bank and DFID

This case study focuses on open budget data of the Federal Government of Nigeria in an attempt to determine: how the public engage in the discussions of the national budget data; the degree of awareness of open data by the public; the potential of open data to drive good governance; the intermediaries in the flow of budget information; and the challenges to effective use of such open budget data. The study looks at attitudes from both the supply side of open data (government officials making data available), and the demand side (intermediaries and end-users who access, process and make use of the data).

To achieve the objectives of the research several approaches were used. These included a survey of institutions and personnel from the budget data supply side and also the data demand side. Respondents from the demand side included journalists, key persons in NGOs and CSOs, re-packagers of the budget data, professionals, and visible budget analysts. Media analysis was also done in order to obtain empirical evidence of stakeholder engagement with the budget data. Six newspapers, from 2009-2013, were analysed as well as online social media conversations around the 2013 budget. The results were presented to a wide audience at a Stakeholders' Workshop, and stakeholders were invited to help generate policy-relevant recommendations for improving the impact of open budget data in Nigeria. Four data sets from the research are available on Zenodo under a Creative Commons license³.

¹ International Budget Partnership (2012). Open budget survey 2012. Retrieved from <http://internationalbudget.org/wp-content/uploads/OBI2012-Report-English.pdf>

² Davies, T. (2013). Open Data Barometer: 2013 Global Report. Retrieved from <http://opendataresearch.org/project/2013/odb>

³ See <http://bit.ly/oddcUnilorin> for datasets.

The study has generated a number of key findings:

Media and social media use of budget data can generate interest and engagement with budget issues

- The media, both the conventional, particularly the newspapers, and the social media, have stimulated the interest of Nigerian people in the national budget of Nigeria, and have thereby laid the foundations for robust citizen engagement through their coverage and provision of platforms and prompts for discussing and interrogating the government on the process of appropriation and implementation of the national budget.
- Open data practice in Nigeria has been spurred by promulgation of the 2007 Fiscal Responsibility Act and enactment of Freedom of Information Law in 2011, aimed to curb financial mismanagement by government officials and politicians as well as the impunity with which corruption has eaten deep into the fabric of Nigerian public service system.

There are differences of opinion over the best data formats for open data

- The contrast between respondents from Government on the demand and supply sides is quite glaring. While all government respondents on the demand side indicated a preference for open data in the PDF format, the exposure of government officials on the supply side to the concept of open data is evident in the choice of the Excel format over the PDF format, suggesting a knowledge gap even in government circles which may impede the drive for Nigeria's open government data initiative.
- A few stakeholders preferred the online budget in PDF format giving their reason for this as a need to safeguard or protect the data from manipulation. If it is available is provided in machine-readable and editable formats such as Excel they fear that it could be tampered with, modified and falsified. A number of respondents believed that if data is available in PDF it could still be reused, but it would be very difficult for anybody to change or falsify the data. This suggests a need for greater awareness of the importance of machine-readable data, and in parallel a focus on developing practices and approaches to open data that can assure the integrity of an 'official source' for open budget data.

There is growing awareness of open data

- Most stakeholders, both on the demand and supply sides, were fully aware of the phrase "open data". Many respondents who became aware of open data in 2014 said they were part of the Open Data Roundtable organized by the Federal Ministry

of Communication Technology and the World Bank in January 2014. Nevertheless, it seems various stakeholders had become aware of open data before 2011, coinciding with the global open data movement.

License requirements for open data is unclear

- The availability of Nigeria's budget data for re-use is not clear because of the copyright notice on the host website. Moreover, stakeholders often assumed that data that is online is open and can be re-used and re-distributed.

Budget data is widely used, but there is significant potential for greater use of *open* budget data

- Media practitioners accessed the online budget of Nigeria most, perhaps because of their need for easy and frequent access to the data to perform their duties of watchdog as the Fourth Estate of the Realm. However, media frequently rely on government officials and statements as their primary source, checking only against PDF copies of budget data. Very little data visualization takes place in mainstream media.
- The major source of information for budget analysis by the stakeholders, as found in this study, is primarily the online budget data made available on the website of the Budget Office.
- The study established that media professionals, civil society organisations and re-packagers like Budgit, Connected Development, and Centre for Social Justice, are the main intermediaries in the budget data flow in Nigeria.
- The study identified some basic factors that respondents suggested are hindering or impeding the access to or use of the online budget of Nigeria, such as ignorance and apathy on the part of Nigerians, illiteracy, and the format in which the budget data is published online.

Based on the findings from empirical work carried out for this study, and upon stakeholder workshop input, we put forward several recommendations:

- Distribution of digital instead of hard copies of the budget by government.
- Advocacy and capacity building to clear stakeholder apprehensions on data integrity, improve data use skills, and generally provide awareness on open data practice
- More prominence should be given to budget and open data stories in the media
- Use of social media to promote citizen engagement especially among the youths and incorporation of active social media into open data portals
- Publication in the open domain of expenditure data (or spend data)
- Furthermore, learning events that will bring together academics, government, professionals and civil society organisations should be organized regularly to

establish collaboration and cooperation for the good and growth of open data initiative in Nigeria.

Next steps

The case study generated many findings but has also raised further questions for research and these will be focused upon in the future. More work will be done in helping groups to make their data open. Within the university community, the Unilorin ODDC hopes to continue with open data activities such as hackathon competitions and awareness building lectures and workshops.

1. INTRODUCTION

1.1 Background

This study investigated the use of the online national budget of Nigeria under the project “From Data to Development: Exploring the emerging impact of open Government data in developing countries” (ODDC) using funds provided through the World Wide Web Foundation supported by grant 107075 from Canada’s International Development Research Centre. ODDC is one of the key activities of the Open Data Research Network that aims to⁴:

- Generate a strong foundation of academic work on the emerging impacts of open data interventions, and the factors that affect those impacts;
- Generate policy and practice relevant findings that can inform both local and global debates;
- Build the capacity of researchers across the world to explore emerging impacts of open data and related issues.

This study on the use of the online budget of Nigeria is one of several case study research projects being carried out across the global south. The study commenced in March 2013 through to June 2014. The study was carried out by a team of four researchers at the University of Ilorin (Unilorin), Nigeria, and was commonly described as the Unilorin ODDC project.

1.2 Motivation

Since 2007, the budget of Nigeria has been made available on the Budget Office website, although it is not published in an organized manner⁵. Although the data files are in general only published as PDF files, the release of the budget data into the public domain marks a vast improvement from the past when such data were only available as hard copies.

The chosen course of investigation for this research was based on the premise that by publishing the budget data on its website, the data qualifies as being partially “open” and that it is important to understand the underlying issues concerning citizen engagement with the data given the hue and cry about corruption and lack of transparency in Nigeria.

⁴ Full Proposal Guidance: Exploring the emerging impacts of open data in the South, p.3.

⁵ For example, although the budget of the country can be obtained through the links on the page: <http://www.budgetoffice.gov.ng/downloads.html>, the link description for each year varies from year to year and it is not clear if the data is the final approved budget or the budget as initially proposed to the National Assembly for consideration.

Nigeria is one country that stands to benefit from the open data initiative because it is generally believed that political independence achieved more than 50 years ago has not translated into improvements in the quality of lives of the citizenry (Okeke, 2010) and that this is mainly as a result of corruption. Thus, a palpable developmental problem exists in Nigeria which Ogundiya (2010) argues is a problem of governance. In order to ensure good governance and foster socio-economic development, Nigeria, in 2007, crafted the Vision 20:2020 framework⁶ through which it aims to develop efficient, transparent and participatory governance; promote government effectiveness; tackle corruption, establish a private sector led business environment; develop sufficient and efficient infrastructure to support sustained economic growth; and reform the Public Service.

From this background situation, the following research questions were raised:

1. What is the degree of citizen engagement and nature of media coverage upon the release of Nigeria's annual budget?
2. Does Nigeria's current budget process reflect emerging best practice and standards in open budget governance, and does the budget data available online meet the standards of open data?
3. What are the sources of information for budget data analysis by stakeholders?
4. What is the level of knowledge and awareness of open data by stakeholders?
5. Are relevant stakeholders aware of the availability of the Nigerian national budget as open data?
6. Who are the intermediaries in the budget data flow, what is their motivation and capacity to facilitate and enable open data access and how sustainable is this role?
7. Are there any challenges or impediments to the implementation of open data by the relevant institutions?
8. Are there any challenges or impediments to the use of open data by public?

It is against this background that the main objective of the study emerged, which is to explore how actors in the public-sphere such as journalists, civil societies and the organized private sector have engaged with the budget data of the Federal Republic of Nigeria. These stakeholders are the principal agents in a democratic society that can drive transparent and participatory governance, which in turn has a direct impact on promoting government effectiveness and tackling corruption. In order to obtain evidence of the degree and nature of public engagement with the discussions on fiscal responsibility through the budget, media artefacts such as newspapers and social networking sites were reviewed as an indicator of this engagement, and a range of budget data suppliers, users and intermediaries were consulted through a survey and in-depth interviews.

⁶ Nigeria's Vision 2020's intent is to position Nigeria to become one of the top 20 economies in the world by the year 2020 (see Nigeria's Vision 2020 Economic Transformation Blueprint available at: <http://nigerianstat.gov.ng/pages/download>)

Specifically, the study had the following objectives:

1. To review and assess newspaper coverage on the budget of Nigeria from 2009 to 2013 and social media discussions around the 2013 budget;
2. To benchmark the current budget governance process in Nigeria, according to international best practice and standards;
3. To describe the nature and characteristics of the online budget data with reference to the standards of open data;
4. To identify the sources of information for budget data analysis by stakeholders;
5. To identify the intermediaries in the flow of budget information between source and end-users and determine the sustainability of that role;
6. To determine the level of knowledge and awareness of open data in general and the availability of Nigeria's national budget as open data;
7. To identify any challenges or impediments to the implementation and use of open data, in general, by stakeholders; and
8. To organise a stakeholder workshop for the dissemination of the research findings and create awareness as to the location and uses of the budget data of Nigeria.

These objectives addressed one of the priorities of the ODDC call: to develop knowledge and action that will enhance the potential of open data to foster greater transparency and accountability in the national budgeting process of Nigeria while building an evidence base.

1.3 Modus Operandi

The study, with the guidance and encouragement of the World Wide Web Foundation, was not operated as a mere academic pursuit. Rather, new knowledge and emerging activities were made use of as opportunities for learning and dissemination of the ODDC work.

Several activities were undertaken during the study. Some of the activities were planned for while some were new opportunities for networking and dissemination or learning. This includes ODDC research network activities which provided a range of platforms for knowledge sharing in the form of meetings (on the web and in person) and participation at conferences. Other activities include participation at the 2013 Lagos Data Hack event, participation at the 1st Abuja Open Data Clinic/Roundtable, organisation of the 1st Unilorin ODDC Open Data Hackathon, and research Stakeholders' Workshop. These activities include:

- A full network meeting in London, UK, from May 24-26, 2013 during which the Unilorin project status was presented by the Project Lead (available at: <http://www.opendataresearch.org/news/2013/first-oddc-network-meeting>).
- A regional meeting for the Africa network partners took place in Cape Town, South Africa from December 7-10, 2013 (presentation at the meeting is available at:

<http://www.opendataresearch.org/content/2013/568/oddc-ictd2013-storify>), prior to participation at the ICTD conference at the same venue. A presentation on Media Monitoring Methodology was made at the ODDC open session at the conference (available at: <http://www.slideshare.net/odrnetwork/oddc-at-ictd2013-research-methods-discussion-media-monitoring>).

- The Unilorin ODDC team acted on information from the Web Foundation to attend a hackathon event on the Extractives industry which took place in Lagos, Nigeria, on 13th and 14th May, 2013 and participated as one of five competing teams.
- Based on recommendation from the Web Foundation, the Unilorin ODDC team attended the 1st Nigeria Open Data Clinic which took place in Abuja, Nigeria, on January 30-31, 2014. We made a presentation at the event titled, "Citizen Engagement with Open Data Evidence from media monitoring in the ODDC case study- 'Investigation of the Use of the Online National Budget of Nigeria'", available at: <https://docs.google.com/file/d/0B0yd9NmqxjWQVi04a0xpU0tISIE/edit?pli=1>
- Leveraging on the Lagos 2013 hackathon experience, the Unilorin ODDC team organised a local open data hack event to coincide with the 2014 International Open Data Hackathon Day. This took place on February 22, 2014. The event was publicised through the web page: <http://goo.gl/yE09pG>, facebook: <https://www.facebook.com/OpenDataUnilorin>, and twitter handle: @unilorinODDC #ODDilorin
- The project's planned ODDC research dissemination stakeholders' workshop took place on April 7, 2014. About 100 participants from government, media, civil society, professional associations, and independent experts, took part in the workshop. Winners of the Unilorin ODDC February 2014 hackathon were invited to present their visualisation output at the workshop. The event is fully detailed on the ODDC network website at: <http://www.opendataresearch.org/project/2013/unilorin>
- Based on recommendation from the Web Foundation, the Unilorin ODDC Project Leader was invited to attend the Making All Voices Count Learning & Inspiration Event in Dar es Salaam, Tanzania on May 26-28, 2014.

The Unilorin team benefitted from the ODDC Project appointed mentor, Dr. Maurice McNaughton. Dr. McNaughton visited Nigeria between April 6th – 11th, 2014, and was part of the stakeholder workshop event in Abuja where he presented a lecture on "Data Journalism". On 9th April, 2014, at Ilorin, Nigeria, Dr. McNaughton delivered the 3rd Faculty Lecture of the Faculty of Communication and Information Sciences, University of Ilorin, on the topic, "Innovation at the Periphery: A Caribbean Perspective".

The study was originally scheduled to run from March 1st 2013 to February 28th 2014. However, due to unavoidable delays, the project end time was shifted to May 15th 2014, then June 13th 2014. Overall, the different approaches to the study ensured that the expected outcomes of the ODDC project were achieved.

2. THE THEORY OF OPEN DATA

2.1 Definitions of Open Data

Open data has been defined in several ways with the underlying commonality being data available to the public without restrictions. Open data has been defined as a philosophy and practice requiring that certain data are freely available to everyone, without restrictions from copyright, patents and other mechanism of control (Campbell & MacNeill, 2010). Open data has also been defined as a non-personally identifiable data produced in the course of an organization's ordinary business, which has been released under an unrestricted license (Open Data Dialogue, 2012). On the other hand, the Open Data Initiative (2012) defines open data as a freely available online service for the creation and dissemination of data for public consumption while it is defined as "data that can be freely used, reused and redistributed by anyone - subject only, at most, to the requirement to attribute and share-alike", in the Open Data Handbook (2012).

Focusing more on the "data" in "open data", James (2013), defines open data as data that can be freely used, shared and built-on by anyone, anywhere, for any purpose; in other words, that open data must permit people to use it, re-use it, and redistribute it, including intermixing with other datasets and distributing the results. According to Chernoff (2010), the data should be released in a format that is free of royalties and other intellectual property (IP) restrictions. Chernoff believes that the problem is that an increasing number of people are using the term open data to mean publicly available data but that open data does not mean that a government or other entity releases all of its data to the public. Rather, open data means that whatever data is released is done in a specific way to allow the public to access it without having to pay fees or be unfairly restricted in its use.

According to Burwell, VanRoekel and Park (2013), the term "open data" refers to publicly available data structured in a way that enables the data to be fully discoverable and usable by end users. In general, open data should be consistent with the following principles (Open Data Handbook, 2012, section on "What is Open?"):

- **Availability and Access:** the data must be available as a whole as and at no more than a reasonable reproduction cost, preferably by downloading over the internet. The data must also be available in a convenient and modifiable form.
- **Re-use and Redistribution:** the data must be provided under terms that permit re-use and redistribution including the intermixing with other datasets.
- **Universal Participation:** everyone must be able to use, re-use and redistribute - there should be no discrimination against fields of endeavour or against persons or groups. For example, 'non-commercial' restrictions that would prevent 'commercial' use, or restrictions of use for certain purposes (e.g. only in education), are not allowed.

It is, however, recognised that “various types of data are apt to be more or less open, and the reasons for the degree of openness may vary from one situation to another, that is type of data, by country, by type of institution, etc.” (Cole, 2012, para.1). Berners-Lee (2009), expounds on the “5 star” deployment scheme for Open Data. The 5-star is visualised as steps in the reproduced figure shown here as Figure 2.1.

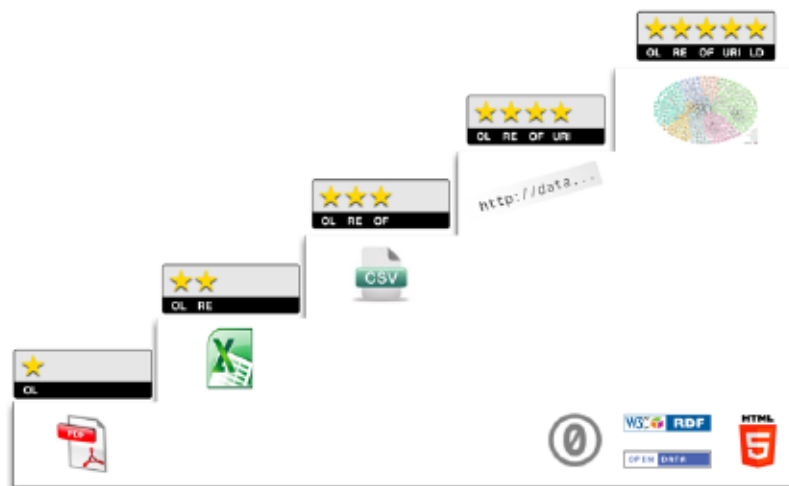


Figure 2.1 Tim Berners-Lee's 5 star Open Data

Source: <http://5stardata.info/> retrieved December 2, 2013.

This categorisation by Berners-Lee shows open data published as PDF to be in the lowest rung of the steps, with linked data having the highest number of stars. How high in the steps of open data, Nigeria's budget data has garnered, should be identifiable from this study.

The introduction of open data has energized political power, information and rights issues in developed countries. Improvement of services and contribution to economic growth has been made possible by making information about services and education data, amongst other information, publicly available on the web (IIEA, 2011). For instance, details on the various aspects of public spending made by the U.S. government can be found at “data.gov.us”. Although a comprehensive database for managing the United Kingdom's public sector budgetary and expenditure data had been operated for years, it was only in 2010 that the directive was given to Treasury officials to begin the online publication of historical data from the Combined Online Information System, known as COINS (McClean, 2011).

In Africa, the Government of Kenya launched its open data initiative in 2011 through which it aims to make several government data sets available to researchers and the general public including students, software developers, journalists and civil societies. The World Bank (2011) reports that since the existence of the open data initiative in Kenya, the public engagement has been impressive, as requests for new datasets on the site have emerged causing software developers to respond with applications that merge datasets, map public services, and provide an SMS query tool so information can reach users in remote rural areas. It is believed that the open data initiative will cut down on corruption in Kenya,

enable more scientific policy making and also engage more people in government by empowering them with the knowledge they can use to challenge both the government and political leaders. Recognizing that accountability emanates from a transparent process in budgeting, a number of standards and best practices have emerged through the International Budget Partnership (IBP) as part of its Open Budget Initiative, “a global research and advocacy program to promote public access to budget information and the adoption of accountable budget systems” (IBP, 2011a). The data made available by the Nigerian government to the public are non-sensitive government data mostly in forms of financial figures, maps, statistics, etc. (Oboh, 2014).

2.2 The Open Data Ecosystem

In the “Open Data Readiness Assessment Tool” prepared by the World Bank’s Open Government Data Working Group (World Bank, 2013), the section on “open data ecosystem” states (p. 27):

Experience among leading governments has demonstrated that Open Data initiatives are more sustainable and high-impact when Open Data efforts use an “ecosystem” approach – meaning governments invest not only in supplying data but also address the policy/legal framework, institutional readiness, capacity building (for government and infomediaries), citizen engagement, innovation financing and technology infrastructure. Governments need to play a multi-dimensional role in an Open Data ecosystem and create new types of partnerships with a wide range of stakeholders.

The section (World Bank, 2013), further outlines the efforts of New York City (NYC) in aggressively pursuing Open Data “in a way that promotes growth of a real ecosystem”. The City’s efforts have included: issuance of Open Data legislation that is part of a larger Digital NYC Roadmap led by a Chief Digital Officer within the Mayor’s Office; an annual NYC BigApps contest that helps investors identify promising apps/start-ups to fund; creating linkages between City government and the local developer community; and launch of a Citizen Toolkit for engaging with New York City government online.

Sinergantara (2013), outline one of such open data ecosystems. In this context, not all data provided by the government for the public can be immediately utilized by society or other users. Some parts of the data can be utilized only when they are developed into applications in web. Others may be utilized only when they are “translated” or “contextualized” by intermediaries (individuals/organizations that serve as a bridge of understanding the data). Expatriating further, the explanation is given that the above mentioned applications on the web (web services) are usually services developed by community or commercial corporations an examples of which are Google Maps and Daftar Pemilihan Tetap (DPT). Furthermore, that intermediaries in the open data ecosystem are usually NGOs, mass media, IT activists, or corporations that voluntarily or commercially have interest in making

information/data in government utilizable for users. Also, that intermediaries often utilize information from the web, instead of taking the data directly from government officials. The piece concludes by explaining that the translation and contextualization process takes various forms, such as bringing the data from digital to printed form, to re-processing data so that society can use the data to serve their needs and in conformity to their knowledge background.

In their Open Data Readiness Assessment framework, The World Bank (2013) suggest that the following factors are important for an open data ecosystem to emerge:

- + Agencies regularly engage citizens, businesses and other stakeholders to get feedback and input on their services, decisions or activities – either using ICT or in more traditional ways.
- + Agencies have a track record for engaging with developers in the creation of applications and eServices. A track record engaging other reuser communities is also a plus.
- + There have been co-creation type events (e.g., hackathons, code sprints, apps challenges) organized in your country/locality.
- + A critical mass of local developers exists, and as a community they are active on social media platforms or through in-person activities.
- + Early stage financing is available for entrepreneurs and start-ups.
- + There is already an Apps Economy in your country (even if small) with firms developing applications and people using/purchasing/downloading apps.
- + There are technical schools and universities with computer science programs that produce a notable number of graduates per year with technical degrees.

Also in the same assessment framework, The World Bank suggest the following as being harmful to a vibrant open data ecosystem:

- Journalism is organized mainly around large media organizations, and there are few freelance/independent journalists and no independent journalism associations.
- State-controlled media dominate the media industry.

On the other hand, open data readiness is conceptualised in the 2013 Open Data Barometer (Davies, 2013, p.24) as how far a country has in place the political, social and economic foundations for realising the potential benefits of open data with three components:

- Government: recognising the need for governments to have political will for an OGD initiative, and the technical capacity to put an OGD initiative into place;

- Entrepreneurs and business: recognising the key role played by innovators and established firms as re-users and intermediaries of government data – and identifying the extent of existing capacity and support for open data use available to the private sector;
- Citizen and civil society: recognising the importance of political freedoms, rights and protections to allow citizens and civil society to use OGD to hold government to account, and to engage in improving policy.

This study should reveal which of these points raised by the assessment frameworks, are important for a **budget data ecosystem** in Nigeria.

2.3 Role of Open Data in Governance

Most people consider the words “governance” and “government” to be synonymous. Though both words have “govern” as their root word, governance is about more than just Government. Fassenfest (2010, p.771), defines government, governing and governance as “Government: the office, authority or function of governing; Governing: having control or rule over oneself; Governance: the activity of governing;” and so, governance is a set of decisions and processes made to reflect social expectations through the management or leadership of the government. Fukuyama (2013) defines governance as government's ability to make and enforce rules, and to deliver services, regardless of whether that government is democratic or not. Governance can be described as a complex yet universal force that exists in all societies as it is been used by people in their daily lives to manage human relationships, in a similar way corporations and countries use it to manage interactions and activities (Misuraca, 2007). Speaking of the quality of a country's governance, however, means the degree to which its institutions and processes are transparent and accountable, that is, not connected to corruption in international business transactions, and accountable to the people allowing them to participate in decisions that affect their lives (governance). Although transparency and accountability are frequently discussed together, they are distinct concepts, although the pairing have become a mainstay of governance, where deficits of accountability can leave those in power more able to practice corruptly, and to serve their own rather than the public interest (Davies, Perini & Alonso, 2013).

The last 2 decades has experienced a lot of changes within the public sector, from new public management in the mid 80's to the arrival of computers, software programs and digital management since the mid 90's. In addition to these transformations, transparency has become a key word in the process, and Freedom of Information regulations have spread through the world in the past 25 years ensuring that citizens have the right to request information from government and making governments publish and provide information to its citizens (Heusser, 2012).

Oana and Flyverbom (2013) stated that “transparency is more often invoked than defined, more often preached than practiced”. They further pointed out that transparency acts as a

solution to governance, economic growth, control of corruption and citizen participation. According to Heusser (2012), open government data is the latest chapter of the governance story that has become a prominent topic for policy makers, academics, computer scientists, civil society organizations, technology corporations and geeks. Heusser describes open government data (OGD) as data that is either produced or managed by the government, and which is made openly available to third parties. Heusser points out that the first steps towards the access of public data were made by 'freedom of information' (FOI) regulations that firstly recognized the citizen's right to access information held in the hands of a public agency. Furthermore, that the assumption that more information leads to more accountability applies as well to the idea of open data, in a way that it can be argued that the more data becomes available, the more chances of accountability. The point about FOI regulations, enacted to enforce citizen right-to-information (RTI), predating the OGD movement is also made by Janssen (2012).

In conclusion, the concept of open data is one that should be pursued by all organisations and government as a fundamental human right, as a complement to freedom of information, including government information. Open data has potential to ensure transparency and create a basis of trust among those in authority/government and those being governed and perhaps enforces the true meaning of democracy. It is also thought to enhance and simplify governance for the government and give room for participation by all. While it may be too soon to ascertain whether Nigeria's open budget data has had any impact on improving transparency and reducing corruption, this study should reveal the thinking of Nigerians on this.

3. RESEARCH METHODOLOGY

3.1 Design

3.1.1 Underlying Framework

Various forms of data collection approaches were used in a way that allowed for triangulation of research results. The methods comprised content and discourse analysis, surveys, interviews, institutional visits, media analysis and active engagement / participant observation (elements of action research). The research was designed to gather what evidence there is on each of the six key case study components of the Emerging Impact of Open Data (ODDC) research framework (Davies, Perini & Alonso, 2013) with emphasis on the component on data use and their impact (C6). The framework is shown in Figure 3.1.

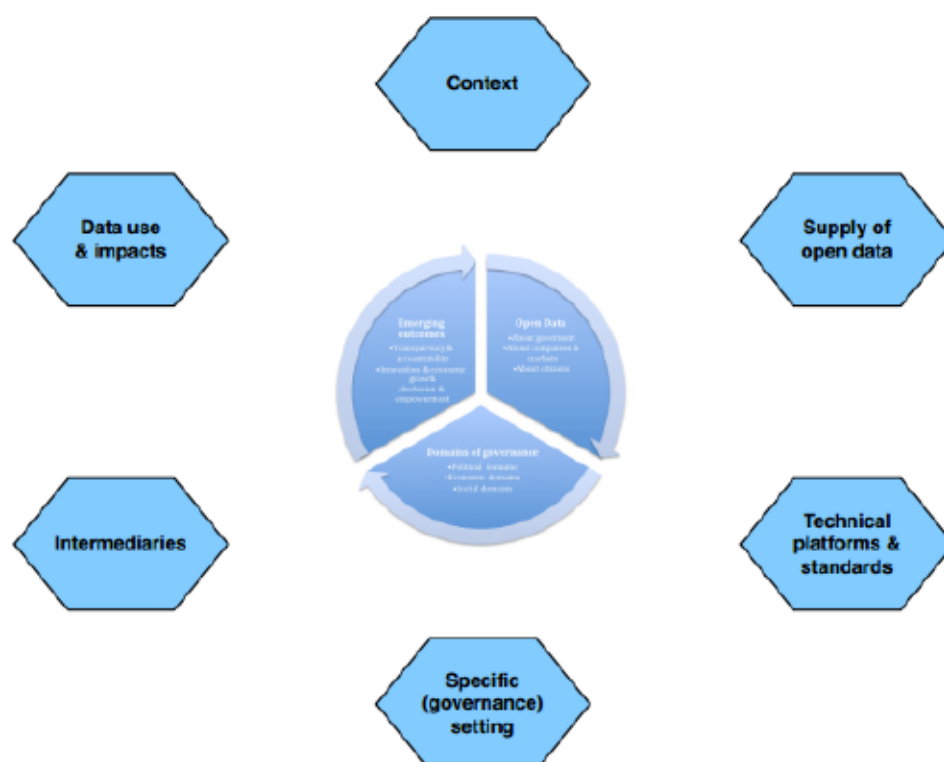


Figure 3.1 ODDC Research Framework

Source: Davies, Perini & Alonso, 2013, p.11

The six key case study components of the ODDC framework are:

- C1. The context for open data – including the political, organisational, legal, technical, social and economic context.
- C2. The supply of open data – including data availability, legal frameworks for data, data licenses, and the stakeholders involved in providing data
- C3. Technical platforms and standards – including data formats and data standards use, and any data catalogues, APIs or analysis tools provided by an open data initiative

- C4. The context of the specific governance setting – including a description and history of the issues in focus, details of key stakeholders, and analysis of how data plays a potential role in this setting.
- C5. Intermediaries and data flow – documenting the means by which data is made accessible in the governance setting: how, and by who?
- C6. Data use and impacts – documenting the experience of those seeking to use data, and providing evidence of an intended or unintended consequence.

The research design also adopted the concept of **supply of**, and **demand for**, data. In the Nigerian context, the budget data is prepared and published from one source – the Federal Ministry of Finance, through the Budget Office of the Federation after consideration by the National Assembly (the legislature). The study refers to this category of stakeholders as belonging to the budget data supply side. Others were regarded as belonging to the budget data demand side and included stakeholder groups such as government ministries, departments and agencies (MDAs) not involved in the production of the budget, civil society/non-governmental organisations, professional associations, re-packagers of the budget data, and members of the Fourth Estate – the Media.

3.1.2 Focus and sources for methodology

On one hand, the research design aims at establishing the context, supply and technical platforms of Nigeria's Online Annual Budget, investigating who is behind the posting of the budget, why, for whom, and access constraints/freedom of use (legal and technical) (Cole, 2012). This was intended to take care of components C1-C5 of the ODDC research framework. On the other hand, data collection was targeted at the major focus of this particular case, which is the investigation of the use of Nigeria's online national budget by identified stakeholders. Intermediaries involved with repackaging the data, generating online discussions and engaging in blogging (Furnas, 2013), were of particular interest.

These elements along with related items from ODDC case study questionnaires and the Open Data Barometer impact items (Davies, 2013) were incorporated in the design of various data collection instruments used for the study and comprised open- and close-ended questions where relevant.

The nature and characteristics of Nigeria's online budget data was compared against the expected standards for open data (Campbell & MacNeill, 2010).

An attempt was made to benchmark the current budget governance process in Nigeria against international best practice and standards, but the intention of employing the standardized questionnaire developed by the International Budget Partnership through their Open Budget Initiative (IBP, 2011b) failed because of the size of the questionnaire (197 pages). Hence the Federal Budget process was merely mapped.

The survey of stakeholders from the budget data supply side and from the data demand side converged on some of the issues being examined. These areas included issues of awareness of “open data”, the relationship between open data and the freedom of information (FOI) Act.

3.1.3 Ethics and practical considerations

All data collection instruments were refined for validity and reliability. In general, respondents were reluctant to agree to in-depth interviews citing time as reason. Thus, questionnaires were designed with a number of open-ended items to allow for responses in the respondents own words. Furthermore, although all establishments where respondents were targeted were requested in writing to grant approval for data collection, only the Federal Ministry of Information replied (positively) in writing. All others where access was given for data collection gave verbal approval. The attempts to obtain interviews (repeatedly) continued until just before data analysis commenced.

The consent of each respondent was obtained using a Participant’s Consent Form where they could indicate if they wanted to be recorded or not, quoted or not, if they wanted to receive results of the research and how, and confirmation that the purpose of the research was understood including the fact that they could opt out of the study at any time. A signed copy of the consent form was the condition to continue with administration of the interview/questionnaire. Hence, the survey questionnaires and interviews were delivered in person.

3.2 Survey

In order to elicit thoughts, opinions and feelings, the survey research method was selected as an appropriate means of achieving the research aims. Another reason was that the literature already pointed to likely stakeholders, such as CSOs/NGOs, the media, government, business, etc., that would be of interest for the study. Since open data is still a new concept in Nigeria the survey method provides the means to explore the issues of the interest.

3.2.1 Sampling procedures

Purposive sampling was adopted in the selection of respondents for the stakeholder survey. Three (3) members of each of the selected organizations (one executive and two lower cadre members) were targeted. Very few of these respondents granted in-depth interviews in the course of data collection, preferring to respond just to the structured survey, although of those who did grant in-depth interviews (five of them), nearly all agreed to be recorded, including one on video.

The business editors of each of the six selected newspapers for this study and the presenters of business shows/discussion programmes on the three television stations

selected were targeted. In order to make the survey inclusive, two lower cadre reporters or correspondents in each of the selected newspapers and television stations, including the ones for business or economic beats were targeted.

Since most organisations in Nigeria are represented at either Abuja - the nation's capital or Lagos - the nation's commercial centre, visits to organisations and newspaper houses selected for the study was initially limited to these two cities. However, Benin-City, Edo State, was later included in order to map the Edo State OGD initiative and interview some of the key players. Respondents associated with the initiative were assigned to government data supply side or other categories on the demand side depending on the role of the respondent in the initiative.

Our overall goal was to elicit the opinion of the stakeholders in relation to whether they have access to and use the open data for their understanding of the annual budget or they exclusively rely on media reports, analysis and interpretation. Care was taken to include in the survey sample, both senior and junior members from targeted organisations as King and McGrath (2004) suggest.

3.2.2 Institutional survey (Supply side data collection)

There were several visits to the Federal Ministry of Finance, Budget Office of the Federation and the National Assembly to obtain information that would feed into ODDR research framework components C1-C5. The Accountant General of the Federation was also identified for an institutional visit. A structured questionnaire, called "Supply side questionnaire" (see copy of questionnaire in Appendix I) was developed and used to collect data from staff of these institutions. Details about who posts the online national budget, for whom, for what reason, in what format, and within what legal and technical framework for its access, was gathered. The target respondent for the institutional survey was drawn from top government officials such as relevant Directors in the offices and junior/senior staff of the Information and ICT departments of the institutions. However, data was not collected from the Federal Ministry of Finance because our letters to them were always referred to the Budget Office for action. Also, the Budget Office insisted that any questions to do with the Federal Budget were well in their purview. From the target of 30 respondents, 23 from the data supply side was retrieved and found useable.

3.2.3 Stakeholder survey (Demand side data collection)

A demand side survey was also done to verify the use of open budget data by stakeholders, the impact of its use on the political, economic and social development of the Nigeria, budget performance, budget implementation, civic engagement and institutional changes. To obtain understanding of how open data is used or how it can be used, essentially to address component C6 of the ODDC research framework and the particular case study of this research, a survey of relevant stakeholders was undertaken including individuals identified as agents of good governance. A copy of the demand-side questionnaire used for Most of the respondents in this part of the survey received a demand-side questionnaire

("General Demand side Questionnaire as shown in Appendix II) that did not include an extra section specific to re-packagers of the budget data. Re-packagers received the most comprehensive version of the demand-side questionnaire and this is shown in Appendix III as "Demand Side Questionnaire for Re-packagers". The "General Demand side Questionnaire" was slightly adapted for respondents in television and also for respondents in the print media, to reflect their special activity of information dissemination.

Identified stakeholders included:

- Journalists from newspaper houses (Tribune, Guardian, Punch, The Nation, This Day, and Daily Trust) and television stations such as Nigeria Television Authority (NTA), AIT and Channels (3 respondents each, 27 overall). NTA is a Federal Government parastatal while Channels and AIT are private television networks.

Channels TV did not grant approval for its staff to participate in the study and so no interviews were obtained from here.

- Key persons in CSOs/NGOs including those that are into social networking and re-packaging of the Federal budget data (assumed intermediaries). Ten (10) organisations in this group were targeted with the intention of interviewing 3 respondents each (30 in all).

At the start of the project such assumed intermediaries were Budget at www.yourbudget.com with twitter ID: @budgetng; Resourcedat at www.resourcedat.com with twitter ID @resourcedat; and Enough is Enough - coalition of young Nigerians promoting good governance and citizen engagement (EiE Nigeria) at <http://EiENigeria.org> with twitter ID: @EiENigeria. In the course of the project, other intermediaries were identified such as Follow the Money (<http://followthemoneyng.org/>), Centre for Social Justice (CSJ) (csj-ng.org). Personnel of CSJ were not targeted for the study because we only became aware of their activities at our Research Dissemination Workshop.

Despite attempts to identify potential informants from Enough is Enough and Resource Data, we were not able to contact anyone to include them in the survey data collection.

Several of the CSOs/NGOs such as Spaces for Change, WangoNeT, Federation of Muslim Women's Association of Nigeria (FOMWAN), Civil Society Legislative Advocacy Council (CISLAC), Fresh & Young Brains, targeted for the survey, were participants at the 1st Nigeria Open Data Roundtable held in January 2014, at which we participated.

- Staff of Professional/Business Associations were targeted. Eight (8) of them, with the intention of interviewing 3 respondents each (24 in all). The associations were Nigeria Computer Society, Nigerian Guild of Editors, Nigeria Bar Association, Nigeria Union of Journalists, Nigeria Medical Association, Nigeria Labour Congress and the Nigerian Association of Chambers of Commerce, Industry, Mines and Agriculture (NACCIMA), Nigeria Society of Engineers.
- Individuals – Visible budget analysts identified from Television, Newspaper and Social Networking sites and known political/financial analysts and social critics. Twenty (20) people were targeted here but with low success in getting them to be part of the study.
- Government data users from MDAs were targeted – three respondents from each of ten (10) MDAs chosen for their assumed relationship to data use (such as National Population Commission, Federal Character Commission) or right to information (Federal Ministry of Information, Federal High Court, Abuja) and importance to the Federal Government’s Vision 20:2020 plan, as well as the Millennium Development Goals (MDGs) (such as the Federal Ministry of Education, National Universities Commission, Ministry of Health, Ministry of Agriculture, National Centre for Women Development). The Federal Ministry of Communication Technology was targeted because of its role as the chair of the planning committee for the National Open Government Data Initiative. Resulting in 30 targeted respondents.

Overall, 131 respondents from the budget data use side (demand) were targeted. However, in many instances in the case of professional associations and CSOs, the decision maker did not see the need for interviewing more than one person in the organisation and this further contributed to the shortfall in the number of targeted respondents. The data analysis was done with a sample of 71 respondents on the demand side.

Being that interview subjects were so few (only 5), responses from them that could be logged under the questionnaire data capture form, was combined with the questionnaire data as either Survey Data (Supply side) or Survey Data (Demand side).

3.2.4 Profile of respondents

For analysis, respondent responses were grouped as **Demand side** with categories belonging to *Civil society* or *Government* or the *Media* or *Demand – Others*; and **Supply side** consisting of *Legislators* and *Government* respondents involved with the budget production process but for convenience have been reported jointly as *Government-Supply side*. “Demand-others” comprised the respondents from professional associations, re-packagers of the budget data and independent analysts or personalities. The number of questionnaires/interviews obtained under each stakeholder category against the number

targeted is presented in Table 3.1. Out of the targeted 161 stakeholders, 94 of those reached, consented to participate in the study, resulting in 58% of the targeted sample.

Table 3.1 Distribution of Respondents by Stakeholder Category, Target and Response Rate

Stakeholder Category	No. of participating respondents	No. Targeted	Response rate
Demand:			
Civil society	17	30	56.7%
Government	22	30	73.3%
Media	25	27	92.3%
Others (including professional associations, re-packagers of budget data, independent personalities)	7	44	15.9%
Supply:			
Government	15	20	75.0%
Legislature	8	10	80.0%
TOTAL	94	161	58.4%

Overall, the resultant sample was made up of 21 (22%) females and 73 (78%) males. The gender distribution by stakeholder category is presented in Table 3.1 and shows there were no females from the *Demand-Others* category. Respondents were quite evenly spread in terms of work experience, from early career to highly experienced as shown in **Error! Reference source not found..**

Table 3.2 Distribution of Sample by Gender

Gender	Category					TOTAL
	Civil Society	Government - demand	Media	Others demand	Supply side	
Female	7 (41%)	4 (18%)	6 (24%)	0 (0%)	4 (13%)	21 (22%)
Male	10 (13%)	18 (82%)	19 (76%)	7 (100%)	19 (8%)	73 (78%)
TOTAL	17 (100%)	22 (100%)	25 (100%)	7 (100%)	23 (100%)	94 (100%)

N=94

Table 3.3 Length of work experience of respondents

Length of work experience	Frequency	Percentage
1 to 3 years	15	16.0%
3 to 7 years	17	18.1%
7 to 10 years	16	17.0%
10 to 15 years	12	12.8%
15 to 25 years	19	20.2%
More than 25 years	11	11.7%
No Response	4	16.7%
TOTAL	72	100% (N=94)

3.3 Media Analysis

Media analysis was undertaken as an independent source of evidence on the issues raised by this research. This involved the review and content analysis of Nigerian newspapers as well as discussions on the National Budget on online social media/networking sites. Newspapers are the only traditional media that reach to the majority of Nigerian citizens, particularly the middle (elite) class, without the barrier of powering a television in view of poor electricity supply. Also, Social media are the most uncensored public domains (termed Emerging Public Sphere) for discussion of governance and public issues. Television and radio were left out because it is difficult to obtain past recordings of shows, and to systematically monitor live television broadcasts.

Social media has exploded as a category of online discourse where people create content, share it, bookmark it and network at a prodigious rate (Asur & Huberman, 2012). Social media is an array of internet based technologies and tools which fosters interaction and discussion among a nomenclature of people with similar interest, in order to facilitate information sharing and strengthen relationship ties. It is not just a broadcast channel or a sale and marketing tool but a platform for building a community of like minds, connected by the relevance of related ideas and interest, enabling the transfer of multimedia and other forms of information fluid among internet users (Mayfield, 2013). Social media as a group of new kinds of online media that share most or all of the following characteristics: Participation, Openness, Conversation, Community and Connectedness. through the social media, government, people or groups can create, organize, edit and share content in the process helping agencies better achieve their mission goals (HowTo.gov, 2013).

Social media has four major potential strengths namely collaboration, participation, empowerment, and time (Margo, 2011). These potential strengths were named as the pillars of open government in an original open government memorandum released in 2008 (Unsworth & Townes, 2012). They further explained that Collaboration reflects the actual engagement, interaction and dialogue between the government and the governed while, Participation seems to be a feature that when present allows the public to essentially have a voice in government or when absent hinders citizen involvement in government matters.

Content analysis is “a research technique for the objective, systematic and quantitative description of the manifest content of communication” (Berelson, 1952, p.18). In relation to the purpose of this study, content analysis is “a research method that uses a set of procedures to make valid inferences from text” (Weber, 1990, p. 9). It is “the systematic and replicable examination of symbols of communication, which have been assigned numeric values according to valid measurement rules, and the analysis of relationships involving those values using statistical methods, in order to describe the communication, draw inferences about its meanings, or infer from the communication to its context, both of production and consumption (Riffe, Lacy & Fico, 1998, p. 20).

A detailed review (from 2009 – 2013) was done for the newspaper analysis. However, social media review was limited to scanning for the discourse around the 2013 budget of Nigeria. The aim being to have one year of assumed common grounds for comparing findings from newspapers and social media.

3.3.1 Newspaper review

3.3.1.1 Selection of reviewed Newspapers

Six Nigerian national Newspapers from over 40 national daily newspapers were already purposively selected, using the criteria of circulation, readership status, geographical locations. The newspapers selected are:

- *The Punch*: Located in Lagos (Lagos-Ibadan axis- South West of Nigeria); circulation of about 1million; popular among the middle class category of social status. Radical ideology
- *The Guardian*: Located in Lagos (Lagos-Ibadan axis-South West of Nigeria); circulation of over 1million; popular among the political elites. Conservative ideology
- *The Nation*: Located in Lagos (Lagos-Ibadan axis-South West of Nigeria); circulation of about 800,000; partisan, owned by Bola Ahmed Tinubu the leader of the “opposition party, All Progressives Congress (APC)
- opposition party; popular among the political elites and, particularly the adherents of the opposition party (APC); no clear cut ideology
- *The Tribune*: Located in Ibadan (Lagos-Ibadan axis-South West of Nigeria); circulation of over 500,000; started as a partisan newspapers, established by Chief Obafemi Awolowo – one of the First Republic politicians; popular among the die-hard followers of the sage among the Yorubas. Conservative ideology
- *Daily Trust*: Located in Abuja, the nation capital city; circulation of over 500,000; popular among the Hausas in the Northern part of the country. Conservative, representing the Northern region of the country
- *This Day*: Located in Lagos (Lagos-Ibadan axis-South West of Nigeria); circulation of about 1million; popular among the political elites. No clear cut ideology

3.3.1.2 Sample Size and Sampling Techniques

The period of study for this case study is the annual budgets of Nigeria from 2009 to 2013. Therefore, the newspaper samples for the study were purposively drawn from this period. However, the analysis was restricted to the period as from when the formulation of the annual budget is usually initiated to the time when it is presented to the National Assembly for debate and passing into an appropriation bill and when it is finally presented to the

public after Presidential accent. This is usually from around December of the preceding year to June of the Budget year.

Thus, the target samples of each of the selected newspapers for analysis consisted of all the editions of each newspaper in over six months of each required Budget year. That is, January to May of the Budget year and December penultimate to the Budget year. For example, for 2012 Budget year, the months analysed were December 2011 and January – May 2012. However, the analysis for 2013 extended as far as November 2013 in some cases.

The expected number of newspapers to be analysed for each newspaper was estimated as 30 editions for 6 months for 5 years amounting to 180 editions for each newspaper per Budget year, and 900 editions in all per newspaper.

Thus the number of editions expected to be evaluated from the 6 newspapers was 5,400. However, 4,571 editions were analysed and so 85% of the target was achieved. The shortfall was due to difficulties in locating some of the newspaper editions after searching for the issues at the University of Ilorin Library, the Kwara State Library, local circulation offices of the newspaper houses, and the Newspaper Head Offices.

3.3.1.3 Variables of Concern

The Units of Analysis of concern consisted of all forms of news items on the annual budget of Nigeria. These included News story, Columns (opinions), Editorials, Articles, News analysis, Cartoons and even Graphics.

The analysis of the newspapers was undertaken in order to determine:

- Depth of the report on the annual budget
- Prominence given to the coverage or report of the annual budget
- News Items for the reports or coverage of the annual budget
- Direction (whether favourable or otherwise) of the reports on the annual budget
- Tone (whether harsh, soft, radical) of the reports on the annual budget
- Major Themes or focus of the budget in the reports
- Sources of the reports (whether government officials, experts, civil society organisations. This will help in making inferences engagement with budget data.

3.3.1.4 Template and Coding Schedule

Content analysis was recorded using a pre-defined coding schedule (Figure 3.2) and the data entered into a spreadsheet using the schedule as drop-down lists in addition to entering details and content of the newspaper article into the template (Figure 3.3). The coded data were analysed using descriptive statistics.

Template for Newspaper Content Analysis - Microsoft Excel (Product Activation Failed)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	PaperName	YearPublished	Day	Month	NewsItems	Themes	Prominence	StoryDirection	Tone	Quality	Source				
1	Guardian	2013	1	January	News Story	Capital Projects/Expenditure	Front Page Major	Favourable	Soft	Comprehensiv	Top Government Officials				
2	This Day	2012	1	February	Features	Recurrent Expenditure	Front Page Minor	Critical	Moderat	Scarcy	Government				
3	Daily Trust	2011	3	March	Editorial	Fiscal Policies in the Budget	Inside Page	Neutral	Horsh	Expert	Minister of Finance				
4	Tribune	2010	4	April	News Analysis	Debt Servicing	Inside Page	Informing			Ministry of Finance				
5	Punch	2009	5	May	News	Key Assumptions and	Back Page Major				Budget Office				
6	The Nation	2008	6	June	Opinion	Expenditure Development and	Back Page Minor				National Assembly				
7			7	July	Adventorials	Micro Economic Development					Non-governmental				
8			8	August	Cartoon	Macro Economic Development					Others				
9			9	September	Photo News	Statutory Transfer									
10			10	October	Exclusive	Financial Items									
11			11	November	Others	Others									
12			12	December											
13			13												
14			14												
15			15												
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Figure 3.2 Pre-coded schedule for newspaper data

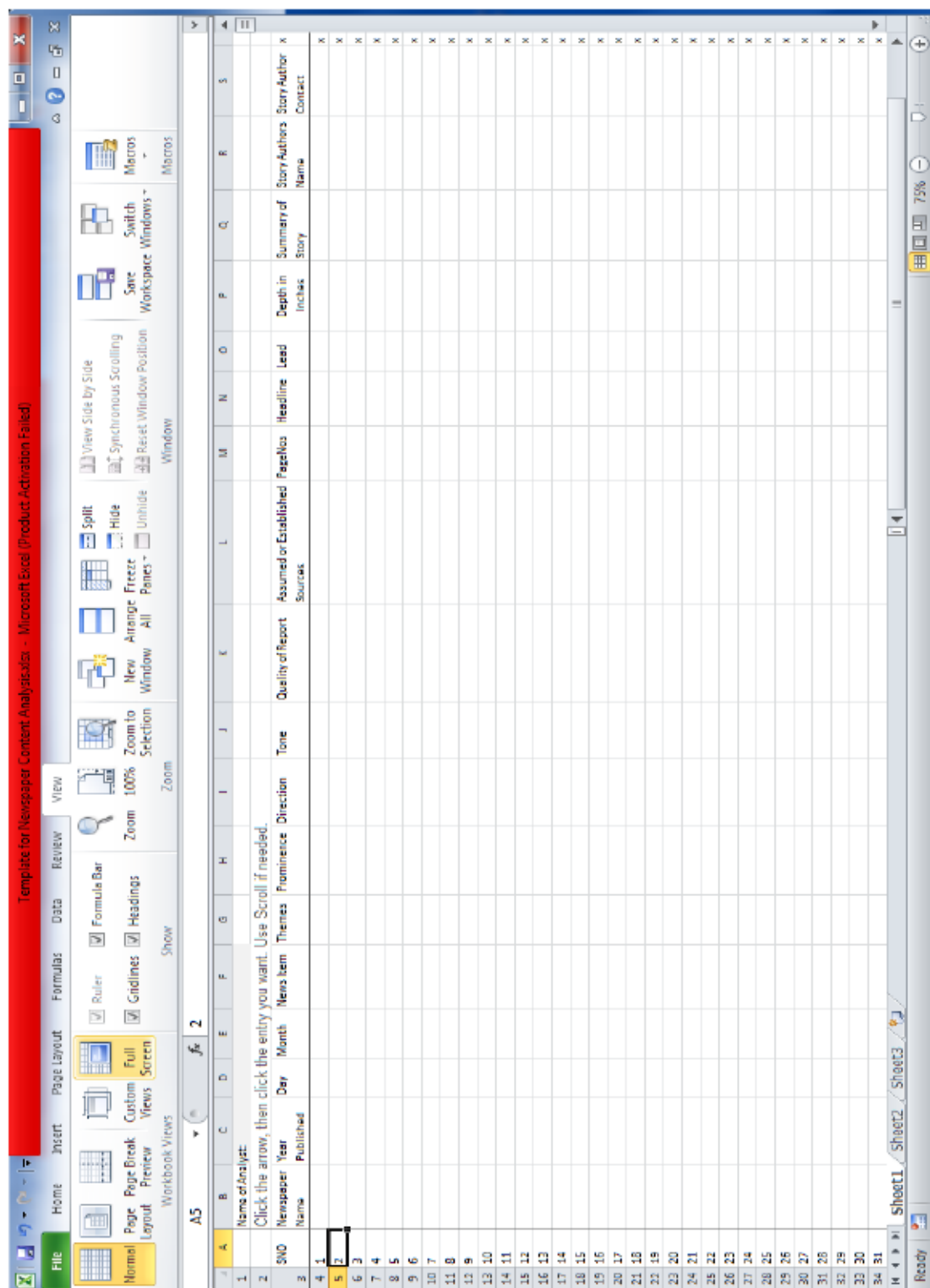


Figure 3.3 Template for Newspaper data entry

3.3.1.5 Process and method of the newspaper analysis

Online archives of the newspapers would have been the easiest medium of obtaining the newspaper editions to be analysed, especially because we were dealing with old and past editions of the newspapers from as far back as to December 2008. However, this proved unviable because only one of the selected newspapers (*The Punch*) had a full online repository of archives of its past editions up to 2008. Archives of all other newspapers could not be assessed, and we concluded that they do not have the required editions online. Thus, the hard copy editions of each of the newspapers were located and analysed one by one.

Six newspaper analysts were employed for the analysis; one analyst for each newspaper. At the commencement, the analysts were closely supervised by the Project's Co-investigator, who is an experienced mass communication researcher, in order to minimise coder bias and ensure that all analysts are interpreting the newspaper content in the same way as much as possible. Further cleaning of the data was done during the data analysis stage. Furthermore, the cleaned data was later returned to the analysts to complete any missing parts in the "Headline" and "Summary of Content" fields.

3.3.2 Online Social Media Discourse analysis

The web was manually scanned for conversations/debates around the 2013 Budget and extracted into an Excel spreadsheet for further coding. This was done with a view of establishing the level of stakeholder engagement that the process of the formulation as well as the release and content of the budget had stimulated.

The majority of our data comes from two social media platforms: Twitter and Facebook, although there are other social media include social networking applications such as Facebook, Google and micro blogging services such as Twitter, blogs, wikis, and media sharing sites such as YouTube and Flickr (Margo, 2011). This is because Twitter and Facebook are much widely used in Nigeria. In 2012, the number of Facebook users in Nigeria was put at 6,630,200, representing a 3.9% penetration rate (Internet World Stats, 2012). Nigeria is also the third most active African country on Twitter (Premium Times, 2012).

Twitter is an extremely popular online micro-blogging service. It has a very large user base, consisting of several millions of users. It can be considered a directed social network, where each user has a set of subscribers known as followers. Each user submits periodic status updates, known as tweets that consist of short messages of maximum size 140 characters. These updates typically consist of personal information about the users, news or links to content such as images, video and articles. The posts made by a user are displayed on the user's profile page, as well as shown to his/her followers. A retweet is a post originally made by one user that is forwarded by another user. These retweets are a popular means of propagating interesting posts and links through the Twitter community. Twitter has attracted lots of attention from corporations for the immense potential it provides for viral marketing. Due to its huge reach, Twitter is increasingly used by news organizations to filter news updates through the community.

Common Facebook terms are “Friend” and “Like”. Facebook Friends are the people you connect with (or “Friend”) and share content and updates with on Facebook. You can send Friend requests to other Facebook members. You also receive Friend requests from other members which you can accept, decline, or ignore. Anyone can click the Like link on any Facebook update to show that they like the content. When you like something, the action appears as an update on the members Facebook Wall. Anyone can also like any piece of content that is found across the Internet whenever it is accompanied by the Facebook Like button.

Social media content was extracted majorly by using various search phrases in the Google search engine by an employed analyst. Since the objective was to identify evidence of citizen engagement, articles, no matter how interesting or related to Nigerian Budget they were, were not extracted if they received no comment from visitors/readers. The analyst disregarded comments containing blatant insults with total disregard for the content being discussed. Comments containing advert placements were also disregarded. The process resulted in 83 primary posts (that is, posts attributed to “Prompters”) and 528 sub-posts (online community engagements with Prompter posts). The number of Likes generated by a Prompter post or by a sub-post was recorded. The number of shares of a Prompter post or sub-post was recorded, as well as the number of retweets of a post. Also, where found, the Comments to a Prompter’s post were extracted.

Prompter posts were coded with impressions similar to the coding of newspaper content although there were major differences. The data items for social media coding were:

- Direction – general direction of the post: Analysis/ Comparison/ Critical / Informing / Optimistic/ Suggestion
- Tone of the post: Call to action/ Harsh / Moderate / Neutral Soft
- Source of post: Citizen/ Civil society /Government /Legislator/ Minister of Finance / Online media / Political party / Top government official / Traditional media
- Target, that is, to whom or what the content of the post is targeted: Accountability / Budget allocations / Budget performance / Citizens / Government / Government & Legislators / MDAs / Revenue sources for budget / Timeliness

The content extracted and coding of impressions of the content were recorded on a spreadsheet and analysed using frequency distributions.

3.4 Action Research

As highlighted in the “modus Operandi” section, we engaged in action research as we applied new knowledge gained through project activities, academic pursuits with students, participation in related national events, and dissemination of the ODDC work.

Participation at Nigeria's first Open Data Clinic

Based on recommendation from the World Wide Web Foundation, the Unilorin ODDC team attended the 1st Nigeria Open Data Clinic which took place in Abuja, Nigeria, on January 30-31, 2014. The Clinic was part of a series of initiatives led by the Federal Republic of Nigeria's Ministry of Communication Technology, the World Bank, the new Code for Nigeria and Hala Nigeria initiatives, and other global partners to help shape the country's national Open Data initiative. This event gave us the opportunity of meeting many of the CSOs/NGOs involved with, majorly, accountability and transparency advocacy, many of whom we later interviewed for this study.

Organisation of a Data Hackathon

The Unilorin ODDC team acted on information from the Foundation to attend a hackathon, which was a new concept to all members of the project team. The event was a data hack on the extractives industry data and took place in Lagos, Nigeria, on 13th and 14th May, 2013. Leveraging on the Lagos 2013 hackathon experience, the Unilorin ODDC team organised a local open data hack event to coincide with the 2014 International Open Data Hackathon Day, on February 22, 2014. Eight competing teams drawn from five universities in Ilorin and environs, were hosted at the University of Ilorin to work on the open budget data of Nigeria (focus of the Unilorin ODDC research). The event was publicised through the web page: <http://goo.gl/yE09pG>, facebook: <https://www.facebook.com/OpenDataUnilorin>, and twitter handle: @unilorinODDC #ODDIlorin

This would be the first inter-university data hackathon to take place in Nigeria.

The research dissemination workshop

The project's planned ODDC research dissemination stakeholders' workshop took place on April 7, 2014. About 100 participants from government, media, civil society, professional associations, and independent experts, took part in the workshop. Winners of the Unilorin ODDC February 2014 hackathon were invited to present their visualisation output at the workshop. The event is fully detailed on the ODDC network website at: <http://www.opendataresearch.org/project/2013/unilorin> We used the opportunity of presenting the research findings to a broad spectrum of stakeholders, to obtain feedback on some key questions arising from the research.

Increased Academic focus on Open Data research at Unilorin

Members of the research team are all based in the Faculty of Communication and Information Sciences, at the University of Ilorin, with opportunity to supervise academic projects at both the undergraduate and postgraduate levels in computer science, information and communication science, and mass communication. With the commencement of the ODDC case study, there has been an increased focus on open data research and projects not only through the researchers on this team but also, active interest from other faculty members.

3.5 Management of the Survey Process

Organisations and individuals identified for the study were assigned to each of the researchers in the 4-member team. Each researcher, working with assistants, followed-up on their allotted subjects and was responsible for supervising transcription of interviews/questionnaires as necessary and the entry of survey data into the relevant Google Forms - one for the Demand side data and another Google Form for the Supply side data. At the end of data collection, the data were downloaded from the Google Forms into Excel spreadsheets after which the data files were exported to the *Statistical Package for the Social Sciences* (SPSS) for analysis. This cycle was repeated until the data was clean enough to undergo final analysis for reporting.

The survey variables were grouped into four sections and each researcher was allocated a section for analysis and reporting. The data was summarised using frequencies and cross-tabulations and pie- and bar- charts. Responses to open-ended data items were content analysed during the reporting stage. This grouping was also used in the presentation of research findings during the dissemination workshop. The summaries from workshop participants were collated and are presented in the relevant parts of the results section. In addition, findings, observations, emerging collaborations, from the February 22nd 2014 Hackathon and engagement with stakeholders such as the January 2014 Open Data Clinic, are also reported during discussion of related results.

3.6 Publication of the data sets from this case study

There are four data sets emanating from this project and they have been published on Zenodo, an online repository, under the Creative Commons license. Each data set and the link to the data are as shown below:

- a) Survey Data (Supply side) – published as <https://zenodo.org/record/11514>
- b) Survey Data (Demand side) – published as <https://zenodo.org/record/11516>.
- c) Newspaper Content Analysis Data available at <https://zenodo.org/record/11512>
- d) Discourse Analysis of Online forums/social networks available at <https://zenodo.org/record/11513>

3.7 Methodological Limitations

Keeping the scope of media analysis to newspapers and social networking sites is a limitation to the study given that once the budget appropriation process begins, all media outlets – newspapers, television, radio, social network sites – engage in the discussions. We, however, believe that this is not enough to affect the findings since newspapers have the most extensive reach with some element of censorship and social networking sites while

being uncensored are increasingly reaching more citizens through mobile-to-web technologies.

Another methodological limitation has to do with coding the impressions of content extracted from newspapers and social media. Personnel skilled and willing to go through the content was in short supply and so it was practicable to have more than one coder on the same data set. In future, such a project could be designed, both in terms of budgeting and personnel to handle coder bias through multiple coding.

4. THE CONTEXT OF OPEN DATA IN NIGERIA

4.1 History of Nigeria

The present-day territorial structure that is known as Nigeria had existed long before 1500 as distinct ethnic groups with diverse cultural and political background (Falola, 2009). Prominent among these ethnic groups that existed as separate nation states included the Yoruba Kingdom, Edo Kingdom, Hausa, Kingdom and many other numerous small states to the West and South of Lake Chad. So the multitude of areas that became Nigeria of today was never a unified entity because the cultural orientation as well as the language of each of the areas was entirely and markedly different (Otite, 1990).

At the 1885 Berlin Conference when Africa territories were shared among the European imperial powers and colonists, the aforementioned scattered areas that were known to have been existing within the Niger Basin area of Africa were allotted to the British as part of its areas of exploitation. Thus, the British colonial power formally and effectively occupied all the territories that are today known as Nigeria by establishing an effective colonial rule on the peoples of the original separate nation states. Perhaps for effective rule, the British divided the nation states into Southern and Northern Protectorates with different styles of rule and different goals or aspirations for the peoples in the two different Protectorates (Les Editions, 2002).



Figure 4.1 Map of Africa highlighting Nigeria

Source: https://www.google.com.ng/search?q=map+of+Nigeria+in+Africa&noj=1&tbm=isch&imgil=LhVHWMW966hGWM%253A%253BfQGLtO74YIZ7aM%253Bhttp%25253A%25252F%25252Faflang.humnet.ucla.edu%25252Fbole%25252Fbole_location.html&

However, by 1914, the British colonialism, through Lord Lugard, created Nigeria by amalgamating the Northern and Southern Protectorate, and, thereby, joining diverse peoples and regions in an artificial political entity with little sense of a common Nigerian nationality (Falola, 1999). Indeed, this lack of feeling of nationhood or the lack of national identity has been enduring, and has been the major bane of the country's aspiration for progress, stability and development. (Wright, 1998)

As Falola (1999) further established, the lack of commitment to the project of Nigeria, which the British foisted on the peoples that have continued to see themselves as markedly different from one another, has been significantly shaping the history of Nigeria as a country. Even after gaining independence from the British colonial rule on October 1st 1960, the peoples of Nigeria could not see one another as one and work together for the rapid transformation of the structures left by the colonial masters. The bitterness and sentiments that boiled up in the late 60s led to the civil war of 1967-1971 that almost broke the entity of Nigeria into splinters. According to Falola (1999), agitations of the different peoples of the country to break into the original nation states of ethnic orientations continues, and the subtle demonstration of this might be linked with the existence of violent militias and terror groups springing up among the major ethnic groups with surreptitious ideological and political goals. This continues to be the case still.

It is generally agreed that by 2014, Nigeria became 100 years old, taking its birthday to be the day that Lord Lugard amalgamated the Southern and Northern Protectorates to create Nigeria. Nevertheless, Nigeria still grapples with the economic, political and some social realities that are hampering its steady growth and transformation (Wright, 1998).

Politically, the country was consistently under different harsh military rulers that came one after another through coups for more than three decades (Siolium, 2009). As Siolium opines, during this long period, the country's aspiration for overall development was stunted. Despite the predominance of military regimes during the three postcolonial decades, Nigerian society has retained many of the fundamental building blocks of a democratic polity: vigorous entrepreneurial classes, a broad intelligentsia and numerous centres of higher education, a dynamic legal community and judiciary, diverse and often outspoken media, and, increasingly, courageous human rights organizations (Siolium, 2009).

In 1991, the country was returned to civil rule and has been managing the inchoate democracy for more than fifteen years now, although with continued challenges of pettiness, bitterness and struggle for the central political power among the different ethnic groups (Wright, 1998). Nigeria is presently a Federation with 36 independent States and the Federal Capital territory (FCT) and 775 local governments across the States and FCT (Les Editions, 2002). Hitherto, precisely during the first republic after independence, the country operated regional arrangement with four major regions. Although the country claims to be a Federal Republic now, it operates practically a central system because the central

government dictates the pace and tune for almost all the affairs of the nation (Oyovbaire, 1987). In spite of the theoretical division of spheres of control into exclusive (only for Federal Government), concurrent (for both the States and the Federal Government) and Residual (only for the States), the Federal Government has absolute control on the national revenue and its allocation to the subordinate governments in the states and local areas.

Thus, the Federal Government takes the lion share of the national revenues from the Federation account, while it shares a small proportion to the states and local government. Exclusive affairs are the sectors or affairs of governance that are within the exclusive and general control and administration of the Federal Government (for example, Security, Fiscal policies and Foreign Relations), while concurrent affairs are those affairs that could be controlled or legislated upon by both the Federal and State Government, giving the federating states the freedom to initiate policies and programmes on such sectors of governance as it affects them (for instance, Education, Agriculture, Housing, Road, Taxation and Tourism). Residual list of legislative power is concerned with the affairs of government that are exclusively left to the states' control and legislation without involvement or any form of control from the Federal Government.



Figure 4.2 Map of Nigeria showing the 36 states and the FCT

Source: <http://www.total-facts-about-nigeria.com/physical-map-of-nigeria.html>

All along its existence, during the military era and even during the civil rule in the first, second and third republic, Nigerian political landscape and governance have been

characterized by political patronage, corruption and injustice (Kukah, 2007). At all levels, political leaders use a range of controls to subdue and manipulate the masses to ensure legitimacy they need from the masses. The political elites do close ranks to share the fruits of office and to prevent challenges to their positions (Ogbeidi, 2012)

Economically, Nigeria was a promising country, particularly after independence. With 25% of Africa's population (Oluwafemi & Ojo, 2006) the country was seen as an emerging economy. With the rebasing of her economy in 2014, Nigeria is considered as the largest economy in Africa (Dana, 2014; Daily Independent, August 2014). However, the potentials or claim of being the largest economy are not manifested on the living standard of Nigerian people in reality, with more than 50% of its 170 million populace living under poverty level (World Bank, 2014). As one of the major producers of crude oil in the world, as well as being the largest populated country in Africa, Nigeria is expected to be among the first 20 world economy. Unfortunately, a series of political, social and economic challenges have stalled Nigeria's potentials for growth.

One of the social banes retarding the growth of the country is corruption (Gboyega, 2006)). This is associated with financial recklessness, unemployment, and lack of transparency and accountability, which have pervaded all sectors of the nation (Ogbeidi, 2012) By the 1980s, the education system in the country was turning out an increasing surplus of graduates. Dozens of university graduates lined up for a single opening, and many more for less specialized positions. Under such conditions, nepotism, ethnic favouritism, and bribery flourished in the employment process and the indirect result of these social realities is violence, which is taking on a new dimension of local terrorism (Falola and Julius, 1985). As the largest economy in Africa, according to the World Bank rebased economic assessment, the country generates over £147 billion a year in oil and gas revenue, and yet many of her people are among the continent's poorest (World Bank Report, 2013) According to USAID, 70% of Nigerians live on less than \$1 per day, and the average life expectancy is only 47 years (USAID, 2013). The country ranks 158 of 177 countries on the United Nation's Development Programme's (UNDP) Human Development Index (UNDP, 2013). The U.S. State Department attributes Nigeria's lack of social and economic development in to "decades of unaccountable rule", and a series of successive rule that lack transparency, accountability and public participation. In spite of many civil society organizations' efforts to drive good governance based on transparency, accountability and public participation, Nigeria rulers remain entangled in financial recklessness, corruption, misappropriation and high disrespect for public opinion (Wright, 1998).

4.2 Open Data in Nigeria

Open data is a relatively new concept in Nigeria, although progress towards more open data has recently begun, starting at the state level and moving upwards to the launch of a national Open Government Data initiative. However, various data sets providing information on developmental and governance issues can be found scattered on various websites of public and private sector organizations. One of such is the publication of the budget of the Federal Government of Nigeria through the website of the Budget Office of the Federation on <http://www.budgetoffice.gov.ng>.

Although Nigeria does not yet have a formal Open Budget Data portal, the National Budget of Nigeria has been published on the website of the Budget Office of the Federation since 2007. A screenshot of the home page of the Budget Office website is shown in Figure 4.3.



Figure 4.3 Screen shot of the Budget Office website

Source: <http://www.budgetoffice.gov.ng/> accessed on April 20, 2013

However, the budget data has not always been published in an organised manner. For example, although the budget of the country for 2007, 2008 and 2009 can be obtained through the Downloads link on the Home page, the link description for each year varies from year to year and it is not clear if the data is the final approved budget or the budget as initially proposed to the National Assembly for consideration. Furthermore, along with the budget for the stated years is a link to 'The Nigeria Constitution'. For 2010 and 2012 budget data, the links can be found on the lower segment of the home page under the frame caption '2012 Budget'. As for 2011, the budget data has to be pieced together from the

2011 quarterly reports on budget implementation available under the 'Downloads' frame on the main menu of the home page as shown in the screen shot in Figure 4.4.



Figure 4.4 Screen shot of the 'Downloads' page of the Budget Office website

Source: <http://www.budgetoffice.gov.ng/downloads.html> accessed on April 20, 2013

Furthermore, the 'Publications' page (Figure 4.5) and the 'Archives' page (Figure 4.6), assessed from the Home page, show similar content.



Figure 4.5 Screen shot of Publications page of the Budget Office website

Source: <http://www.budgetoffice.gov.ng/publications.html> accessed on August 27, 2014



Figure 4.6 Screen shot of the Archives page

Source: <http://www.budgetoffice.gov.ng/archives.html> accessed on August 27, 2014

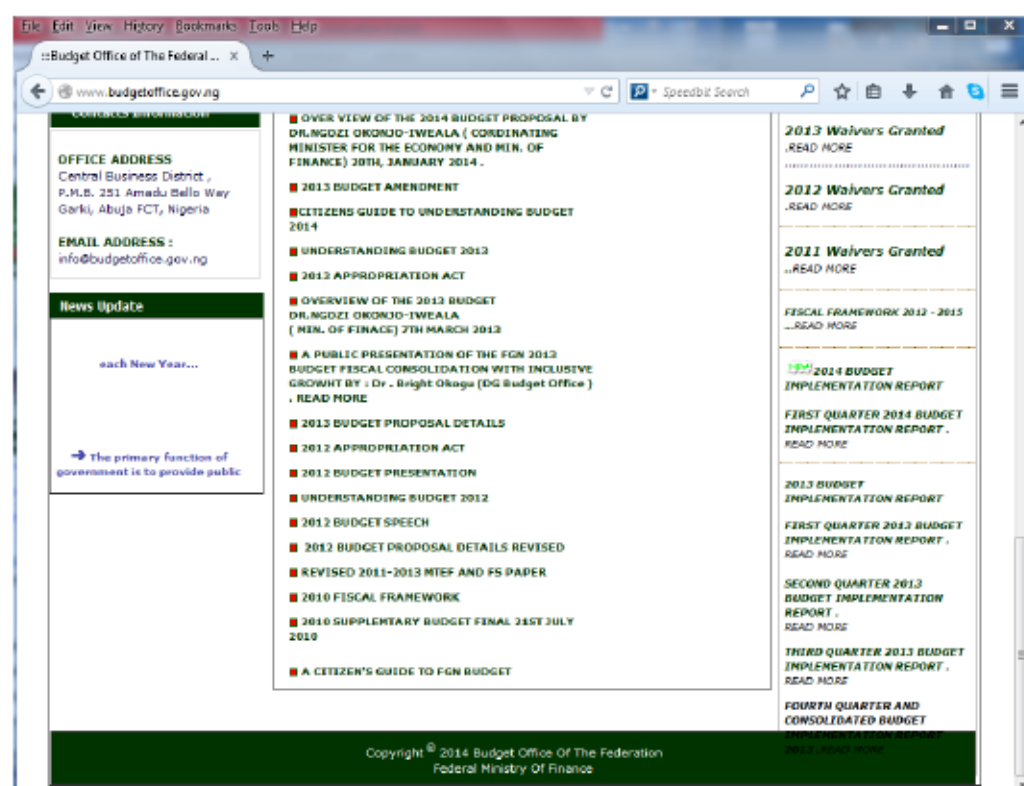


Figure 4.7 Budget Office Home page showing the "Copyright" notice

Source: <http://www.budgetoffice.gov.ng/> accessed on August 27, 2014

At the commencement of this project, there was no license attribution on any of the web pages and organisation of the budget data sets was poor. However, in the second quarter of 2014, we observed a re-organisation for the better, in terms of data organisation, but for the worse, in that there is now a Copyright notice on the home page.

Edo State became the first state in Nigeria to launch an open government data (OGD) portal making it the first of its kind within the country. The OGD portal was launched on the 13th of September, 2013, by Governor Oshiomole where a data centre at the Directorate of ICT in the state with data communication links connecting all its government offices was also commissioned (Techloy, 2013). The portal which was named data.edostate.gov.ng is the official data repository for the Edo State Government. It provides an easy way to find access to and reuse public datasets from the government. Reasons given for implementing the portal are the benefits gained by several countries such as, being a platform to improved transparency, catalysing innovation and enabling social and economic development (Tribune, 2013). According to Governor Adams Oshiomhole of Edo State, the only way to deal with wastages, fraud and ghost workers' syndrome in government is to introduce information and communication technology (ICT) into governance (Techloy, 2013).

The Edo portal main menu has items such as Datasets, Organizations, Groups, Suggest Data, Apps and Blogs. As at June 2014, 91 datasets were available on the portal. Examples of the available datasets are: audited financial statements for the year ended 31st December 2010 on statements of Assets and Liabilities; Geo-located data showing the location of illegal waste dumps in Benin metropolis; and Edo state approved capital and recurrent budget from the year 2010 – 2013. Below are some screen shots from the Portal (Figure 4.8 - Figure 4.11). The Edo State OGD portal has a Terms of Use link on the Home page to the page shown in Figure 4.9.

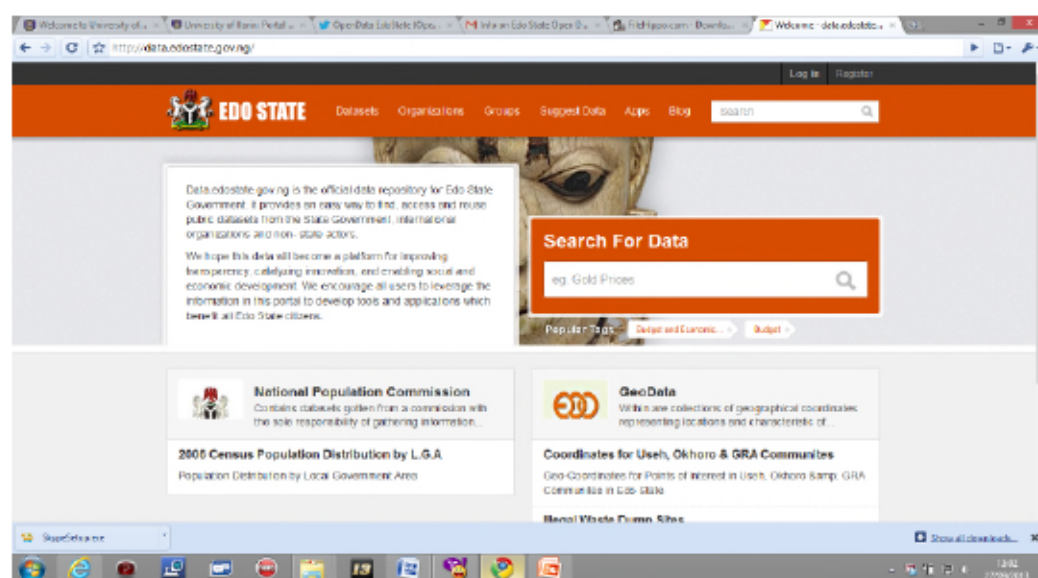


Figure 4.8 Screen shots showing the Home page of the Edo State OGD Portal

Source: <http://data.edostate.gov.ng> accessed on June 27, 2014

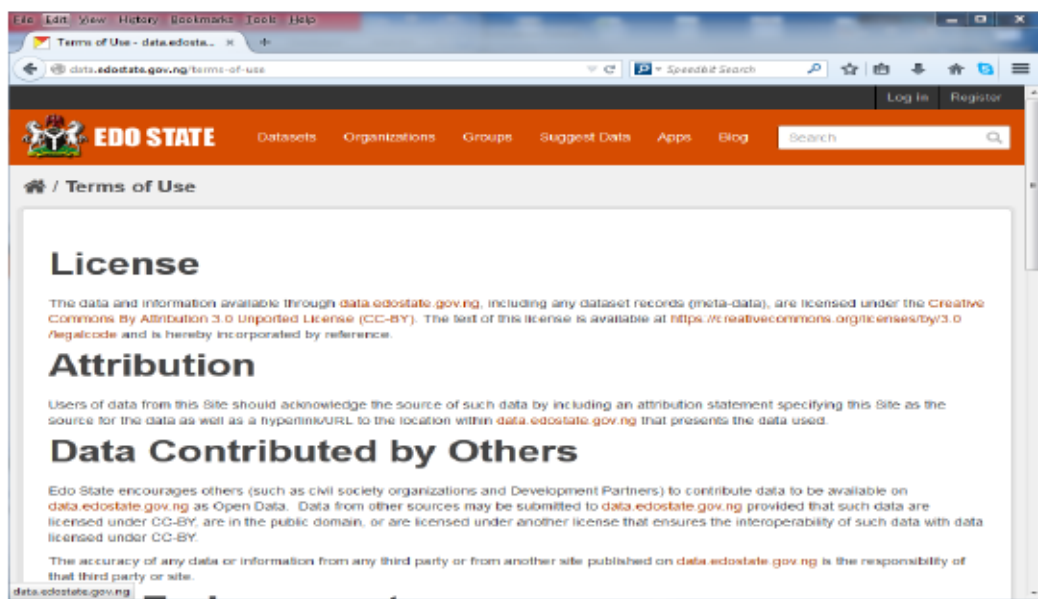


Figure 4.9 Screen shot showing Terms of Use page

Source: <http://data.edostate.gov.ng/terms-of-use> accessed on June 27, 2014

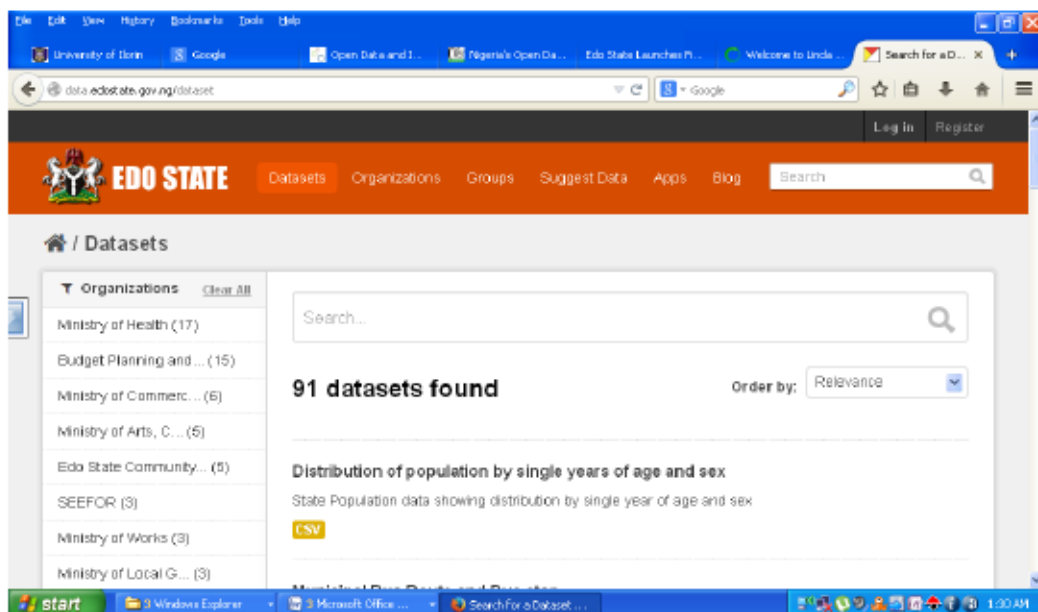


Figure 4.10 Screen shot showing List of Datasets

Source: <http://www.data.edostate.gov.ng/> accessed on June 27, 2014

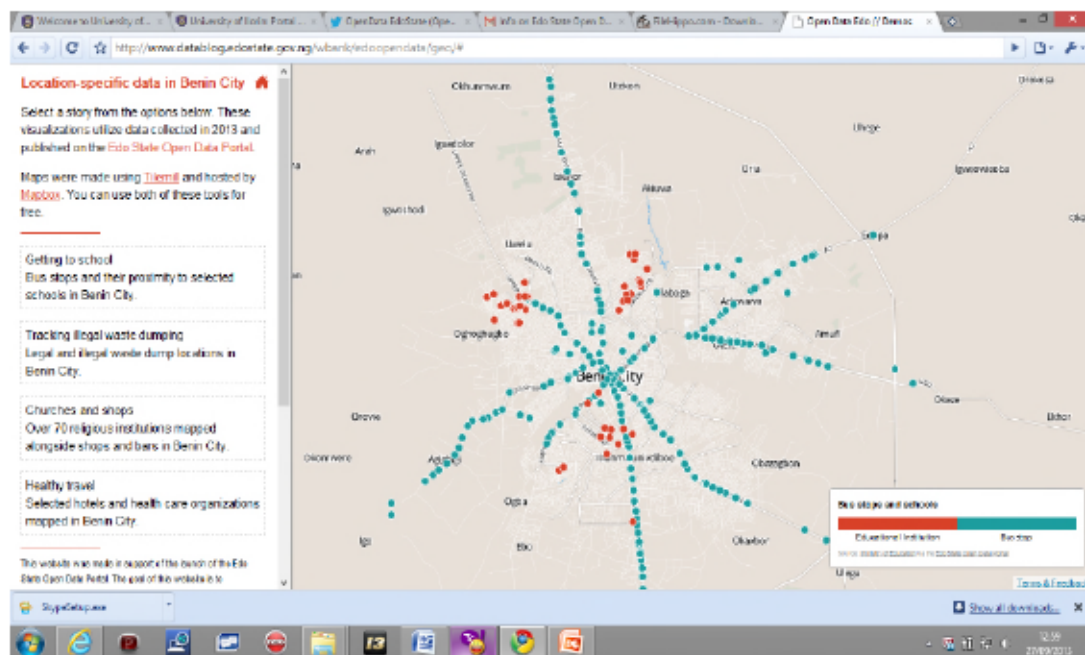


Figure 4.11 Screen shot showing Bus stops and schools in Benin-City, Edo State

Source: <http://www.datablog.edostate.gov.ng/wbank/edoopendata/geo/#> accessed on June 27, 2014

Taking a cue from the Edo state government, the states in the Western region of the country are also coming together to launch a joint open portal for the state governments in the region.

At the national level, the process of commencing a national OGD portal for Nigeria began with stakeholder consultations from January 29th – 31st, 2014, when the Federal Ministry of Communication Technology led by the Honourable Minister for Communication Technology, Mobola Johnson, kicked off a one of its kind Open Government Data Development process to support the Federal Government's objective of driving innovation, investment and economic growth by enabling access to government data. The initiative, supported by the World Bank and DFID has its concept based on making information and data freely available and searchable, encouraging feedback, information – sharing and accountability. Furthermore, it is a consultative process expected to open up high value datasets from across government ministries to Nigerian citizens and the rest of the world at large. The commencement of the process made Nigeria the world's first federal Open Data initiative to simultaneously launch inclusive and continuing consultations with both government and non-government communities on their Open Data priorities to develop the country's national Open Data implementation plan (Ifebhor, 2014). All members of the Unilorin Open Data Research Group participated at the Open Data Clinic which took place on January 30th and 31st, 2014.

During the Open Data Clinic, an analysis presented by the global consulting firm McKinsey, indicated that open government data was having an impact on the economic growth of the United States of America (USA) as it generates more than \$3 trillion of new economic value

for the U.S. economy alone and that the weather data of the U.S. was worth \$30 billion annually, while the total worth of Global Positioning System (GPS) data was worth \$90billion. Nigeria hopes to see such economic benefits in opening up its government held data.

So far, the awareness of Open Data within Nigeria has grown as a result of various workshops initiated by the Government, Private Organizations and the University of Ilorin Open Data Research Group. A Data Hack Workshop themed “Follow the Data Extractives Hack” was held in Lagos, Nigeria, on 13th and 14th May, 2013. The Unilorin Open Data Research Group organized its first Unilorin Open Data Hack Day on February 22, 2014, at the University of Ilorin (NG Scholars, 2014). The event attracted universities within the immediate environ of Ilorin. The Unilorin research group also organized a Stakeholders’ Open Data Research Dissemination Workshop which attracted a wide range of professionals; the event took place at Abuja on the 7th of April, 2014.

The emerging open government data activities in Nigeria are being encouraged by the Freedom of Information Act which was signed into law in the country on the 28th of May, 2011. The law acts to make public records and information more freely available, provide for public access to public records and information, protect public records and information to the extent consistent with the public interest and the protection of personal privacy, etc. (FOIA, 2011). The Freedom of Information Act has based its mission to promote open and democratic government in Nigeria through advocacy for public access to information, participation in governance and vocal participation with diverse constituency, grass roots, civil society groups and government institutions (FOIA, 2011). The interplay between open data practice and a Freedom of Information Act is being explored in this study.

Also, the Fiscal Responsibility Act encourages open government data in Nigeria. It came into law following its signing by the Late President Musa Yar’Adua in 2007. The law provides for prudent management of the nation’s resources through greater accountability and transparency in fiscal operations, among other provisions. The law established the Fiscal Responsibility Commission, FRC, charged with the monitoring and enforcement of the Act to promote the country’s economic objectives (Premium Times, 2014).

4.3 The Budget Process

In this section we draw upon information obtained from the supply-side survey together with other insight from supply side personnel, and documents on the budget process, in order to put together a picture of the budget process, from preparation to when it goes online.

As outlined CGFB (2014), preparation of the Federal Budget is a shared responsibility between Executive arm of the Federal Government and the National Assembly. The

responsibilities are spelt out in the 1999 Constitution of the Federal Republic of Nigeria as follows (CGFB, 2014, p.13):

The 1999 Constitution requires the President to submit an annual budget proposal to the National Assembly for their approval (or passage). Once the National Assembly approves the budget proposal (or Appropriation Bill) and the President assents to it, it becomes Law (or an Appropriation Act).

The budget preparation commences when the President gives directives to the Minister of Finance and the Budget Office of the Federation to prepare the Budget in line with the government's vision and direction for the nation.

The *Fiscal Responsibility Act 2007* provides guidelines and procedures for the budget preparation process and it stipulates that the Budget be based on a medium-term fiscal framework, which is a plan for the country's revenue, expenditure, borrowing and fiscal balance (deficit or surplus) for a few years in advance and usually includes a Revenue Framework as well as an Expenditure Framework (CGFB, 2014, p.13).

The Budget Office of the Federation, headed by a Director-General, is one of the departments of the Federal Ministry of Finance (FMF). The Budget Office can be deemed to be in the forefront of seeking citizen engagement with the budget process, budget content, and budget performance. Two publications of the Budget Office underscores this – *"Citizens' Guide to the Federal Budget 2014"* and *"Understanding Budget 2014"*. In *Citizens' Guide to the Federal Budget 2014* (CGFB, 2014), the preparation of the Federal Budget is described as "a long and collaborative exercise, involving many stages: first within the Executive, then between the Executive and the Legislature. It also involves a lot of consultation with various stakeholders that are not within the Government such as the organized private sector, civil society and the media" (p.18). The publication also provides a flow diagram of the budget preparation process as shown in Figure 4.12.

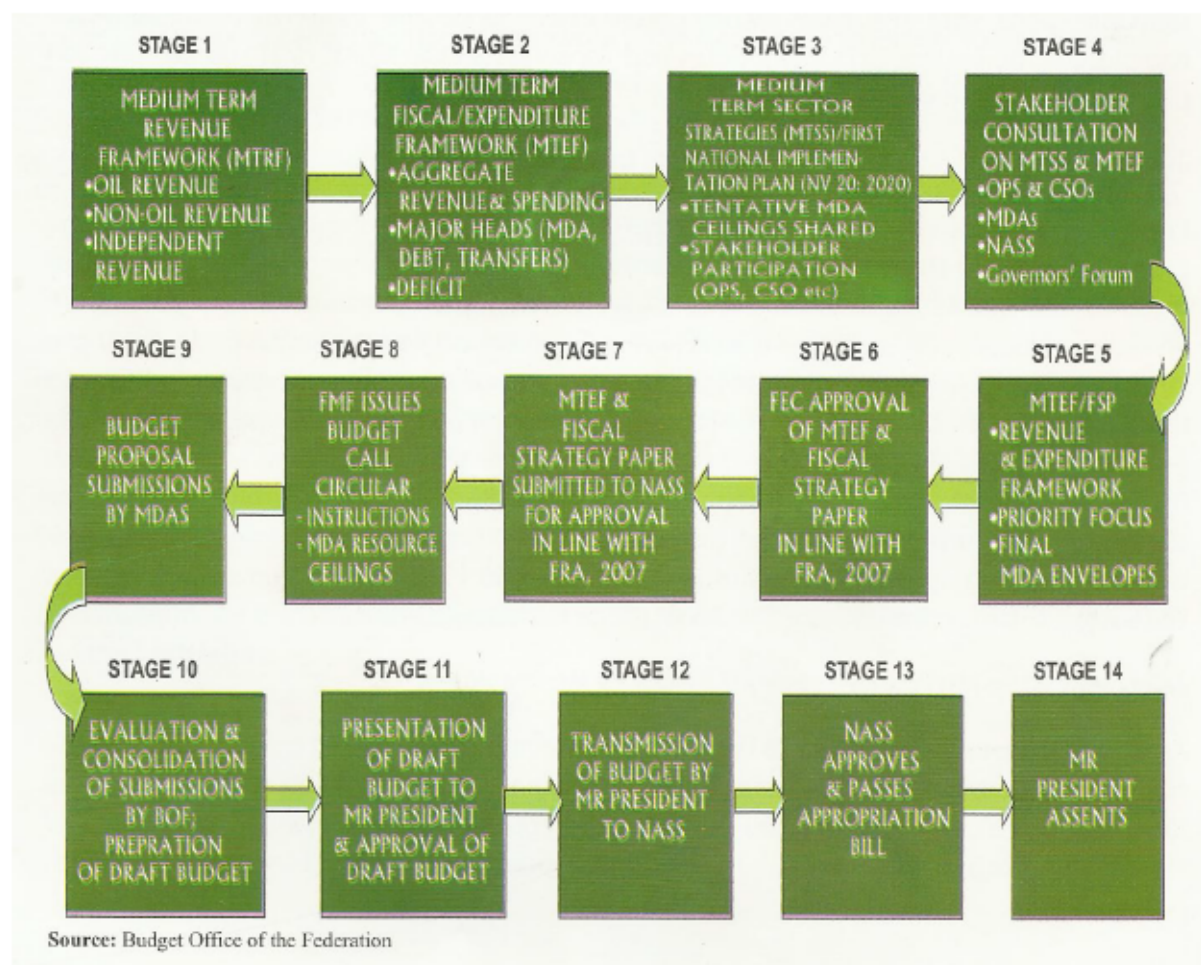


Figure 4.12 The Budget Preparation Process

After the budget is assented to by the President, the budget data is published on the website of the Budget Office in PDF format by the ICT section. Reasons given by respondents from the Budget Office for publishing the data in PDF format include: “to ensure data integrity”, “to avoid alteration”, “to protect the data from intruders”.

The screen shots shown in Figure 4.13 and Figure 4.14 show typical layouts of the published data. The Budget Office has improved on the quality of the published PDF files which previously had hanging columns due to the width of the spreadsheet from which the PDF’s are generated. There is no licensing attribution accompanying the published budget data although the home page of the Budget Office of the Federation, has the “Copyright©” notice at the bottom of the page.

made and his response was that the AGF's Office would work on publishing the annual unaudited accounts of the federation, online, but that it would be about three months in arrears since the account is prepared at the end of the fiscal year after the MDA's have sent in the returns of their expenditure. The Office of the AGF provides actual expenditures and cash plan for the use of the budget office in the preparation of the annual budget.

5. FINDINGS FROM THE STAKEHOLDER SURVEY

5.1 Supply of Budget Data

Insight into the supply of the budget data is important to this study as it sets the context for what happens next, especially, why the data is being used in the manner it is. The supply side is important in the overall open data discussion, because that is the point of release into the public domain. Issues such as the format in which the data is released or restriction attributions affect the value chain and the ecosystem. The supply side, also, is what makes a discourse on Open Data so context sensitive. In this section we present some questionnaire items (presented in some cases, specifically) to respondents on the supply side. Supply side respondents included government officers and legislators on budget production.

As earlier documented in the section on “The Budget Process”, the budget data is published in PDF format by the Budget Office of the Federation after the President has signed it into law. Reasons given for publishing the data in this format include: “to ensure data integrity”, “to avoid alteration”, “to protect the data from intruders”. Coming from the supply side, this **fear of alterations to the data already on the website**, is worthy of note.

Also, highlighted in the section on “Open Data in Nigeria” was the Copyright notice now included on the web pages of the Budget Office. So the question arises, is the national budget data really available for re-use as open data? We leave this for a later discussion.

We asked supply side respondents the question, **“Through which media do you make the document (of the annual budget of Nigeria) available to the general public?”** and invited them to select as many of the options that apply. From the 14 out of the sample of 23 that responded, Online was the major channel selected (45%), followed by Press Briefing (32%) and National Newspapers (14%). Others were Official Bulletins/Magazines (5%) and Newsletters (5%).

Online, being the most highly selected channel is not surprising seeing that the study is on the online budget. What is surprising is that the Supply side is making very little use of Bulletins and Magazines, perhaps due to the bulky nature of the budget document. National Newspapers could be better utilized, possibly through serialization.

Although it is commonly claimed that open data, having no formal restrictions on who can use it, can be used by anyone – in practice the supply of data may be targeted towards particular audiences and users. Asked **which category of Nigerian citizen is likely to understand the budget as presented for public consumption**, and invited to tick as many as apply, respondents were unanimous in their opinion that it is not the illiterate. This is because 48% of the 20 (out of a sample of 23) indicated the Literate as the most likely to benefit (48%) followed by Experts in financial analysis (28%), the elite was next (20%) and Public servants was specified under Others (4%).

The Budget, as signed, is a highly technical document so it is not surprising that respondents expect only the Literate, Experts in financial analysis, and the Elite to be the ones that can understand it. This supports the need for intermediaries in breaking down the information for easier understanding by the illiterate public since Nigeria has a literacy rate of 61%.⁷

Many models of open data supply assume that the process of making data accessible to the public will take place through the action of intermediaries. Supply-side respondents made their choice of the categories of intermediaries through which they think that the annual budget of Nigeria will get to the public in simplified and useful format. They were asked the question, “Who are the **categories of intermediaries through which the annual budget of Nigeria gets to the public in simplified and useful format?**” Respondents could pick as many of the options provided that they found applicable. From the 21 that responded, NGOs and CSOs ranked highest, 21% and 19% respectively; also Government MDAs (19%). Journalists came in fourth with 16%, closely followed by Social/Policy/ Financial Analysts (12%) and Legislators (9%). Research institutes and the Academia were the lowest with 2% of the responses, each. It is a good thing that the Supply side recognises the role played by NGOs/CSOs and Journalists as open data intermediaries. It is yet to be determined how Government MDAs serve the role of simplifying the budget in the context of Nigeria.

Table 5.1 Intermediaries involved in simplifying the budget as selected by Supply side respondents

Intermediaries	Frequencies	Percent
Non-governmental organisations	9	21%
CSOs	8	19%
Government MDAs	8	19%
Journalists	7	16%
Social/Policy/Financial Analysts	5	12%
Legislators	4	9%
Research Institutes	1	2%
Academia	1	2%

Within what legal obligations is the data made public?

Licensing of open data is an important part of building clarity about the rights of users to re-use the data they gain access to. As mentioned in a previous section, when this project started there were no use attributions on the website of the Budget Office. Indeed, during data collection when personnel of the Budget Office were interviewed, there were indications that plans were in place to add attributions for use to the published data. As of the time of writing, the Budget Office website displays a Copyright notice (see Figure 4.7).

At best, the openness of the budget data is very much in question now. The confusion deepens further as a respondent, replying to the question “What is the legal limitation on

⁷ Source: http://en.wikipedia.org/wiki/List_of_countries_by_literacy_rate

the accessibility and usability of the online National budget document?” writes, *“It has no legal substance and is likely not enforceable legally.”* Two respondents indicate that the online budget “has no legal backing”. Deciphering this and charting a way forward probably requires expert legal analysis.

The most common attribution for data intended to be open, is usually a selection from the Creative Commons licenses. Still exploring the legal context of the online budget data, respondents were asked if they were familiar with the Creative Commons licenses. From the responses Yes was 4 (17%) while No was 15 (65%) and 2 were uncertain (9%) while non-responses were 2 (9%).

The lack of awareness of the Creative Commons license, a common license for open data, highlights a need for capacity building.

Impact of having the budget online as anticipated by Budget officials

To probe the anticipated impact of having the budget online, respondents from the Budget Office were asked if there was an instrument/mechanism for monitoring and measuring public access to the online document and it seems this is mainly IT-driven through user feedback and site analytics showing how many people visit the Budget Office site.

According to an official, there have been *“uncountable requests from Researchers, Businessmen, MDAs, World Bank and other international organisations demanding for the annual budget and the financial statements.”*

From our institutional visit, we were informed that the **process for requesting the budget data** from outside the Budget Office must be in writing and addressed to the Director-General, Budget Office of the Federation and if approved, a hard copy of the budget is made available to the requester.

5.2 How is Budget Data Being Used?

This study is focusing on the online budget data of Nigeria and an important aspect is to understand how budget data is being used, irrespective of the source. We expect some valuable findings that will help in explaining and understanding the “open subjects” such as open data, open budget data, and open government data, in Nigeria. This aspect constitutes one aspect of the research questions that the study is to answer on source of data and reasons for using those mediums in accessing the national budget by different categories of the stakeholders from the demand side used in the research survey sample of 71.

Do citizens use the budget of Nigeria?

The first thing in this section was to establish the proportion of demand side respondents that have “gone through” or “looked through” or “read through” the budget of Nigeria at one time or another. Respondents were asked, **“Have you ever looked through the budget**

of Nigeria?” Of the 71 respondents, those that answered “Yes” were 43 (61%) and “No” was 17 (24%). No response was 11 (15%).

The break-down of how the respondents differed in their responses according to their categories is presented in **Error! Reference source not found..** The responses vary across categories with more of the Media respondents (40%) indicating that they have previously looked through the budget, followed by Civil Society (30%) and Government officials (21%). Others (professionals, re-packagers, etc.) accounted for 9% of those who had previously accessed the budget.

That the media practitioners have looked through the budget of Nigeria most, could be attributed to their role as disseminators of information in the society.

Table 5.2 Previous Use of the budget of Nigeria by Respondent category

Responses	Category				TOTAL
	Civil Society	Government	Media	Others	
Yes	13 (30.2%)	9 (20.9%)	17 (39.5%)	4 (9.3%)	43 (100%)
No	4 (23.5%)	5 (29.4%)	5 (29.4%)	3 (17.6%)	17 (100%)
No Response	0 (0%)	8 (72.7%)	3 (27.3%)	0 (0%)	11 (100%)
TOTAL	17 (23.9%)	22 (31.0%)	25 (35.2%)	7 (9.9%)	71 (100%)

N=71

Why was the information accessed?

Those that indicated that they have previously gone through the budget of Nigeria were asked to provide the reason for accessing the budget. The different categories of respondents presented different reasons.

For the members of the civil society organisations, one of the motivation is to enable me do my work in the area of budget monitoring and tracking of implementation, to enable me as a procurement monitor to monitor the procurement process of specific MDAs like education, power and health.

The media professionals also supported the above view that they look through the budget for research purposes, to see how Government is spending money, to see allocations to important sectors like education, power, agriculture, etc., on a yearly basis. To see if there has been a change of priority (from recurrent being heavy to capital being lean), but it has remained the same pattern every year.

The above responses was put in a much clearer manner by another member of the media professional that as a media practitioner, it is my responsibility to convey the content of the budget to the general public as explicit, concise and constructively as possible using the layman language.

The government officials also emphasize on the above view, to extract relevant data in respect of the commission; to acquaint myself with details of the sectorial allocation; to examine the focus of Government in respect of both fiscal and monetary policies.

How was the budget information accessed?

Respondents were asked the question, "How did you access the information in the budget?", and were invited to tick as many as apply. The different sources from where stakeholder's accessed budget information is presented in Table 5.3 and shows that the most used source was the website of the Budget Office of the Federation (22, 31%) with nearly twice as many respondents indicating this source than they did "Obtained the data from online sources other than the Budget office website" which was the second most used source (12, 17%), followed by a hard copy obtained from the Budget Office (10, 14%) closely followed by serialisation of the budget document in the newspaper. **The ranking shows a total digital access to the budget data of nearly 50%** (actual percentage is 48%). It should be noted that 2 respondents indicated they obtained a copy through personal confidential contacts although this was the least indicated source for respondent budget information.

Table 5.3 The source through which the information in the budget is accessed

Source of respondents budget information	Frequencies	Percent
Obtained the data from the Budget Office website	22	31%
Obtained the data from online sources other than the Budget office website	12	17%
Obtained the hard copy from the Budget office	10	14%
From serialization of the budget document in the newspaper	9	13%
From information given during press briefing by the Finance Ministry	9	13%
Other sources	9	13%
Requested for a copy from the Ministry/Department/Agency (MDA)	5	7%
From information given during Legislative sittings on the budget	5	7%
Obtained a copy from the National Assembly	4	6%
Obtained a copy through personal confidential contacts	2	3%

N=71 no response = 28

When asked how reliable they found the information obtained through the source used, the responses from the sample of 71, were: Very reliable, 30 (42%); Reasonably reliable, 12 (17%); Not reliable at all 1(1.4%); no response, 28 (39%). So, it can be concluded that the used sources were quite reliable.

Asked if they carry out their own analysis of the budget, 32 (45%) said they did while 9 (13%) indicated that they do not carry out their own analysis (N=71, no response = 30).

The 45% respondents that carry out their own analysis of the budget, were invited to describe how they carry out the analysis – including tools used such as pen and paper, calculators, computers, etc. The responses given are presented next.

Descriptions of how respondents carry out their analysis including tools used

Even when the budget was looked through as is established above; there is a need for analysis and visualisation in order to convey the content of the budget to the general public as explicit, concise and constructively as possible using the layman language. This was investigated through some open-ended questions that revealed some interesting information and responses.

The majority of the members of the civil society organizations sampled revealed that they do their analysis by using the previous year's budget available, and do bring out the "policy thrust", analyse the government policies and compare it with proposed budget, compare and contrast the sector allocation with government policies available, determine provision and percentage of capital to recurrent expenditure, determine the level of previous budget performance, using tools like computer, Microsoft Excel software, and printer.

For the media professionals, they breakdown the budget according to allocations for recurrent and capital expenditure and also, break it down into sectors to determine what occurs for each sector in order to write the analysis on aspects that affect their beat using tools like Microsoft Excel software, SPSS, and printers. This was put in a much clearer manner by another respondent who engages in discussions with informed citizens by way of interviews where their views on the budget and their implications are disseminated. The interviews are interpreted in relation to the budget and how the current budget differs from the previous ones. These observations are written down with pen on paper then elaborately developed on the computer before it is printed in the newspaper for others to read.

The above responses were also supported by government officials who analyse the budget by preparing/codifying needs into works, goods and services, identifying the priority projects and preparing procurements plan for the budget implementation using pen, pencil, papers, calculators, and computers.

What is the motive of respondents for going through the budget?

Respondents were asked to pick as many options that apply from a list of possible motivations for wanting to access the budget data. The highest picks were in the area of transparency and accountability. The first was "To match government performance with the allocations in the budget", 26 (37%); next was, "To push for good governance", 34%; and the third was, "To entrench transparency and accountability", 34%. Surprisingly, "To fight against corruption", came in 8th at 28% out of the list of 10.

Table 5.4 Motive of respondents in accessing the budget

Source of respondents budget information	Frequencies	Percent
To match government performance with the allocations in the budget	26	37%
To push for good governance	24	34%
To entrench transparency and accountability	22	31%
To sensitize and mobilize public evaluation of government performance	22	31%
To push for budget performance that would alleviate poverty	22	31%
To raise public consciousness on governance issues	21	30%
To educate the public on the probity or otherwise of public spending	21	30%
To fight against corruption	20	28%
To engineer action for improvement in all of the above	16	23%
To fight against financial recklessness of MDAs	15	21%

N=71 no response = 32

The last question in this section of the questionnaire was, “Are you aware that the national budget of Nigeria is available online i.e. on the Internet?”, and 64% were aware while 14% were not. The non-response rate was 22%. The result across the categories shows that the media professionals are ahead of members of the civil society and even the government because the highest number of those aware that the budget was online was in this category.

Table 5.5 Aware that the national budget of Nigeria is available online

Responses	Category				TOTAL
	Civil Society	Government	Media	Others	
No	2 (20.0%)	6 (60.0%)	1 (10.0%)	1 (10.0%)	10 (100%)
Yes	11 (23.9%)	13 (28.3%)	19 (41.3%)	3 (6.5%)	46 (100%)
No Response	4 (26.7%)	3 (20.0%)	5 (33.3%)	3 (20.0%)	15 (100%)
TOTAL	17 (23.9%)	22 (31.0%)	25 (35.2%)	7 (9.9%)	71 (100%)

N = 71

The preliminary findings from this section were presented to stakeholders at the Research Dissemination Workshop which took place in April 2014. During group discussions, the following two questions were presented to one of the groups for: What would citizens like to see in the budget that will motivate them to engage more with it? What can be done with the budget data in order to promote good governance? On the first question, the group suggested the following:

- a) Budget should be prepared in format that is easy to use and understand.
- b) It should be more detailed with line notes and specific information for tracking new, on-going, suspended and completed projects.

- c) It should be presented with clear indication of estimates and actual on capital projects, over-heads to ensure accountability and blockage of wastages.
- d) It should be explanatory enough to enable monitoring of level of payment and implementation.
- e) It should be interactive with visuals in forms of apps, maps, etc.
- f) There should be a timely upload of budget information.
- g) Implementation of budget should start on the 1st day of the fiscal year (January 1st).
- h) There should be software for budget monitoring and evaluation of its performance.
- i) It should reflect input from the grassroots.

On the second question: What can be done with the budget data in order to promote good governance?; the group offered the following suggestions:

- a) Government needs to regain the confidence of the citizens through capacity building motivate their interest in the process.
- b) Government should differentiate between budget and quarterly reports.
- c) The citizens should be able to request for data and verify extent of attainment.
- d) Government should consider literacy span classification when preparing the budget to make it beneficial to all.
- e) Government should adopt incentive approach by noting the needs of its divergent groups in the budget through a needs-assessment exercise.
- f) Government should accommodate independent bodies like entrepreneurs, civil-societies, organized labour, etc., in assessing the congruity between what is provided and what has been achieved.
- g) The government should sensitize the grass root to the provisions of the budget and how to access it.

Discussion:

From the foregoing, evidence of use of the budget has been established since about 60% of the respondents sampled, across all stakeholder categories, had gone through the budget of Nigeria at one time or the other in the past, and this shows a high level of citizen interest in reading through the National Budget data. Not only that, a sizeable proportion of them accessed the budget data from digital sources accounting for 48% of the access. This is promising for the open data movement in general and open budget data including OGD in Nigeria. This means that the Budget Office must put in place the proper tools and platforms for collecting data about such indices as the number of downloads, etc., because in the section on “Supply of Budget Data”, it is noted that this is not being formally monitored at the moment.

But this seeming gain may be dampened by the fact of the other 40% who have never gone through the budget. Could it be because of its technicality, which as pointed out by the group at the Stakeholder Workshop, needs to be prepared in a format that is easy to use and to understand.

It can also be argued that the capacity for budget data analysis is here in Nigeria. This is because 45% of the respondents carry out their own analysis. But indicators that the capacity is there but at different levels can be seen from the mention of printers as part of the tools used for analysis by some from civil society and the media.

The motivation for reading the budget is driven mostly by issues of transparency and accountability, a common motivation for opening up data.

5.3 Users of the Online Budget Data

We have presented results progressively from the supply of budget data, to how the budget data is being used irrespective of the source of the budget information and now we are focusing more directly on the use of the Nigeria's budget data from any online source. Arguably, one of the efficient platforms, if not the best platform, of making data open is to have it online on the Internet. By digging deeper to highlight the context in which citizens use the budget data they obtain from online sources (which in the preceding section had been used by 48% of the demand side respondents to access budget information) it is possible to understand what is needed for a sustainable open data ecosystem in Nigeria. Results from the survey are presented first. This followed by some of the outputs from the first inter-university open data hackathon organised by this project team which took place on February 22, 2014. The competing teams hacked on the national budget data obtained from the website of the Budget Office of the Federation. Thereafter, some of the academic pursuits around the online budget data in its present format as PDF files on the Budget Office website are presented. The section closes with a discussion of the findings.

5.3.1 Results from the survey section on Users of the Online Budget data

Respondents were asked to complete this section of the survey questionnaire on *users of the online budget of Nigeria*, if they had accessed the budget of Nigeria from any online source. The result, presented in Table 5.6, shows that of the 35 (N=71) that responded, **60% had accessed the budget data online in the recent 3-month period**. So most were active users of the data.

Table 5.6 Last time Online Budget was accessed

Last online access to the budget data	Frequencies	Percent
In the last one month	11	31.4%
In the last 3 months	10	28.6%
In the last 6 months	4	11.4%
In the past 1 year	6	17.2%
more than 1 year ago	4	11.4%
TOTAL	35	100.0%

N=71 no response=36

The accessed file was mainly in the PDF format, 20 (61%), and spreadsheet format, 9 (27%). Only 3 respondents (9%) selected the Database format which includes Oracle, SQL as examples. The result is shown in Table 5.6.

Table 5.7 File format of the online data accessed

File format of the online data accessed	Frequencies	Percent
a) Database i.e. Oracle, SQL, MySQL, etc.	3	9.1%
Analysis by those who have had direct access to the data	1	3.0%
b) PDF	20	60.6%
c) Spreadsheet i.e. XLS, XLSX, ODS, CSV, etc.	9	27.3%
TOTAL	35	100.0%

N=71 no response=38

Respondents were asked to select as many as apply from a list of options, the factors that are impeding against the use of the online budget data by the populace. The responses are shown in Table 5.8.

Table 5.8 Factors impeding against the use of the online budget data as rated by Respondents

Factors impeding against use of online budget	Frequencies	Percent
Illiteracy	22	31.9%
Lack of awareness of what to do with the data	21	30.4%
Apathy	15	21.7%
The format of the document	6	8.7%
Other	3	4.3%
Legal constraints	2	2.9%

N=71 no response = 36

On how easy it was to find the specific information sought, the response was mixed. Excluding non-responses, the result is: Extremely easy, 3 (8%), Very easy 17 (47%), Not too easy, 14 (39%), Not easy at all, 2 (6%) (N=71, no response=35). **So the capacity is at two opposing ends – 47% say it was very easy, while 39% say it was not too easy.**

Respondents selected as many options that apply from a list of covering uses of the information from the online budget. The result is shown in Table 5.9.

Table 5.9 How respondents use the online budget data

What the online budget information is used for	Frequencies	Percent
Interpreting the budget for public understanding	24	34.7%
Interpreting the budget to drive civic engagement and participation	15	21.7%
Disaggregating the information into specific and simple pieces for the knowledge and information of the public	14	20.3%
Visualizing the data to make it simpler for the public to understand	11	15.9%
Other	5	7.2%

N=71 no response = 35

The usage by the respondents is varied from the traditional expected interpretation of the budget for public understanding (35%) and civic engagement (22%) to the disaggregation of the data (20%) and visualizations of the data (16%) as shown In Table 5.9. **The fact that lots of effort is going into disaggregation of data suggests a need for more machine-readable data that is easier to disaggregate or to make into interactive tools that let citizens perform their own disaggregation.** Also, the very low levels of visualisation are also notable – particularly as visualisation is one of the big benefits that advocates of open data emphasise.

Based on some of the findings emanating from the foregoing, the following questions were presented to one of the groups at the Stakeholder Workshop that took place on April 7th, 2014: What factors are impeding against the use of the online budget data by the populace & how can this be overcome? How can we source for more and better funding to act as a driving force for open data re-packaging initiatives in Nigeria? What tools are readily available for analysing and visualizing budget data? The group had quite an animated consideration of the questions and presented the following as their consensus:

Question 1: What factors are impeding against the use of the online budget data by the populace & how can this be overcome? Group comments:

- a) Ignorance: The problem is that the grassroots are not aware and no publicity to the grassroots. Also, no citizen feedback in government activities and projects/citizen participation. The solution is to: Seek community engagement; Mount radio programmes; Create citizen engagement platforms; Conduct town hall meetings.
- b) Apathy: Attitude of Nigerians to government issues; Non-challant attitude of Nigerians. The solution would be for CSOs and non-State actors to educate citizens to help people understand data; Use data driven tools to help get the budget to the people.
- c) Set-up Licensed Community Radio in order to eradicate ignorance and reach the Grassroots.
- d) The Government no longer announces through public media (“Land Rover Public Address System”). This should be re-introduced to create awareness to the rural dwellers.
- e) There is need for a feed-back mechanism on-line Budget website.
- f) GIS of the online Budget (Geo specification) is necessary.
- g) Creating Applications or Blogs for the online Budget.
- h) Other problems are power outages; internet access; poverty/hunger; high cost of infrastructure; non-performing budget i.e. no implementation of the budget.
- i) There should be Free Access to Internet.

Question 2: How can we source for more and better funding to act as a driving force for open data re-packaging initiatives in Nigeria? Group comments:

- a) There has to be a proof of concept to ask for more grant (that is, a proper Needs assessment).

- b) We have to have a good relationship with the decision makers in government (champions within government)
- c) Show that you can start up a better initiative.
- d) Provide analysis of cost savings benefit.
- e) Seek funds from Governments (MDAs), Private Institutions (Donors)

Question 3: What tools are readily available for analyzing and visualizing budget data?
Group comments:

- a) Map tools - Map box, Arc GIS, Tile mill; Excel; Data Rapper; Microsoft Word & Power Point; Infographic tools; Graphic design tools (Adobe Illustrator, Anonations); USHAHIDI; Tableau.
- b) Charts – Pie chart, Bar chart, Histogram
- c) Newsprints
- d) Social media.

5.3.2 Repackagers of the Budget Data

A category of intermediaries, whom we called “Re-packagers”, were of special interest to us because of the added value to the budget by way of extra processing, computer programming and visualisations employed by them to make the budget either easier to understand or make the data available in a more re-useable format. The re-packagers encountered in the course of the study include:

- **Budgit Nigeria** with whom we collaborated on our Hackathon event (they publish the budget data online via APIs);
- **Connected Development**, a start-up working with Follow the Money on Follow the Money, Nigeria (they tag the data with geo-referencing markers and re-display the budget data on maps ;
- **Citizens Wealth Platform (CWP)**, a project of the Centre for Social Justice (CSJ) – they print simplified extracts from the budget and make this widely available to citizens as hard copies.

CWP/CSJ were not part of our survey sample but we had the benefit of interacting with them during our Stakeholder Workshop at which they were present. They distributed some of their publications to participants at the Workshop. We provide brief background information below on Budgit and Connected Development.

ABOUT BUDGIT

Budgit is a Non-Government Organization that was established on the 13th September 2011 with the main objective of monitoring and analysing the annual budget of Nigeria. Thus, its main duties include repackaging the budget information for wide circulation among Nigerians through printing in newspapers and on a website as well as training the National Assembly budget and research office on data analysis. They analyse the annual budget using

Excel sheets, design with CorelDraw and do data visualization using tools such as Datawrapper and Infograms. So the core of its work is analysing and visualizing the budget data to impact the society. To this end, the organization is part of the open data community.

The initiative of Budgit was informed and stimulated by the political and social factors that necessitated the desire for good governance in Nigeria.

The goals of the organization for concentrating on analysing and visualizing budget data include the desire to entrench transparency and accountability and fighting corruption in Nigeria for the purpose of attaining good governance. It also has the goals of matching government performance with the allocation in the budget; sensitizing and mobilizing public evaluation of government and performance; fighting financial recklessness of Ministries and agencies; educating the public on the probity or otherwise of public spending and pushing for budget performance that would alleviate poverty. Besides, its duty of visualization of budget data is meant to create jobs for the youth.

The organization is being funded by international organizations, development agencies and some individual donors. It intends to engage in producing infographics for corporate organisations as a way of sustaining its open data initiative built around analysing and visualizing budget data.

With the coming of the Budgit into the open data community in Nigeria, concentrating on the budget data, the national budget has impacted the Nigerian society. Government is proud of the organization and the work it does in simplifying the budget as was proven by the mention of them by the Keynote Speaker at our Stakeholders' Workshop.

Their office is in Lagos, Nigeria and the organization has eleven members of staff of which not less than 60% are female. Its work can be found on yourbudgit.com. It obtains the budget data it analyses and visualizes from the website of the Budget Office of the Federation. A screen shot of the home page for Budgit.



Figure 5.1 Screen shot of Budgit's Home page

Source: Retrieved from <http://www.yourbudgit.com/> on August 12, 2014.

ABOUT CONNECTED DEVELOPMENT

Connected Development (CODE) is a Non-Government Organization that was established on the December 2013 with the main objective is to improve access to information and empower local communities in Africa. Its main duties include ensuring people's access to information through whatever technological means they choose, sharing innovative approaches to information exchange through experimentation, research and technology, developing innovative platforms for coverage of social, environmental and governance issues and providing training and support to youth interested in using innovative ideas to improve the development index in the local community. They analyse the annual budget using Excel sheets, and do data visualization using tools such as SPSS, Tableau, Photoshop and geo-locate where funds are spent and place it on map using USHAHIDI. So the core of its work is advocating for aid, tracking and visualizing the aid, and analysing how effective it has been in our local community. Connected Development operate the project called **Follow the Money** in Nigeria.

Funded by international organizations/agencies, Connected Development utilizes innovative technologies to create early warnings to vulnerable communities, likewise during emergency response. They engage communities in community participatory mapping and in other disaster risk response mechanism. CODE uses its Follow the Money project to ensure transparency and accountability in funds [international aid or government spending] meant

for local communities. Also CODE, develop participatory tools such as the Nigeria oil spill map, promote policy - relevant research, and peace building events aimed at developing greater knowledge about the relationship between human rights and conflict, thus encouraging participation of marginalized communities in democracy and governance, rather than in conflicts.

According to their representative who was interviewed, “Our #SaveBagega project allowed 1,500 lead poisoned children have access to urgent medical treatment in 2013.” On sustaining the initiative at the end of the external funding they plan to partner with the Nigerian government, sell their products and advertise their products. When asked how their initiative will lead to action on transparency, accountability and poverty alleviation in Nigeria, the representative noted that creating a feedback loop between citizens and the government allows for effective decision making, which encourages transparency and accountability. They presently support their partner journalists on data usage and interpretation. They obtain the budget data from the budget office, Ministry of Finance and press releases.

Connected Development is located in Abuja, FCT, Nigeria. The organization has six members of staff of which not less than 66% are female. Its work can be found on <http://connecteddevelopment.org/> Figure 5.2 shows a screen shot of the home page for Connected Development.

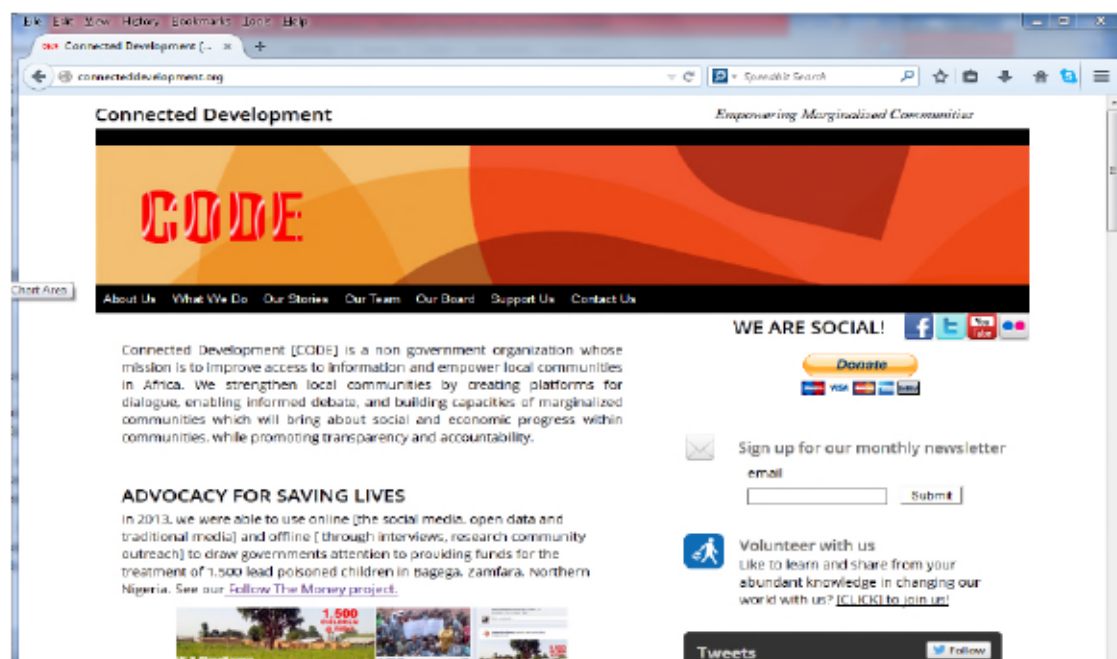


Figure 5.2 Screen shot of the Home Page for Connected Development

Source: Retrieved from <http://connecteddevelopment.org/> on August 12, 2014.

5.3.3 The Budget Data and the Unilorin ODDC Hack Event

The Unilorin Open Data Hack event was held on February 22, 2014, and was planned to coincide with the 2014 International Open Data Hack Day. The data hack was organised as a competition between Teams, on visualisation of the budget data of Nigeria, the data being the bedrock of our ODDC research. We collaborated with Budgit Nigeria for the event and they provided 70% of the scores used to judge the teams. The audience used an online form to score the teams on the remaining 30%.

There were eight teams at the event. Each team comprised a Team Leader, Programmer, Systems Analyst, and Web Developer. There were eight teams from four universities (the University of Ilorin, Ilorin; Kwara State University, Malete; Ladoke Akintola University of Technology, Ogbomosho; and Al-Hikmah University, Ilorin) and a private computer-training firm (Paramount Computers, Ilorin). Each team had a nickname. Thus, there was:

- Team Adewole (University of Ilorin)
- Team Sanni (University of Ilorin)
- Team Bello (University of Ilorin)
- Team Ajao (Kwara State University)
- Team Agbaje (Al-Hikmah University)
- Team Justice (Ladoke Akintola University of Technology)
- Team Tayo (Ladoke Akintola University of Technology)
- Team Ayeni (Paramount Computers)

After the judging, the winners were as follows:

- 1st Prize winner - Team Bello (University of Ilorin)
- 2nd Prize winner - Team Agbaje (Al-Hikmah University)
- 3rd Prize winner - Team Sanni (University of Ilorin)

Below we show the outputs from the top two winning teams.

Outputs from the Winning Team – Team Bello (University of Ilorin)

Give a short Name for your APP:	Visual Budget
Select the years of the budget from which you pulled the data for your APP:	2012 2011 2010 2009 2008
What is the APP supposed to do / achieve?	Visual Budget is a web based application that aims to simplify the Nigerian budget by creating visualizations that sit easier for an average Nigerian to comprehend the Budget.
Description of the APP: This should include a description of the APP from inputs to processes to outputs	The Application is a visualization application thus there is very little input needed for the user. A user of the application only needs to go to the visuals page on the website and select whichever visualization tool he/she would like to see. The System then takes this input and displays the corresponding visual by calling an Api created by the team
Development Tools used in building the APP. Provide the name of each software/tool used and what area of the APP it was used for.	Visual budget was developed using Microsoft Visual Studio integrated development environment which is integrated collection of runtime libraries, builders, compiler etc that make development easier for developers. The Programming Languages used was ASP.NET with C# and the visualization engine used was provided by infoqur.am
State any learning undertaken in order to better handle the hack exercise.	It was immensely beneficial that we learned how to use third party visualization engines and experimented with a few of them before coming up with one which we eventually used to develop the application
What future undertakings do you envisage as a result of being part of this event?	Building a startup around open data
Upload HOME screen shot	shot1.png
Upload PROCESS screen shot	shot2.png
Upload OUTPUT screen shot	shot3.png


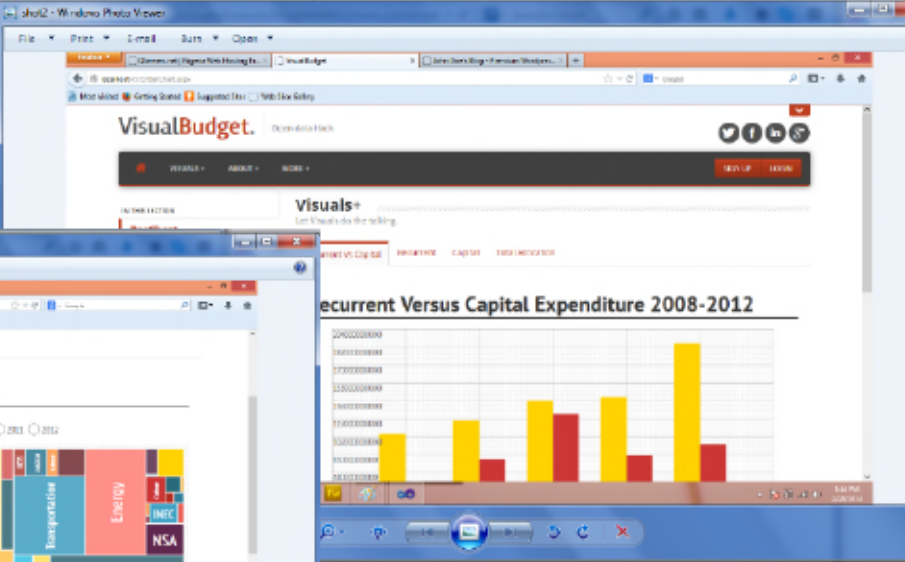





Figure 5.3 Outputs from the Hackathon Winning Team – Team Bello (University of Ilorin)

Select the years of the budget from which you pulled the data for your APP::	2012
What is the APP supposed to do / achieve?	To create visualization and publish an Educational Sector of the economy
Description of the APP: This should include a description of the APP from inputs to processes to outputs	Input: the date from the budget was m usable database Process: (i) A click on the "Education E k will calculate the total amount of each and stored it in the "tempview" table (ii) selecting any category will filter the amount of items in the category Output: (i) the pie-chart of ALL the cat (ii) the pie-chart of the selected category
Development Tools used in building the APP: Provide the name of each software/tool used and what area of the APP it was used for.	HTML, CSS, Javascript, bootstrap - Lay PHP, jquery - connect and extract data Google Chart - publish and display the selected category MySQL - the category backend (database)
State any learning undertaken in order to better handle the hack exercise.	Website design, database management
What future undertakings do you envisage as a result of being part of this event?	Create a project that will be able to vis and also perform futuristic and predict
Upload HOME screen shot	homescreen.JPG
Upload PROCESS screen shot	process.JPG
Upload OUTPUT screen shot	output.JPG
Upload zipped folder containing your applications & instructions for running it -	randtheshubudrapp.zip

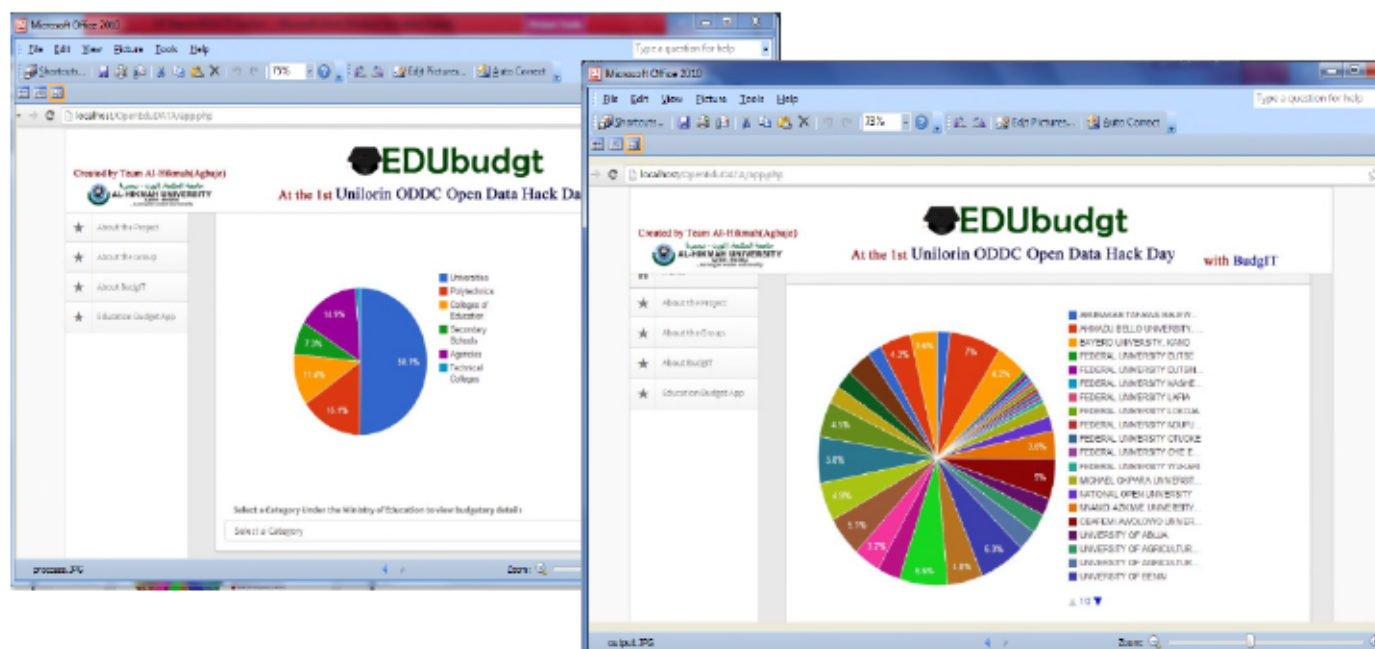
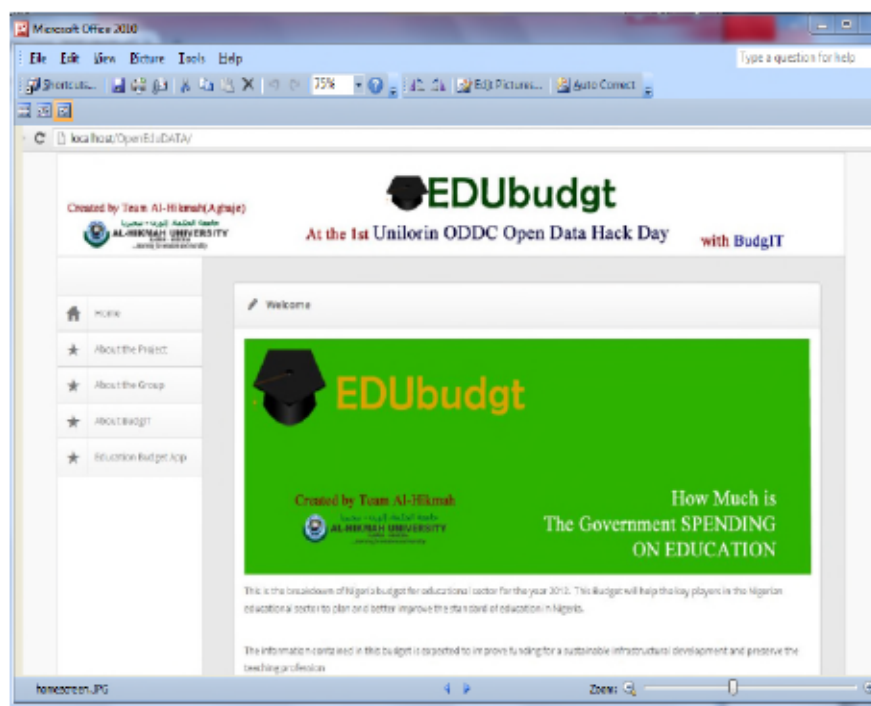


Figure 5.4 Outputs from Hackathon 2nd Prize winner - Team Agbaje (Al-Hikmah University)

5.3.4 Some Academic Pursuits

As mentioned in the methodology section, there has been increased academic activity on the theme of Open Data since the commencement of this study and especially after the Hackathon. To illustrate, a group of undergraduate students completed a mini-project which they titled, “Web-based Viewing System for Nigeria’s Open Budget Data”. To accomplish their goal the students, as detailed in their report, chose Tabula software because of:

“its accuracy in extracting the data from the PDF document and above all it is free and open to use. Other PDF extracting software we tried include pdf extractor and pdftohtml but none of them could extract the data accurately like Tabula.”

A Master of Computer Science student is working on developing an appropriate meta-data schema for Nigeria’s budget data.

5.4 Potential to Use the Online Budget Data of Nigeria

The overarching aim of the ODDC project is to explore the emerging impact of open data in developing countries. In designing the survey questions, we included questions that would help us understand how the online budget could be used in the future and who is most likely to use it. This was based on the assumption that the use of the budget, at least, at the commencement of the study, was quite low. It is one thing to make open and adequate access to the government data, it is another thing for people and potential users to access the data. To this end, this study sought to verify from the demand side respondents, whether the potential users of the online budget of Nigeria would likely access the budget information that is being opened to them on the internet, the potential challenges of access via internet, and the potential benefits accruable from such online access.

Likelihood of Accessing the Budget Data Online

We start the section, by asking the question, “How likely are you to access the online version of the national budget?” and **70% of the respondents selected “Very Likely” to access the online version of the national budget** while 14% selected “Not Likely” (N=71; no response=11). The responses are further broken down by categories as shown in Table 5.10.

Table 5.10 Responses to the Likelihood of Accessing Online Budget of Nigeria According to the Categories of the Respondents

Responses	Category				TOTAL
	Civil Society	Government	Media	Others	
Not Likely	0 (0%)	6 (60%)	2 (20%)	2 (20%)	10 (100%)
Very Likely	9 (18%)	16 (32%)	21 (42%)	4 (8%)	50 (1000%)
No Response	7 (58.3%)	0 (0%)	3 (27.2%)	1 (8.3%)	11 (100%)
TOTAL	16 (22.2%)	22 (30.5%)	27 (37.5%)	7 (9.7%)	71 (100%)

N=71

As shown in Table 5.10, there is a marked difference in the responses of the different categories of this study's respondents to the likelihood of their accessing the online version of the national budget. Out of the total 50 respondents that said they were likely to access the data on the national budget of Nigeria, 9 (18%) were members of civil society organizations, 16 (32%) were Government officials, 21 (42%) were media practitioners, while the remaining 4 (8%) belonged to "Other" category that consisted of re-packagers, associations relating to commerce and business and other professionals.

This could imply that **the media practitioners are likely to access the online budget of Nigeria most, perhaps because of their need for easy and frequent access to the data to perform their duties of watchdog as the Fourth Estate of the Realm.**

In the same way, out of the total 10 respondents that said they were not likely to access the national budget data on the internet 6 (60%) were Government officials, 2 (20%) were in the media, 2 (20%) belonged to other category consisting of re-packagers, professionals and commercial associations, while none of them belonged to the group of civil society organization.

The implication of this is that **accessing the online budget of Nigeria is likely to be common, rampant and significant among the civil society; probably because they need the data more, perhaps as much as media practitioners, to pursue their goals or duties, which is essentially monitoring government spending and policies for transparency and accountability.**

Meanwhile, out of the 11 respondents that did not provide any response to whether or not they were likely to access national budget online, 4 (33%) were media practitioners, 1(8.3%) belonged to the other category, 7 (58%) were in civil societies and none was a Government official.

Potential Benefits of Having the National Budget Online

Even when the online budget is likely to be accessed as is established above, there is a need to investigate and understand the potential benefits stakeholders feel they were likely to gain for accessing the online version of the national budget. This was investigated through an open ended question that revealed some interesting information and responses.

The majority of the members of the civil society organizations sampled revealed that **the benefits of the online budget to different stakeholders are different in nature and degree.** For example as one of them put it:

For the government, it encourages transparency and accountability. For the citizens, it informs them on what the government is spending on. It encourages states and local governments too to publish their budget online.

The above response was put in a much clearer manner by another respondent who noted that the benefits of having the national budget online is specifically in the area of :

Accountability and Transparency, Reduction in corruption, Follow-up on projects done by MDAs will be made easy, Budget tracking will be made easy, Financial recklessness will reduce drastically.

The above response was also supported by another member of the civil society organization who noted that having national budget online will result in “quick and easy access to budget document/instruction, ability to follow budget analysis or information at all stages, ability to have access to facts and figures using it to blow whistle when necessary”

For the media professionals, the general opinion is that access to online budget of Nigeria offers a lot of benefit which essentially **revolves around transparency, accountability, facilitating proper monitoring and openness**. As one of them put it:

All can access it from across the world, including Nigerians in diaspora so that they can follow events in their home country, make contributions to nation building by offering suggestions on how best to realize the budget dreams as well as hold the government responsible for failures

Put in another words, another media professional believed that having the national budget online could offer a lot of benefits to the individual citizens of the country. As the media professional captured it, such major benefit could be categorized into two major clusters.

1. It makes it easy for analysts to critique the budget and explain to the public where government has gone wrong or may not likely to implement well. 2. It makes government accountable to the people.

To reflect the benefit of having the budget online to media practice, a media professional noted that having the budget online enabled **“easy accessibility and circulations. It saves both man hours and financial cost of going to the office. It avoids unnecessary bureaucracies”**

The benefit of openness as espoused by the media professionals was presented by one of them from a different dimension of the potency of the online budget to open the country to outsiders and thereby attracting sufficient foreign investors. As he put it:

It provides ready information to citizens on Government business. It makes government, right or wrong, tries to be transparent in its dealings in relation to the budget. It also enables international and local investors to read the barometer of the country and make up their minds on investment move.

It is this issue and **benefit of openness and accountability that is emphasized by the government officials** sampled as the major benefit of having the national budget of Nigeria online. This is captured by one of the government officials in a very revealing way as this:

It is promoting accountability as citizens are holding political office holders especially at the Local Government level responsible; New start-ups are being established by IT savvy youth; It will promote transparency as everyone will see what Government is doing and plans to do; There will be socio - economic predictability

The government respondents also noted that online budget of Nigeria is opening up government activities and spending, which is increasing people participation, transparency, accountability and generally good governance. As a government put it: “The availability will allow people make inputs on issues that affect them. It will ensure a participatory governance which can only be good for the growth of our democracy”.

Thus, having the budget online, is potentially beneficial to **different stakeholders in different ways and degrees. For the media professionals, the benefit revolves around transparency, accountability, facilitating proper monitoring and openness, a point also made by government respondents. For media practice, the benefit is in savings in man hours and the cost of financing on-site work.**

Potential challenges of having the national Budget Online

Following the above question, respondents were asked if they foresaw any challenges or impediments to accessing the budget from the Internet and 24 (34%) chose “Yes” while 38 (52%) chose “No” (N=71, no response=9).

A break-down of the responses of the respondents as to whether or not they foresee any challenges in accessing the online budget of Nigeria according to their categories is presented in Table 5.11.

Table 5.11 Responses to whether or not respondents foresee Challenges or Impediments to accessing the National Budget online according to their Categories

Responses	Category				TOTAL
	Civil Society	Government	Media	Others	
Yes	7 (29%)	10 (42%)	4 (17%)	3 (13%)	24 (100%)
No	5 (13%)	12 (32%)	18 (47%)	3 (8%)	38 (100%)
No Response	4 (40%)	0 (0%)	4 (44.4%)	1 (10%)	9 (100%)
TOTAL	16 (22.2%)	22 (30.5)	27 (37.5%)	7 (9.7%)	71(100%)

Respondents differed in their responses in respect of whether they foresee any challenge or impediment to accessing the online version of the Nigerian national budget data. Out of the total 38 respondents that said they did not foresee any challenge to accessing the online budget of Nigeria, the majority of 18 (47%) were media practitioners, 12 (32%) were

Government officials, 5 (13%) were in civil societies while the remaining 3 (8%) belonged to the other category.

This result, particularly as pertaining to the media practitioners, might not be a surprise as many of them should be adequately internet literate in order to efficiently perform their duties, which involve, most of the times, using the computers and surfing the net to research background to their stories.

Meanwhile, out of the total 24 respondents that said foresee some challenges or impediments, 7 (29%) were in civil societies, 10 (42%) were Government officials, 4 (17%) were in the media while the remaining 3 (13%) belonged to the other category.

Having the budget open online will definitely bring about some unintended outcomes as much as it can offer tremendous benefits. To further probe the views of respondents on how they feel about having the budget online, we asked the open-ended question: **“What potential disadvantage or problem do you think is likely to emerge from having the budget of Nigeria readily available online?”**

The sampled respondents in this study identified and explained qualitatively some of the likely problems or disadvantages. Meanwhile, the different categories of respondents presented a different view or opinion about the likely problems.

For the members of the civil society organizations, the likely problem might be that people are likely to use the information to put pressure on government and the government in turn might begin to harass and intimidate the people, the consequence of which might be that the government pull down the online budget or limit peoples’ access to the online budget.

The media professional also supported the above view in a stronger dimension that putting the budget online for people to use and see might lead to civil unrest if people push agitate for better spending, transparency and accountability. As one of them put it:

If the budget continues to be implemented in such a way that they don’t impact positively in the lives of people and people have not seen and read online about the huge amount voted, it will first provoke anger then criticisms and this may be followed by civil disobedience. Government is playing with fire.

This view and fear was also shared by the people in government. As the following quotes suggested, the problem of having the budget online is majorly the crisis and agitation it can induce from the populace.

It could generate heated reactions from the populace. Undue comments might be sent online which may be insulting (sic) to Nigerians at international level.

The consequence of this, according to some of the government officials is that “the full version may not be given so that the electorate will not ask questions”, “Some unscrupulous

leaders may not make it work perfectly”, “The friendliness in which the data will be present might not be easy to access”.

This theme was further explored at the Research Dissemination Stakeholders’ Workshop, when one of the groups discussed the questions: What best format could increase stakeholders’ potentials for using the online Budget data? How can we stimulate increased access to the online budget data by the citizens at the grassroots, and not necessarily only by the professionals? How do we verify the authenticity of the budget posted online? How best can we use the online budget to monitor government and drive transparency and accountability? The consensus was that:

1. The best format for the online budget data that would increase stakeholders’ potential to use the data was to have the data in Excel because *“one can add/subtract and update the data automatically. Excel is for Numbers while PDF are for Text so both can complement each other.”* Mention was also made here of Infographics software such as Tableau.
2. On stimulating increased access to the online budget data by the citizens at the grassroots, and not necessarily only by the professionals, the workshop group made the following suggestions:
 - a) People in the grassroots are more so grassroots advocacy is vital. Use of ICT resource and support for the advocacy groups. There should be grassroots campaign/advocacy on the importance of knowing about the budget. Provision of ICT / Information centres just like the football viewing centres, to enable villagers to access the budget data.
 - b) Increased support for NGO’s to disseminate the budget information.
 - c) Increased broadband penetration to allow fast & quick internet access.
 - d) Use of SMS to disseminate the budget information.
 - e) Use of local language as a medium of disseminating budget information such as user-friendly software that can translate into local dialects.
 - f) Use of Adverts.
3. Since issues surrounding the integrity and authenticity of the data posted online had been identified from analysing responses from both the supply and demand side, the question of how to verify the authenticity of the budget posted online was put before the group. The solutions they proffered included using the FOI Act; referring to the hard copy for comparisons; increased capacity of community based organisations (CBOs) and other stakeholder organisations to interpret data; and that citizens should be confident enough to speak out when they notice anomalies in what is posted online.

4. The fourth question the workshop group discussed was How best can we use the online budget to monitor government and drive transparency and accountability. The suggestions were:
- a) Making FOI very functional.
 - b) Expenditure of items should be posted back online e.g. when actual expenditure is posted online, then false figures will be checked and accountability will increase.
 - c) Doing a policy brief e.g. the budget of Anambra State from 2003 to 2013 was done and it was discovered that the allocation for Agriculture was 0.3%. The government was advised to increase the budget for agriculture to avoid problems in that sector.
 - d) A mobile application can be built to track budget data.
 - e) Use of jingles.

In summary, the evidence points to confirmation that open data practice is still at its infancy in Nigeria. With issues being raised about the authenticity of government data posted online, it is little wonder that discussions of such data is met with skepticism by Nigerian citizens.

5.5 Awareness and understanding of open data (supply and demand sides)

Although the government is making budget data available, it is not necessarily doing so following full open data best practices. Adoption of open data practices might happen through government decisions, or demand-side pressure for better open data. Whether either is likely depends on stakeholder awareness and understanding of open data. The study sought to establish the level of knowledge and awareness of open data by stakeholders on both the supply and demand side, whether the relevant stakeholders were aware of the availability of the national budget as open data, and the challenges or impediments to the use of open data by the public. In the next section, results to the questions posed to respondents to elicit answers to these research questions are presented.

How aware were Nigerians before the survey?

Respondents were asked if they were aware of the phrase “open data” before this survey. Most stakeholders were aware of the phrase “open data” (above 55% in most cases), except for Government officers on the demand side where only 27% were aware. They are followed by other demand-side stakeholders (that is, the cluster of professional associations and independent analysts) where 43% of the respondents were not aware of the phrase “open data”. Although majority of the respondents on the supply side were aware of the phrase “open data” before the survey was done, few respondents (18%) that were not previously aware came from among the Legislators.

Table 5.12 Awareness of the phrase "open data"

Aware of the phrase "Open Data"	Category					TOTAL
	Civil Society	Government - demand	Media	Others demand	Supply side	
No	6 (35%)	12 (55%)	9 (36%)	3 (43%)	4 (18%)	34 (36%)
Yes	11 (65%)	6 (27%)	13 (52%)	4 (57%)	18 (78%)	52 (55%)
No response	0 (0%)	4 (18%)	3 (12%)	0 (0%)	1 (4%)	8 (9%)
TOTAL	17 (100%)	22 (100%)	25 (100%)	7 (100%)	23 (100%)	94 (100%)

N=94

When did respondents become aware of the phrase "Open Data"?

Of those that indicated prior knowledge of open data before the survey, 75% of them were already aware of the term "open data" prior to 2013. The complete response by category is shown in **Error! Reference source not found.** which depicts a picture of steady motion in awareness of open data, gaining momentum at a steady pace since 2010. Many respondents that became aware of open data in 2014 said they were part of the Open Data Roundtable organised by the Federal Ministry of Communication Technology and the World Bank in January 2014. Nevertheless, it seems various stakeholders had become aware of open data before 2011, coinciding with the global open data movement.

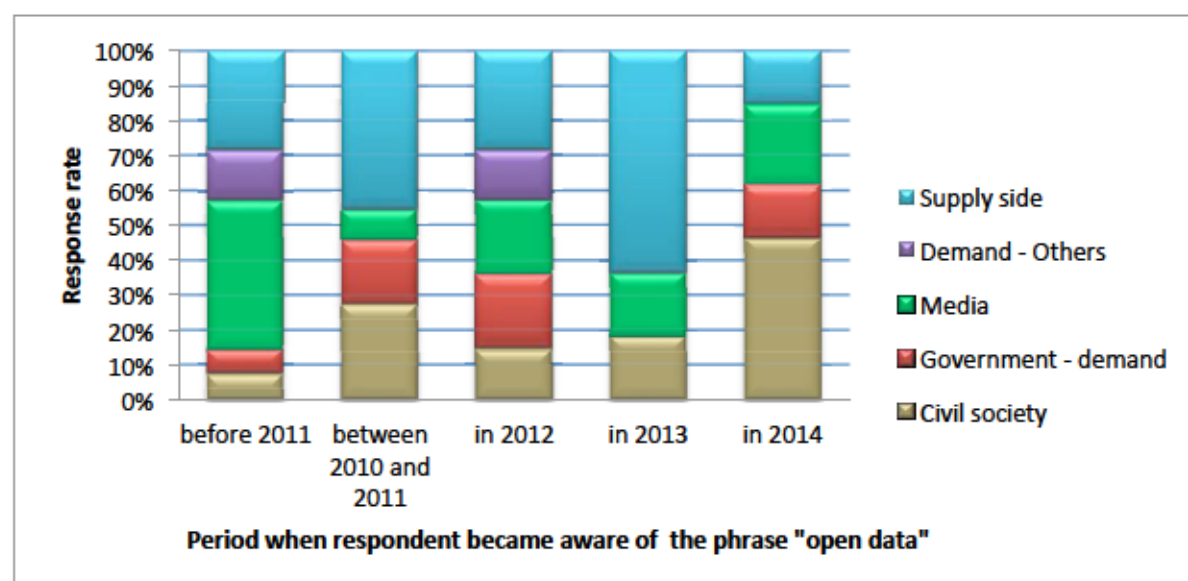


Figure 5.5 Respondent's initial awareness of "open data" (n=63; non-response=31)

How did respondents became aware of Open data?

Respondents outlined how they first became aware of the term "Open Data". On the demand side, several respondents became aware of open data at workshops, seminars and conferences or while preparing academic papers. Keywords or phrases related to the open data discourse such as "e-governance", "National Information Technology Development Agency (NITDA) in Abuja", "World bank Initiative", "being part of the Open Knowledge community", were used.

On the supply side, legislators' first awareness of Open Data came through training workshops on data processing and management for legislative activities while officers involved with budget preparation were introduced to the subject through service provider meetings on the introduction of GIFMIS into the Public Service in Nigeria and also through workshops on data analysis. Few respondents mentioned becoming aware of Open Data through the media – reading newspapers and listening to the news.

What is the understanding of Open Data?

Respondents were presented with several statements describing Open Data and asked to select all statements that apply to open data. Respondent selections are summarised in Table 5.13 and shows an underlying assumption that data that is open can be “used without any restrictions” (45% from demand side and 39% from supply side) or “without the data owners’ permission” (30% from demand side and 39% from supply side).

Table 5.13 Respondents’ Understanding of Open Data

Demand Side			Supply side		
Statements about Open Data	N	%	Statements about Open Data	N	%
a. Open data is data that is available online without any restrictions.	35	45%	a. Open data is data that is available online without any restrictions.	16	39%
b. Open data is data that is online and copyrighted.	6	8%	b. Open data is data that is online and copyrighted.	3	7%
c. Open data is data that can be repackaged and reused without the data owners’ permission.	23	30%	c. Open data is data that can be repackaged and reused without the data owners’ permission.	16	39%
d. Open data does not require any statement to be made about copyright attributions.	11	14%	d. Open data does not require any statement to be made about copyright attributions.	6	15%
e. None of the above applies to Open Data.	1	1%	e. None of the above applies to Open Data.	0	0%
f. Other	1	1%	f. Other	0	0%

It is tempting to assume that open data practice is at its infancy in Nigeria. However, if 75% of the 55% who said they were aware of open data before this survey, became aware prior to 2013, then perhaps the critical mass already exists and only needs to be activated. The passiveness in those that are aware of open data reflects in their understanding of attribution requirements for open data. Perhaps, like Chernoff (2010) points out, they are identifying publicly available data to mean open data. With these conflicting understandings, it may explain why nobody is paying any attention to the copyright notice on the web pages of the Budget Office of the Federation. Legal barriers and confusion about the current legal-status of the use and re-use of data, is thought to represent a huge constraint not only for top-down OGD policy implementation, but also for the bottom-up use and re-use of the public data (Fioretti 2010).

Nevertheless the right signal in best practice has been set by the Edo State OGD initiative which has a clear open data attribution (the Creative Commons Attribution license) for the data on the portal. Overall, the above results suggest a need to include data licensing topics in data analysis or open data trainings or capacity building programmes. It also a point for policy intervention.

5.6 Demand for Open Data

In the belief that an open data will cut down on corruption, enable more scientific policy making and also engage more people in government by empowering them with the knowledge they can use to challenge both the government and political leaders (World Bank, 2013), the open data community has been pushing for implementation of open data initiatives world-wide. How sustainable the resultant open data ecosystem will be depends on the local demand for open data. For this section, we report respondent views on how OGD could create value and their preferred format for published open data.

Ways in which Open Government Data could create value

Since there are those who argue that open data initiatives should be built on a business model and data is often thought of as a valuable resource, we asked respondents to suggest ways in which open government data could create value using the open-ended question: *"In what ways do you think Open Government Data could create value?"* We hypothesise that if citizens see open data as a valuable commodity, they are likely to demand it. One respondent summarised it thus; OGD will create value by:

Creating new business and improving the employment situation by creating jobs;
Building trust between citizens and Government; Reducing duplication in research between Ministries, Departments and Agencies; Reducing response time for FOI law requests if data is online by default; Making Government more open, accountable and hence reducing corruption among officials.

The quoted response, above, touches on job creation, trust building, reduction in data duplication, effect on FOI, transparency, accountability, and reduction of corruption.

Overall, quite a number of the responses centred around **issues of transparency and accountability** such as, OGD will "help check corruption", make "government more open, accountable and hence reducing corruption among officials"; and from another: "It is a sign of transparency and accountability and it shows that the government has too little to hide from the public."

There were several comments to the effect that open government data would increase **citizen awareness and participation in governance**, allowing "for clear feedback from citizens." Another respondent puts it this way: "Educating citizens with knowledge to

measure qualitative plus quantitative processes, output and outcomes of governance in a democracy. Measuring the delivery of public goods and services.”

A number of respondents suggested that open government data would “unleash a new set of civic entrepreneurs” and also **create jobs**. One respondent suggested that OGD’s value could be in “creating new business and improving the employment situation by creating jobs”, and another, “Open Government Data will encourage the generation of economic and social worth through efficiency, innovation, transparency and participation.” In the opinion of another respondent, OGD provides “Creative solutions that help the citizens solve critical problems and more jobs are created for the unemployed.

A few were also of the opinion that open government data would drive **public sector effective planning**. In the opinion of one respondent: “It will help in planning, evaluation, monitoring and reporting. It allows for effective decision-making for policy makers.” From another, it will be “available information for planning purposes”. Some saw it as an **opportunity to improve Government services**. As a respondent from the supply side put it, OGD could create value by “opening the door for criticisms and at the end, assist Government perform better.” Another saw the value as being to “... help in planning, evaluation, monitoring and reporting.”

A few saw it as an **avenue for the public to understand Government activities**. In the words of a respondent, OGD could create value “by assisting the public appreciate the efforts of Government”. From another, it will create “openness in the system. Everyone will understand what is going on. The transparency will encourage commitment to our duties.”

Value creation was seen **in the light of research activities**. For example, OGD could create value if as one respondent wrote it “is made accessible for research purposes and public consumption.” Another respondent wrote: “It allows effective decision-making for policy makers. It encourages transparency and accountability. It allows for clear feedback from citizens. It helps during research and development.”

There was **concern for integrity of such data**, though, as one respondent put it: “As long as the data has not been mutilated at source, and there is freedom to use such data to hold government accountable.”; and **the format of such data** as opined by a respondent who wrote: “It should be in a format that an average Nigerian can easily understand and be able to use.” In the words of another respondent, such data “should be accurate and made easily accessible to members of the public. They should be well-stated and produced for reference purpose.”

We note, however, a respondent who wrote, “Open Government Data - is that not the responsibility of the National Bureau of Statistics (NBS)?” So, there are very likely to be those who do not see the need for an OGD where national bodies that deal with data are already in place. It is cheering to point out that the NBS is a participating member of the

planning committee for the national OGD initiative which launched with stakeholder consultations in January, 2014.

From the foregoing, it is clear that Nigerians also link open data to improved transparency and accountability and a reduction in corruption. So the support and encouragement for OGD in one form or the other from bodies such as The World Bank and IBP, is justified. Although it is possible that as Davies, Perini and Alonso (2013) pointed out about the tendency to pair transparency and accountability together in discussions despite being distinct concepts, Nigerians may also be doing the same. Other value gains elicited from Nigerians as highlighted above – job creation, citizen participation, improvement in government services; are also found in discussions of an open data ecosystem and the Open Data Readiness Assessment framework by The World Bank (2013). However, these are values attributable to OGD which do not have to be actualised before an OGD initiative commences. So perhaps, the focus should be on what would encourage a flourishing open data ecosystem rather than on an open data readiness. It is a case of one thing leading to another and if countries wait to be ready before embarking on an OGD implementation, it may never happen. As such, it seems the open data readiness as conceptualised in the 2013 Open Data Barometer (Davies, 2013) is more progressive.

Preferred format for published Open Data

Focusing on the “data” in “open data”, James (2013) opines that open data must permit people to use it, re-use it, and redistribute it, including intermixing with other datasets and distributing the results. Burwell, VanRoekel and Park (2013), stress the point of open data being available with a data structure that “enables the data to be fully discoverable and usable by end users”. Hence, in this study, the format of published open data is of interest, especially because the online national budget data of Nigeria, the focus of this study, is made publicly available in PDF format, the lowest rung of the 5-step open data ladder suggested by Berners-Lee (2009).

Respondents were asked the question “In what format would you prefer to see published Open Data?” They were invited to select one from the options provided, which were Oracle file; PDF; SQL; MySQL; Excel file; and Uncertain

We used these options, rather than, for example, machine-readable structured data (in place of which we used Excel, a very familiar software in Nigeria), or, machine-readable structured non-proprietary format with CSV as an example (instead we used SQL, MySQL and Oracle, since these are easily recognisable by Nigerians even when the underlying technical classification is not clear).

Respondent preferred formats, both on the supply and demand side, for published open data are as presented in Table 5.14. The result shows that, overall, 28 (30%) preferred the PDF format, followed by 20 (21%) favouring Excel. As anticipated, the formats in the higher level of the 5-star open data rung, were barely selected. Combined, that is, for MySQL,

Oracle, and SQL; only 4% indicated for these options. As an indicator, perhaps, of little knowledge of data formats and possibly how it relates to open data, this question recorded “no response” of nearly 40%.

Table 5.14 Respondents’ Preferred format for published open data

Preferred format for open data	Category					TOTAL
	Civil Society	Government - demand	Media	Others demand	Supply side	
Excel file	6 (35%)	0 (0%)	2 (8%)	3 (43%)	9 (39%)	20 (21%)
My SQL	1 (6%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (1%)
Oracle file	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2 (9%)	2 (2%)
PDF	4 (24%)	7 (32%)	11 (44%)	0 (0%)	6 (26%)	28 (30%)
PDF, Excel file	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (4%)	1 (1%)
SQL	0 (0%)	0 (0%)	1 (4%)	0 (0%)	0 (0%)	1 (1%)
Uncertain	0 (0%)	0 (0%)	2 (8%)	1 (14.3%)	1 (4%)	4 (4%)
No response	6 (35%)	15 (68%)	9 (36%)	3 (43%)	4 (17%)	37 (39%)
TOTAL	17 (100%)	22 (100%)	25 (100%)	7 (100%)	23 (100%)	94 (100%)

N=94

Excluding the respondent that chose both PDF and Excel formats, the responses are presented in the stacked bar chart in Figure 5.6. Contrasting the responses from members of Civil society and the Media, it can be deduced that while the most preferred format for open data by members of Civil society was Excel, the most preferred for members of the media was PDF. This divide presents a window of collaboration between Civil society and the Media because it suggests that the media professionals may not be analysing the budget data as much as they should, probably because they lack the skills to do so.

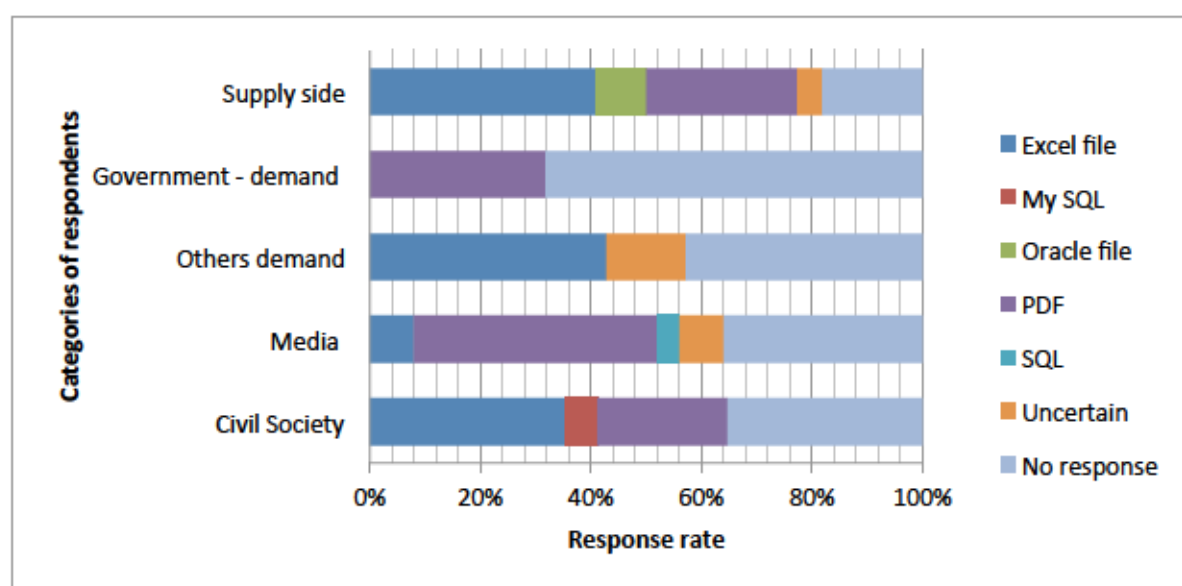


Figure 5.6 Respondents preferred format for published open data

The contrast between respondents from Government on the demand side and from the supply side is quite glaring. While all government respondents on the demand side indicated a preference for open data in the PDF format, the exposure of government officials on the

supply side to the concept of open data is evident in the choice of the Excel format (39% respondents) over the PDF format (26% respondents), suggesting a knowledge gap even in government circles which may impede on the drive for Nigeria's open government data initiative.

In the preceding section on how OGD could create value, a few respondents expressed concern for the integrity of the data and the format in which the data is published, expressing the need for it to be "in a format that an average Nigerian can easily understand and be able to use." Earlier, in describing "The Budget Process" under section 4.3, we present some of the reasons given by respondents from the Budget Office for publishing the data in PDF format as: "to ensure data integrity", "to avoid alteration", "to protect the data from intruders". **Thus, an understanding of data formats and its effect on open data publishing, data integrity and data licensing is important for the sustainability of open data practice in the Nigerian context.**

The preferred format for open data was discussed at the Stakeholder Workshop and majority of the participants preferred Excel "because it can be used for further research purposes" but a few preferred PDF "because it cannot be tampered with".

5.7 Open Data and Freedom of Information

Earlier in the description of the status of open data in Nigeria (see section 4.2), we informed that a Freedom of Information Act was passed in 2011 (FOIA, 2011). Furthermore, in reviewing the literature on the role of open data in governance, we present Heusser's view (Heusser, 2012), which alludes to freedom of information regulations being the precursor to open data practice. Hence, this case study has as one its objectives, the exploration of the twin concepts of open data and freedom of information. The findings are presented in the following sections.

Awareness of Nigeria's Freedom of Information (FOI) Act

Since there is thought to be an inter-relationship between Freedom of Information (FOI) and Open Data practice this theme was explored in this study by first asking respondents if they were aware of the Freedom of Information Act. Although many of the respondents did not answer this question (28%), about 70% of those who responded indicated awareness of the FOI Act.

Have any non-government stakeholders invoked the FOI Act in order to obtain data/information?

The non-government stakeholders (the media, civil society, and Demand-Others) summed up to 52% of the survey sample (a total of 49). Analysis of their responses to the question, "*Have you had cause to invoke the FOI Act in the course of your work?*", showed that about

a third (31%) have invoked the FOI act to obtain information. However, surprisingly, from amongst this 31%, a much smaller proportion of the media have invoked the FOI Act (20%) compared to 67% from Civil society. Clearly this is an area for further examination as to why the media is not operationalizing the FOI Act as much as expected, and indeed civil society for that matter, considering the high non-response figure of 14 (representing 29%). The data are summarised in Figure 5.7.

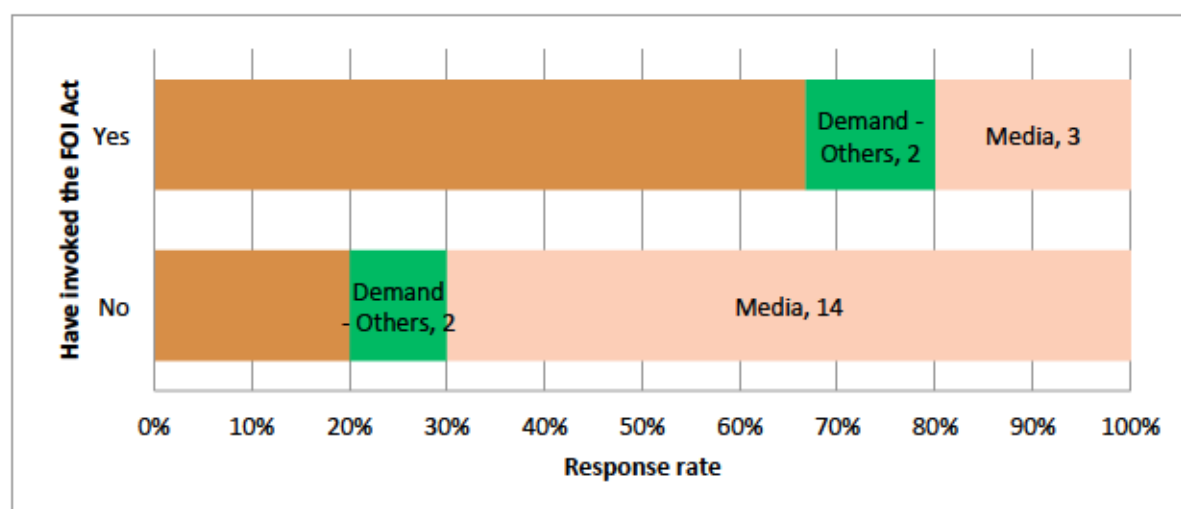


Figure 5.7 Non-government stakeholders and use of the FOI Act (n=49; non-response=14)

Respondent views on the link between the FOI Act and data access for citizens/open data Janssen (2012), emphasises strongly, the link of the open government data movement to the right-to-information movement, and the policy on the re-use of public sector information. Janssen further establishes that research on the right to information has mainly focused on comparative analyses of existing FOI laws and practices. Janssen summarises the problem thus:

At first sight, the OGD and RTI movement show considerable similarity in their objectives and drivers, even leading some to question whether OGD can replace FOI legislation and by itself guarantee the right to information. However, more insight is needed in the links and differences between both movements and into the possible impact, both on a theoretical and on a practical level, of OGD developments on the right to information. (Janssen, 2012)

The predating of FOI to the Open Data move is also true for Nigeria where the FOI Act was passed in 2011. Thus, we sought in this study, to contribute to the understanding of the link between FOI and Open Data practice, by asking respondents the question, *“To what extent would you agree that the FOI Act promotes data access for citizens?”*; and also the question, *“How, in your opinion would the FOI Act impact on the drive for Open Data?”*

To what extent does the FOI Act promote data access for citizens?

Opinions were varied. Many of the respondents were of the opinion that the FOI Act was a **good thing** for data access and in the words of a respondent from civil society, *"to the extent consistent with the public interest, protection of the privacy of citizens and protect serving public officer"* and from another: *"Although I am yet to see any individual in Nigeria who has used this, but I believe it is a good development in the promotion of rights to information, particularly from the government."* Another respondent stated that: *"Significantly, to a large extent it will grant citizens access of government data without fear of victimization."*

A respondent from the media wrote: *"It makes it very difficult for public/civil servants to hide information. Hitherto, civil servants claimed they were barred by an Act not to disclose information."* From a respondent on the supply side: *"It helps to disclose some information that were formerly restricted. all excluding personal information and documents that threaten the security of the nation."*

Some respondents were of the opinion that the putting the FOI Act into practice was **still at the infancy stage because implementation was somewhat slow**. As one respondent put it, *"The law promotes wide access to data and information across the board but implementation is somewhat slow and information is not readily given even when it is basic."* From a respondent on the supply side:

I agree the FOI act promotes data access to citizens to about 40% because even if a stakeholder is willing to give out an information with respect to the FOI act, they won't buy the idea of giving them a time line to deliver such information due to different reasons which may be official.

Some were sceptical, **expressing doubt that government was ready to grant access to its data**. Surprisingly from a government respondent on the demand side, *"Yes it does"* (that is, the FOI Act promoting data access for citizens) *"but I wonder if the government is ready to grant access"*. From a professional (Demand – others category):

"It has been mixed experience. Even though, we get responses, many are still grossly inadequate. we have used the FOI 17 times on getting actual expenditure of the budget and we are yet to get a favourable response."

Under-utilization of the FOI was also highlighted although this may be linked to **poor understanding of the Act** as expressed by some respondents, for example, *"even journalists do not know the details of the Act"*.

About the FOI law itself, a respondent pointed out that although the Act was *“potent enough ... it is not domesticated in states while the federal officers do not allow it to work.”*, and a respondent from the supply side put it pointedly – *“Not implementable.”*

The participants at the Unilorin ODDC Stakeholder Workshop discussed the anticipated overlaps or differences between Open Data and FOI practice in Nigeria and they came up with two comments. That:

- a) Open data are data posted on the net/web which can be assessed while FOI is only on demand and approval FOI gives you right to demand for a document that need i.e. to say it has a legal backing while open data has no legal backing.
- b) People still ask for Open data even though it (the data) is posted on the Website or Internet.

From the foregoing, it appears respondents recognise that the FOI Act was necessary for the enforcement of the right of citizens to government-held information but the gains are slow probably because of a lack of understanding of the Act and the pervasive poor attitude of government officials to requests. This suggests that there is still a role for the RTI campaigners to play in ensuring that government officials do not “frustrate” citizen requests for information. It may be necessary for the media to publicise success stories as way of overcoming the scepticism from Nigerians about the workability of the Act.

How does the FOI impact on the drive for Open Data?

On the impact of the FOI Act on the drive for Open Data in the country, a respondent wrote:

The FOI Act is a required input for Open Data to be successful. Otherwise, data may be difficult to retrieve from organisations.

In the words of another:

In a great way, the FOI Act in Nigeria has started driving the open data evangelism, in that it is established in the law (asking for information); nevertheless, it would be sustainable if government themselves will realize the benefit of making these data sets open.

A respondent from the media put it this way:

In fact, the primary reason for the FOI is to make available information without hoarding it; information must be open to all who need it. And because it is a law, it is intended to give everyone access to information, especially those who need the information for the purposes of informing the masses, the goings-on in Government and in society in general. Although information is still being withheld by Government

agencies, parastatals and corporate organisations, despite the FOI. The law is yet to bite – I mean, no one has been penalised for going against the law.

However, still expressing the lack of understanding of the Act, a respondent from the media wrote: *“If journalists know how to invoke it, it will aid information accessibility and processing. It would help better educate and inform the public”*.

It was opined that there would be a positive impact if *“the information is made available in a timely manner and in an easily managed digital format”*.

As another respondent put it: *“If the act were properly implemented, it would have a huge impact because information would be widely available making open data truly open.”*; and from another, *“If properly publicised, it could bring about more demand for data and so trigger more supply.”* (this, from a government respondent on the demand side)

Suggesting a need for an awareness campaign, a media respondent opined that, *“The FOI will only become a powerful tool when Nigerians in their millions are enlightened enough and determined enough to get the information they need from relevant government and MDA’s.”*

Assigning and *“training a specific FOI desk officer in all the public institutions for ultimate compliance”* was suggested as well as printing the Act for sale and serialising the content by newspapers.

In the words of a government respondent from the demand side:

Opening up data has been the needed 'pill' to stop corruption as information inequity or inadequacy protects inefficiency. FOI is the first plank and with the current open data initiative, we are on the route for effective society.

A respondent sums it up in the following words:

The FOI Act will impact the drive for good governance such that: there will be timely release of data. There will be applications and visualisation of government data, crowd sourced data on pot holes made open in visuals could inform the government of pot holes and government can respond to these. Government will avoid fund mismanagement, government will ensure adequate and even distribution of budget on roads, works, education, etc. across all states knowing data on the budget is released, government will ensure implementation.

The issues highlighted above through the analysis of respondent views points to a general agreement of a positive impact of the FOI Act on the drive for Open Data. However, the point is being made that there is little understanding of the law and low uptake by members of the Fourth Estate – the journalists. Some suggestions are given for the operationalizing of the Act, such as the appointment of FOI Desk Officers in all public institutions and the wide

circulation of the Act, in print, to citizens as well as the serialisation of its content in newspapers.

5.8 Perceived Impacts of Open Data

In the 2013 Open Data Barometer assessment (Davies, 2013), the expert survey researchers were asked to look for open data impact using surrogate cues. The study looked for “evidence” of impact on transparency and accountability, entrepreneurial open data use, government efficiency, economic growth, environmental sustainability, and inclusion of marginalised groups. In this study, we chose to ask respondents questions along these same points in order to compare the results against the findings from the Open Data Barometer assessment. Based on the questionnaire validation, we included an additional three items – that is, the extent to which academic institutions, businesses, and civil society; are opening up their data.

The items were scored on a 6-point Likert scale of Extremely high (5) , Very high (4), High (3), Low(2), Very low(1), and Not at all(0). The total points accumulated across the nine items of interest are summarised on the bar chart in Figure 5.8, revealing the area of highest impact to be on increasing Government efficiency and effectiveness. This was 3rd in the Open Data Barometer rankings. Apart from the re-ordering of Government efficiency to the top in this study, the ordering of the ranking for the items are the same in this study and in the 2013 Open Data Barometer assessment (see Davies, 2013, p.21).

Thus, overall in this study, we find that **respondents perceive open data has had the greatest impact on Government efficiency and effectiveness, followed by Transparency and accountability, then on Entrepreneurial open data use, then on Economic growth, Environmental sustainability and inclusion of marginalised groups scored the least.**

On the perceived extent to which open data has had a noticeable impact on the three additional items, the extent to which **Civil society were opening up their own data scored the highest, followed by Academic institutions, and Businesses in the country came in as the lowest.**

The frequency distribution of ratings for each item are presented in Table 5.15.

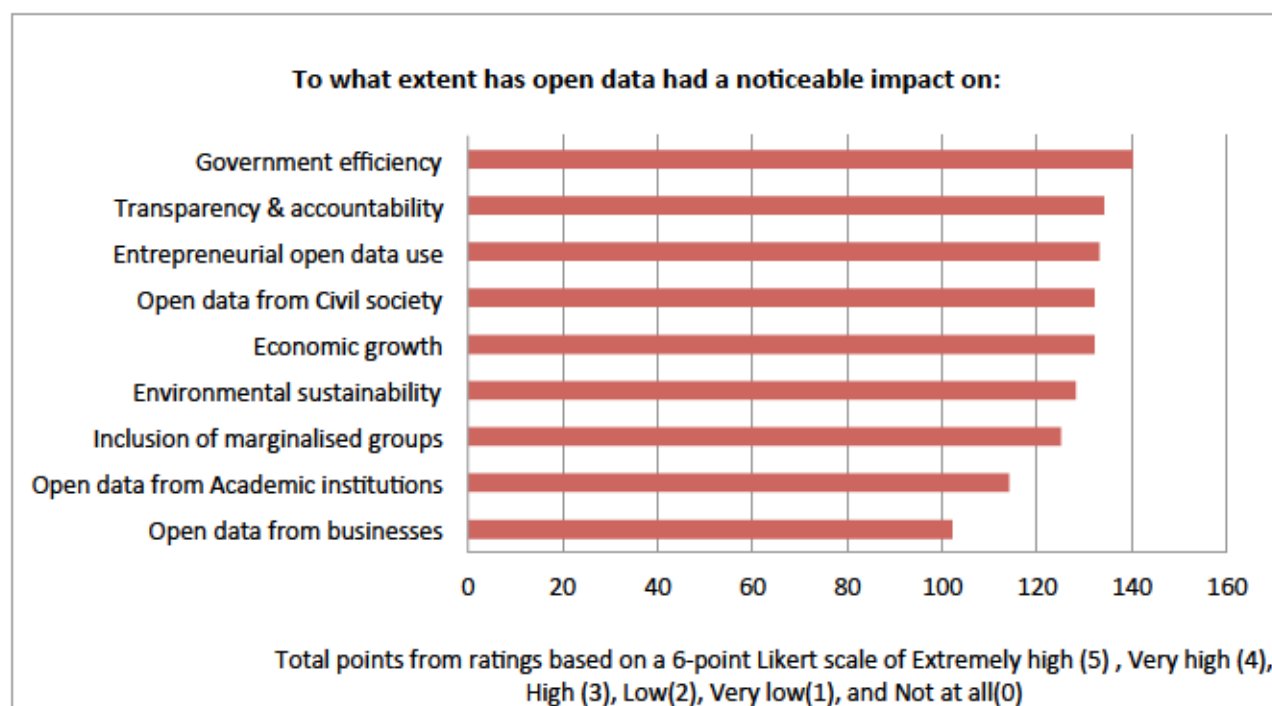


Figure 5.8 Perceived impact of open data

Table 5.15 Responses to Perceived Impact of Open Data on Items A – I

Impact of Open Data:	Extremely high		Very high		High		Low		Very low		Not at all		No response		Total	
A. on increasing government efficiency and effectiveness	3	3%	5	5%	22	23%	15	16%	9	10%	5	5%	35	37%	94	100%
B. on increasing transparency and accountability in the country	3	3%	4	4%	19	20%	20	21%	6	6%	7	7%	35	37%	94	100%
C. on environmental sustainability in the country	2	2%	4	4%	18	19%	20	21%	8	9%	6	6%	36	38%	94	100%
D. on increasing the inclusion of marginalised groups in policy making and accessing government services	0	0%	3	3%	23	24%	16	17%	12	13%	6	6%	34	36%	94	100%
E. in noticeable positive impact on the economy	2	2%	7	7%	14	15%	22	23%	8	9%	7	7%	34	36%	94	100%
F. entrepreneurs successfully using open data to build new businesses in the country	0	0%	7	7%	15	16%	25	27%	10	11%	3	3%	34	36%	94	100%
G. academic institutions in the country opening up their data	0	0%	2	2%	15	16%	26	28%	9	10%	5	5%	37	39%	94	100%
H. businesses in the country opening up their own data	1	1%	1	1%	10	11%	27	29%	9	10%	10	11%	36	38%	94	100%
I. civil society in the country opening up their own data	0	0%	6	6%	20	21%	21	22%	6	6%	4	4%	37	39%	94	100%

Participants at the ODDC Research Dissemination Workshop discussed the type of impact that we expect from increased awareness of Open Data in Nigeria? They came up with following ordered list, from highest to lowest:

- a) Monitoring and Evaluation
- b) Transparency

- c) Accountability
- d) Accuracy
- e) It enables researchers to carry out researches
- f) Increased citizens participation in the budget
- g) Tracking & Implementation.

Just like the order that emerged above on the perceived impacts of open data, and as emerged in the 2013 Open Barometer ratings, transparency and accountability were rated almost at the top. This is expected for most works on open data.

6. FINDINGS FROM MEDIA ANALYSIS

Section 5 has outlined the perception of respondents in a purposively sampled survey. They show respondents perceive substantial potential for budget data to be used in for holding government accountable, engaging citizens through visualisations of the budget and for academic and research purposes. As budget data has been available online since 2007 we might anticipate some of those impacts are already emerging. By taking an objective look at media publications we complement the subjective insights gathered through our interviews, surveys and participant observation.

6.1 Results from Print Media

Six newspapers were to be content analysed from 2009 to 2013 for the months of January to May for each year and the month of December of the preceding year because of the budget processing cycle as outlined in the methodology section. The average number of pages for a newspaper edition was: daily Trust (60), The Guardian (72), The Punch (72), The Nation (64), This Day (60), and Tribune (56). The number of dailies scanned for each newspaper, the number of newspapers from which stories relevant to the study were found, are presented in Table 5.1. Sometimes, in a day's edition, there were multiple stories appearing on the budget. The table also shows the total number of stories extracted from each newspaper.

Table 6.1 Overview of Newspaper Analysis

Newspaper	Total papers analysed	Total Papers with required Information	Total Papers with no required Information	Proportion of Papers with story items related to Nigeria's budget	No. of stories found per newspaper
Daily Trust	702	273	429	39%	428
The Guardian	869	393	476	45%	636
The Punch	961	369	592	38%	652
The Nation	712	369	343	52%	656
This Day	714	366	348	51%	554
Tribune	613	221	392	36%	305

As shown in Figure 5.1, all Nigerian newspapers considered budget issue as an important issue which was of news value to them. This is because none of the sampled newspapers had less than 30% of budget issue in their report within the study period. Indeed, the *Nation* had about 54% of its report within the study period on the budget issue. This implies that the Nigerian newspapers take their statutory function of surveillance and monitoring (Laswell, 1948) as a priority. Given the prominence and quantity of reports on budget issue within the study period, it could also imply that the agenda setting role of the media (McCombs and Shaw, 1972) is at the center of the Nigerian newspapers' focus on the budget issue. Through this, they are able to prime the public and thereby made it an

important issue that the Nigerian audience should consider as important (McCombs and Shaw, 1972).

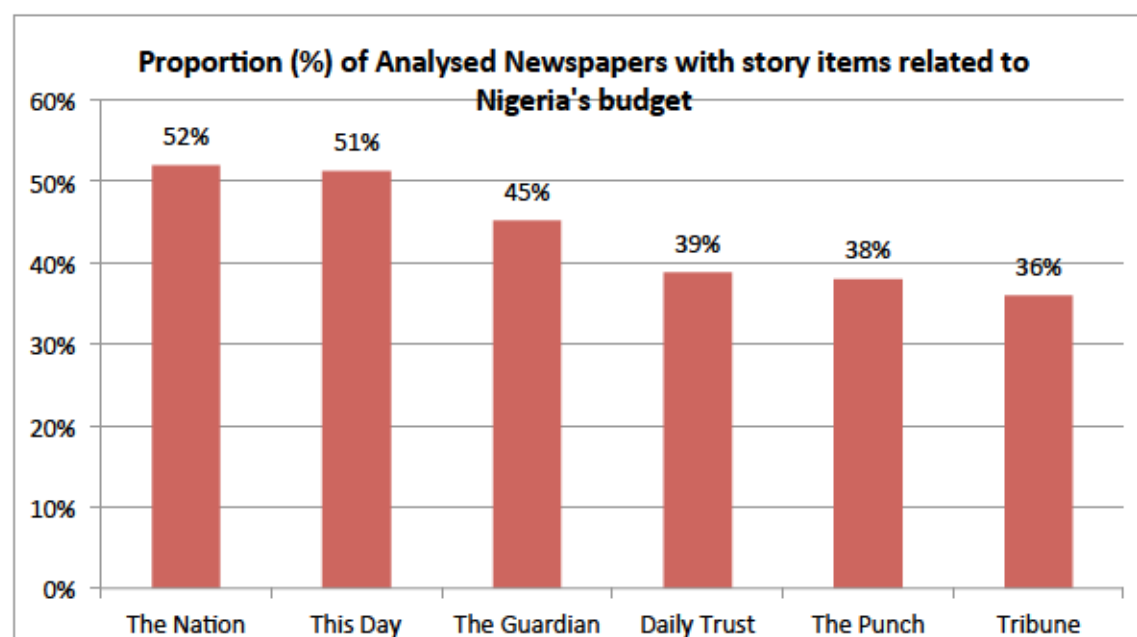


Figure 6.1 Proportion (%) of analysed Newspapers with story items related to Nigeria's budget

Years Analysed

As mentioned earlier, sometimes there were more than one story per paper. The stories relevant to the study seem to have increased steadily from 2008 to 2009 as the frequency distribution in Table 5.1 shows and this is the case for each newspaper as the bar chart, Figure 6.2, displays.

Table 6.2 Number of stories analysed per year

Year	Frequency	Percentage
2008*	41	1.3%
2009	159	5.1%
2010	504	16.1%
2011	740	23.6%
2012	790	25.2%
2013	897	28.6%
TOTAL	3131	100% (N=3131)

*for 2008, only The Punch newspapers could be located

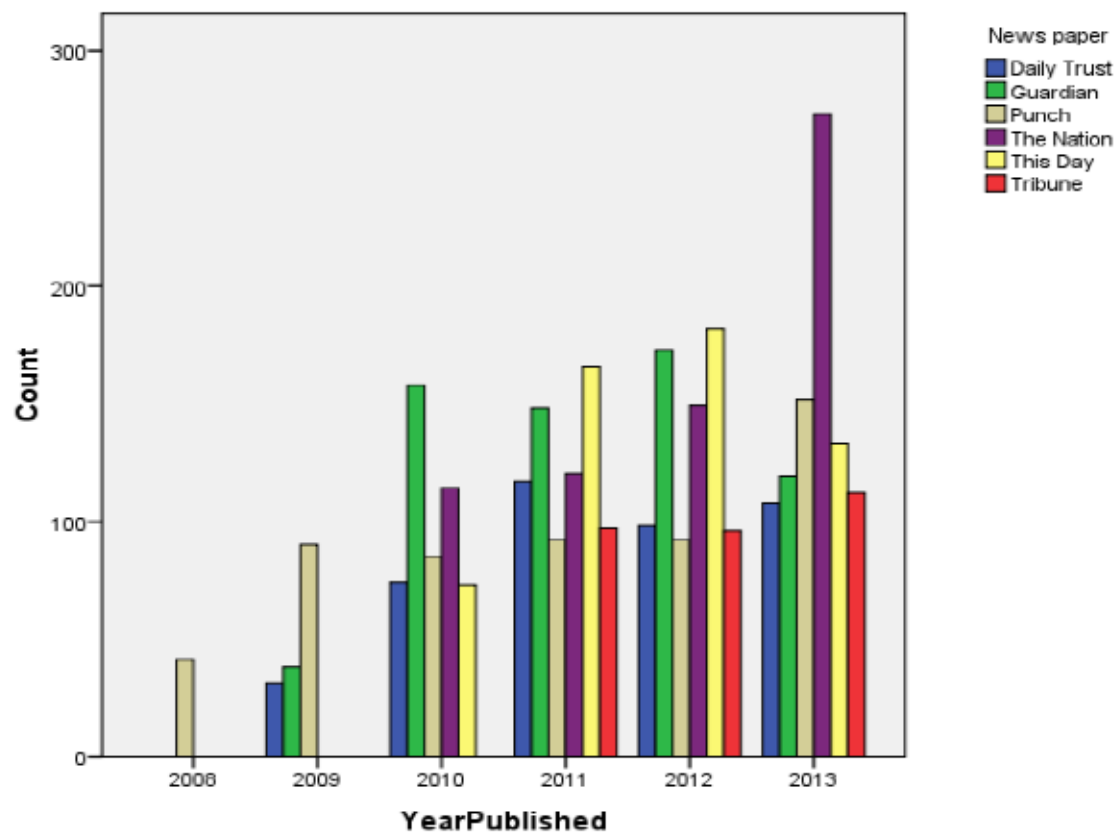


Figure 6.2 Number of stories per year analysed per newspaper

Months in which stories were published

As shown in Table 6.3, the number of stories published by the sampled newspapers varied from month to month. However, it is revealed that more stories were published on the national budget in December, January and February than other months in the year. As shown in the Table, 764, 650 and 486 stories were published in December, January and February respectively. These constitute 24.4%, 20.8% and 15.5% of the total sampled stories within the study period. The reason for this is that the debate on the national budget gets to its peak in December, January and February when the budget is going through rigorous process of approval. There were therefore less stories on the national budget in Nigerian newspapers in July, August, and September when the budget is already going through implementation.

Table 6.3 Number of stories published per month

Month	Frequency	Percentage
December	764	24.4%
January	650	20.8%
February	486	15.5%
March	420	13.4%
April	261	8.3%
May	313	10.0%
June	82	2.6%
July	108	3.4%
August	37	1.2%
September	8	.3%
November	2	.1%
TOTAL	3131	100% (N=3131)

News Items

The extent of importance that is attached to the budget issue by the newspapers is also deduced from the kind of news items that were used to report or cover the budget issue as shown in the Table 6.4 and Figure 6.3. The majority of news items on the budget issue were news story. About 2,290, constituting 73% of the total news items on the issue within the study period were news items. Nevertheless, features (226, constituting 7.5%). News analysis (84, constituting 2.7%). Editorial (70, constituting 2.2%) and opinion (123, constituting 3.9%) were published by the sampled newspapers within the study period, which confirmed that the newspapers were not only reporting issues on the national budget, but were also publishing rigorous, critical and extensive comments and interpretations of the issues on the national budget. This was to complement their watchdog and monitoring function.

Table 6.4 presents the summary of the stories and interpretations the Nigerian newspapers published on the annual national budget approval process and implementation during the studies period.

Some of the stories under this variable are presented in Table 6.5

Table 6.4 Number of types of news items published

News Item Type	Frequency	Percentage
Advertorials*	24	0.8%
Cartoon	16	0.5%
Editorial	70	2.2%
Exclusive Interview	78	2.2%
Features	235	7.5%
News Analysis	84	2.7%
News Commentary	92	2.9%
News Story	2290	73.1%
Opinion	123	3.9%
Photo News	14	0.4%
Others	82	2.6%
No Response	23	.7%
TOTAL	3131	100% (N=3131)

*Advertorials is the term commonly used to describe Advertisements in the Nigerian media

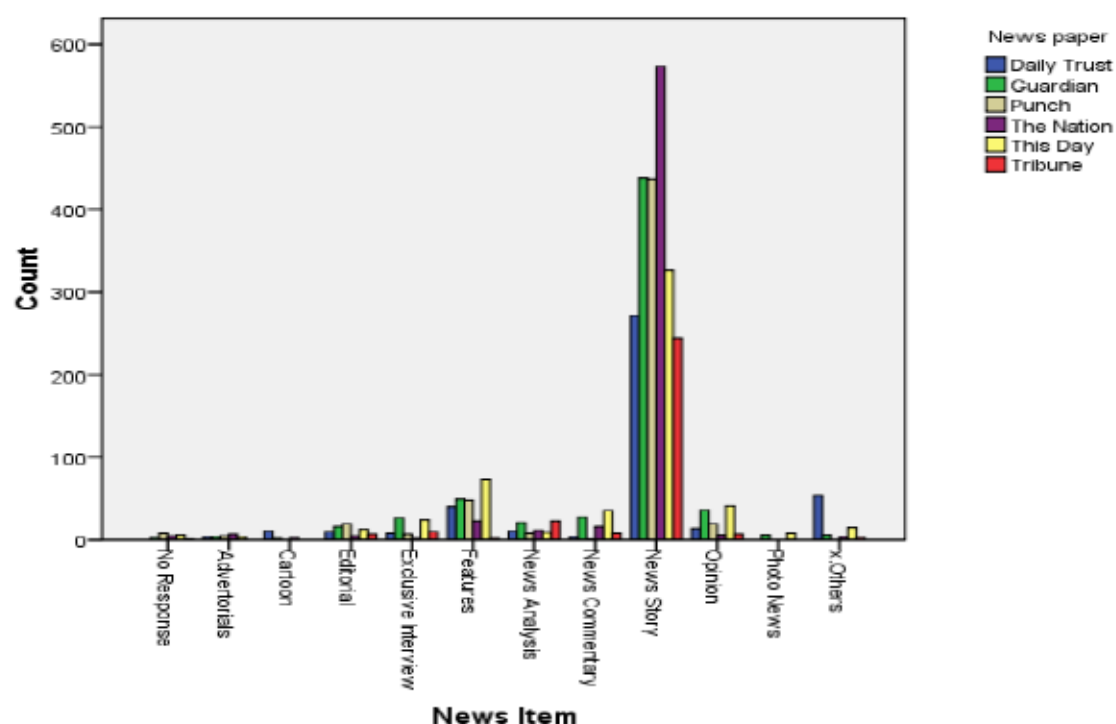


Figure 6.3 Type of news items published per newspaper

Table 6.5 Some stories published under each News Item

News Type	Summary of story	Source
Advertorials	The advertorial reacted against the advertorial of some lawmakers in Taraba State, whose report served as a rebuttal of Senator Aisha Alhassan's who according to this report said the bitter truth the Governor Danbaba Suntai, saying that his administration is wasteful and misplaced priorities when he relocated the state NYSC orientation camp from one place to another. The report also noted that in the 2012 budget, over 1 million naira was appropriated for project 2011, after spending 400 million and 600 million for the same project.	This Day, May 17, 2012
Cartoon	The cartoon informs on the favouritism enjoyed by the Police Command for the receiving of a budget of N31 billion in the 2013 fiscal year.	Daily Trust, January 19, 2013
Editorial	Foreign trips should not be an opportunity for government officials to squander public resources and earn fat estacodes for doing nothing.	Guardian, January 12, 2012
Exclusive Interview	Rep Kyari Gujbawu (PDP, Maiduguri Metropolitan) in this interview, reacts to the threat to override the veto of the president on the issue of budget. He however, explained that in all cases for the 14 years, such things amicably settled behind closed doors, and budgets are signed into law president in the presence of the Senate President and the Speaker of the House.	Daily Trust, February 15, 2013
Features	The more than one year dispute between the two chambers of the National Assembly formally ended last Wednesday as President Goodluck Jonathan succeeded in bringing members of the legislature together after a prolonged standing off. According to the report, the president has presented the 2011 budget estimate to the legislature for scrutiny and subsequent passage into law, as the Senate President, David Mark pledges the federal lawmakers determination to raise the standard of the nation's budgetary process to a level far above the formalities of annual rituals.	This Day, December 19, 2010
News Analysis	Oteh was walked out by members of NASS when she appeared with her team to defend the 2013 budget proposal	Guardian, December 29, 2012
News Commentary	The story comments on the events cropped up by the 2012 spending proposal. It as well describes the condition in which the removal of subsidy will put the masses and no matter which way it will be done, the people still lose.	Daily Trust, December 18, 2011
News Story	Office of the auditor general expresses frustration over poor allocation to them	Guardian, December 3, 2012
Opinion	There are lots of hidden things in the budget especially the state budgets	Punch, January 30, 2012
Photo News	The report notes that N794 billion would be borrowed to finance the 2011 deficit, also the \$70 per barrel; benchmark on which the 2012 budget is predicated was very realistic as opposed to the initial \$75	This Day, December 15, 2011
Others	The News item informs on peoples reaction to the presidency budget to purchasing multimillion SUVs. However, people critically reacted negatively to it as they see it as a wastage of money.	Daily Trust, December 22, 2011

Themes

The common themes that formed the focus of the reports and correlations of the Nigerian newspapers on the national budget of Nigeria are depicted in. As shown in the Table 6.6, issues and debate on the capital project and expenditure formed the major focus of the newspapers' report and interpretations during the study period. Seven hundred and eighty four news items, representing 25% of the total news items on the national budget within the study period, were on the reportage or interpretation of the capital project and general expenditure of government as embedded in the national budget. Furthermore, 495 news items, representing 15.8%, were on fiscal policies in the budget, 198, representing 6.3%, were on recurrent expenditure, 85, representing 2.7%, were on debt servicing, 141, representing 4.8%, were in financial items and 174, representing 5.6%, were on key assumptions and projections.

Table 6.7 presents a summary of the form of content published under each of the major themes identified in the reportage and interpretations of the sampled newspapers within the study period.

Table 6.6 Themes of published stories and the frequency

Theme	Frequency	Percentage
Capital Projects/Expenditure	784	25.0%
Debt Servicing	85	2.7%
Expenditure Development and Revision	249	8.0%
Financial Items	151	4.8%
Fiscal Policies in the Budget	495	15.8%
Key Assumptions and Projections	174	5.6%
Macro-economic Development	61	1.9%
Micro-economic Development	43	1.4%
Recurrent Expenditure	198	6.3%
Statutory Transfer	67	2.1%
Others	811	25.9%
No Response	13	.4%
TOTAL	3131	100% (N=3131)

Table 6.7 Some stories published under each Theme

Theme	Summary of Story	Source
Capital Projects/Expenditure	The governor of the Borno State Governor Ali Modu Sheriff presented the state's budget out of which he plans to resuscitate and rehabilitate all dormant industries and commercial outfits such as the Maiduguri International Hotel, Borno State Hotels, Borno Wire and Nail Industries Ltd. etc.	Daily Trust, December 31, 2010
Debt Servicing	Amount of debt owed by some states. It is revealed in the story that the states only collect half of their monthly statutory allocations while the rest are held at soruce to settle debts.	Daily Trust, July 16, 2013
Expenditure Development and Revision	The Senate has announced to submit the details of the 2013 budget, but this is still worked on and the president would have to carefully study the details before signing it but the senate promised to implemt the budget before end of January.	Punch, January 13, 2013
Financial Items	The FG on Friday announced a donation of N450 million to victims of Boko Haram in Adamawa, Borno and Yobe States.	The Nation, July 20, 2013
Fiscal Policies in the Budget	The house of representatives committee on public accounts has invited the Finance Minister, Ngozi Okonjo-Iweala, to explain what it called continuous poor budgetry allocation to the Office of the Auditor General of the Federation	Guardian, December 3, 2012
Key Assumptions and Projections	Government sources N420b for Police welfare; to upgrade Kano academy to university	The Nation, May 1, 2010
Macro-economic Development	Why Federal Ministries, Departments and Agencies (MDAs) are having difficulty accessing their budgetary allocation has been uncovered.	The Nation, May 21, 2012
Micro-economic Development	The report did a review of the Jigawa State 2011 budget performance which indicates that the state had a successful fiscal year, adding that the revenue flows were satisfactory and the output of public expenditure during the year was also encouraging.	This Day, January 4, 2012
Recurrent Expenditure	Emmanuel Ogbile, State House, Aso Rock Villa Permanent Secretary, must have jolted the nation with his argument before committee on federal character and inter-governmental affairs when he said that N1, 305,292,050 allocated for the Presidency in the 2013 budget for refreshment, meals, and other miscellaneous expenses was insufficient.	The Nation, December 4, 2012

Statutory Transfer	An urge for the National Assembly to review its position in the interest of the stability of the capital market, the nation's financial system and the larger economy.	Tribune, January 4, 2013
Others	The house of representatives on Thursday made a U turn on its decision to pass the 2011 budget next week	Punch, March 4, 2011

Prominence

One of the key means by which the media set agenda and put certain issues in the consciousness of people who takes such issues as very important and talk about them is through placement, quantity of attention given to the issues and the manner in which the issues are framed (Baran and Davies, 2003). So “those problems that receive prominent attention on the national news become the problems the viewing public regards as the nation’s most important” (Iyenga and Kinder, 1987, p. 3). As such, the Nigerian newspapers are expected to work extensively in putting the budget issues in the consciousness of people as a way of performing their function of monitoring, inciting advocacy for transparency and good governance in the way they are expected to attach importance to the issues through their attention to them. However, as shown in Table 6.8, the sampled newspapers did not give the expected much prominence to the issues on the national budget because the majority of the issues on the national budget were buried inside the newspapers and less were placed on the front pages of the newspapers. About 1,262 news items, representing 40.3% of the total news items analysed, were inside page major; 1344, representing 42.8%, were even inside page minor, whereas 153, representing 4.9%, were front page major, 207, representing 6.6%, were front page minor. One hundred and ten news items equivalent to 3.5%, were placed as back page major and a meagre 37, representing 1.2%, were placed as back page minor.

Table 6.8 Prominence of published stories

Prominence	Frequency	Percentage
Back Page Major	110	3.5%
Back Page Minor	37	1.2%
Font Page Minor	207	6.6%
Front Page Major	153	4.9%
Inside Page Major	1262	40.3%
Inside Page Minor	1344	42.9%
No Response	18	.6%
TOTAL	3131	100% (N=3131)

To show the level of importance the Nigerian newspapers intended to attach to different categories of budget issues, a summary of stories or interpretations placed at the different positions in the newspapers are presented in Table 6.9.

Table 6.9 Some stories and the Prominence given

Prominence	Summary of story	Source
Back Page Major	Standard Chatered Bank regional head of research, Africa, Mrs Razia Khan has suggested that the federal government should urgently implement the fiscal reforms in order to address the increasing debt of the nation. Adding that the country's domestic debt is currently estimated at 16.6 % of GDP. She noted that the rapid pace of domestic debt should be a major concern of the country.	This Day, February 4, 2011
Back Page Minor	The John Enoh-led house of reps committee on finance yesterday queried the whereabouts of N5.6b shortfall in the total revenue generated for FCT administration as inland taxes by the FIRS.	Guardian, March 26, 2010
Font Page Minor	President Goodluck Jonathan has directed the presidential projects assessment committee to probe some projects listed for execution in the 2010 budget.	Punch, May 25, 2010
Front Major	The Coordinating Minister for the Economy and Minister of Finance, Dr. Ngozi Okonjo-Iweala, has said the federal government has not stopped the funding and execution of constituency projects in the country as contained in the 2013 budget.	This Day, August 8, 2013
Inside Major	Care must be taken in the preparation in order to ensure a realistic implementable budget	Tribune, May 30, 2011
Inside Minor	Despite yesterday's passage of the N4.485 trillion 2011 budget by the National Assembly, the controversy surrounding the 2011 Appropriation Amendment Bill may not be over yet.	The Nation, May 26, 2011

Direction of the published stories

The direction and tone in which the media report an issue determine the nature and direction of the influence of such report on the opinion of people about the issues being reported. This is specifically the framing perspectives of media report, which, according to Schufele (2000), usually provide interpretative schemas that influence how people think about certain issues. This perspective is depicted in the analysis of the news items on the national budget of Nigeria as reported or covered by the Nigerian newspapers.

Table 6.10 shows how the sampled newspapers wanted Nigerians to understand and accept issues on the national budget in the ways they presented the issues. As shown in the Table, the majority of the news items analysed (1055 representing 38.7%) were just informing, not providing any interpretative schemas for the readers to have a perception about the issues. However, 867 of the news items analysed, representing 27.7%, were critical, aiming at influencing the opinion and attitudes of the readers negatively towards the issues being reported. Nevertheless, 817, equivalent to 26.1%, of the news items, were presented favourably so as to influence the opinion of readers favourably towards the issues being reported. Meanwhile, 361 of the news items, representing 11.5%, were neutral.

To illustrate these various directions that provided different interpretative schemas for understanding the various issues that were reported on the national budget, examples of content under each of the direction were presented in Table 6.11.

Table 6.10 Direction of published stories

Direction	Frequency	Percentage
Critical	867	27.7%
Favourable	817	26.1%
Informing	1055	33.7%
Neutral	361	11.5%
No Response	31	1.0%
TOTAL	3131	100% (N=3131)

Table 6.11 Some stories and the Direction under which they were categorized

Direction	Summary of Story	Source
Critical	The budget proposals presented to the National Assembly by President Goodluck Jonathan on Monday contain a number of contradictions	Punch, December 14, 2011
Favourable	The house of reps yesterday passed through the second reading the 2013 budget amendment bill sent to it by the President.	Guardian, July 19, 2013
Informing	National Assembly has approved the statutory budget of N116 billion for the Federal Capital Territory Administration(FCT) with the FCT Administration (FCTA) projecting the sum of N195.2 billion, which represents a 12% increase on actual revenue collection in 2010 as expected revenue in the 2011 fiscal year aimed to provide basic infrastructures and services to the residents of FCT, Abuja.	This Day, May 6, 2011
Neutral	The story informs on the intention of the Federal Government to spend billions on the acquisition of ammunitions as revealed in 2012 budget for the security sector. The sector however, is announced to have been allocated N920 billion in the budget for the 2012 fiscal year.	Daily Trust, December 19, 2011

Tone of the published stories

As is already noted earlier, tone and direction are two major dimensions of framing in media reportage of issues, which are usually meant to influence the understanding and opinion of people about the issues that are reported by the media.

Table 6.12 show the different tones in which issues on the national budget of Nigeria were reported by the Nigerian newspapers. As shown in the Table, a majority of the news items analysed in the sampled newspapers (1055, representing 33.7%) were neutral, not being specific in the tone in which they reported the issues they reported on the national budget. However, 867 of the sampled news items in all the sampled newspaper, representing 27.7%, were harsh, while 817, representing 26.1%, were moderate. This implies that many of the Nigerian newspapers were cautious in the way they reported issues on the national budget, probably aiming at practicing responsible and developmental journalism.

Table 6.13 presents a summary of some contents that illustrate the different tone in which the sampled newspapers reported issues on the national budget of Nigeria.

Table 6.12 Stories Tone of published stories

Tone	Frequency	Percentage
Harsh	867	27.7%
Moderate	817	26.1%
Neutral	1055	33.7%
Soft	361	11.5%
No Response	11	.4%
TOTAL	3131	100% (N=3131)

Table 6.13 Some stories illustrating Tone

Tone	Summary of Story	Source
Harsh	President Jonathan presented year 2012 budget proposals to the national assembly barely a week before the Christmas recess! Incidentally, the 2012 budget is the first budget crafted on the foundation of the transformation agenda which spells out the strategic direction of Jonathan's administration.	Guardian, January 8, 2012
Moderate	The Executive Director, Niger Delta Budget monitoring Group, Mr George-Hill Anthony has urged the Budget Office to slow down on the warrant releases on capital until a new legislature is inaugurated on May 29, while it enjoined the Bureau of Public Procurement (BPP) to remove any unrealistic capital vote to its legislature with denial of Certificate of No Objection on the threshold which needs central due process clearance until after May 29, 2011.	This Day, March 24, 2011
Neutral	The president has refused and withheld his assent due to the inclusion of strange constituency projects in the final draft	Punch, February 6, 2013
Soft	The story informs on the percentage taken by the south-south out of the whole budget for the year 2012. This was reported by a tabulated presentation showing that the South-South was allocated N116.5bn representing N29.65% of the total votes allocated to the six geo-political zones. This however leads to a critic as the northern legislators disagree pointing that it is impossible for a state's allocation to surpass that of a whole region like the North East.	Daily Trust, February 29, 2012

Quality of report

Even though the Nigerian newspapers did not seem to have given adequate attention to the issues of the national budget through proper positioning on the front pages, they nevertheless gave the issues extensive reportage. As shown in Table 6.14, and supported by figure 5.6.8, 1735 news items, representing 53.4%, were comprehensive in their reports. However, 974, equivalent to 31.1%, were scanty, and 413 (13.2%) gave enough expert analysis. To illustrate the quality and deepness given to the reports on the national budget of Nigeria by the Nigerian newspapers, a summary of the content for each of the classification of the deepness and quality of reportage is presented in Table 6.15.

Table 6.14 Quality of the story report

Quality of report	Frequency	Percentage
Comprehensive	1735	55.4%
Expert Analysis	413	13.2%
Scanty	974	31.1%
No Response	9	.3%
TOTAL	3131	100% (N=3131)

Table 6.15 Stories illustrating Quality of report

Quality of report	Summary of stories	Source
Comprehensive	In his presentation, Ameachi said that the 2013 budget was N52.32 billion higher than the appropriated 2012 budget which was N438 billion, adding that 314.30 billion out of the amount proposed was for capital expenditure while recurrent expenditure was put at N176.02 billion. Taraba state governor, Alhaji Garba Umar in his presentation said the N73,415,972,736.00 proposed 2013 budget presented would place emphasis on agriculture rural infrastructure (electricity, water, and roads), education, health, tourism and security. While Governor Musa Rabi'u Kwankwaso, of Kano in his own presentation noted that the 2013 presented proposed budget is made up of capital expenditure totalling N175, 510,102,000 or 75 percent while recurrent expenditure was N59,794,827,000 representing 25%.	This Day, December 23, 2012
Expert Analysis	The whole chorus of transformation has turned out to be a misnomer, going by the details of the 2012 budget proposal.	Guardian, December 18, 2011
Scanty	Mallam Sanusi stated that the significant accretion witnessed may be reversed due to higher budget projection and the oil price benchmark which is US \$4 more than what the Federal Government approved.	Tribune, March 20, 2013

Assumed or Established Sources

Another dimension of the quality and deepness of report on the national budget of Nigeria by the Nigerian newspapers is in terms of the sources of the reports. According to information subsidy theory, journalists depend largely on the sources to get information for their daily report. They need information, while their sources need the access to reach the public. In this wise, the source to a particular story in the media determines the quality and accuracy of such report (Katz, 1997).

Table 6.16 shows the different sources from whom it is assumed the journalists that reported issues on the national budget of Nigeria got the information to do their reports. S shown in the Table, top government officials constituted the major sources of information to the sampled newspapers in reporting issues on the national budget of Nigeria. So, 1564 news items, representing 50% of the analysed items, were linked with the top government officials. The National Assembly provided sources to 553 (17.7%) of the analysed news items, 87 (2.8%) from the Minister of Finance, 95 (3%) from Government Spokespersons, and 59 (1.9%) from the budget office. Surprisingly, budget office provided sources to a very little stories on the n=national budget.

Table 6.17 provides a sample of the content to illustrate and support the different assumed sources of news items on the national budget of Nigeria.

Table 6.16 Assumed or Established Story Sources

Assumed or established story sources	Frequency	Percentage
Budget Office	59	1.9%
Government Spokespersons	95	3.0%
Minister Of Finance	87	2.8%
Ministry Of Finance Officials	46	1.5%
National Assembly	553	17.7%
Non-Governmental Sources	306	9.8%
Top Government Officials	1564	50.0%
Others	404	12.9%
No Response	17	.5%
TOTAL	3131	100% (N=3131)

Table 6.17 Some Stories under Assumed or Established Story Sources

Assumed or established story sources	Summary of stories	Source
Budget Office	N740 billion capital votes in this year's budget has been released to Ministries, Departments and Agencies (MDAs) of government to execute their on-going projects, the Director General of the Budget Office has said.	Daily Trust, May 14, 2010, p.27
Government Spokespersons	President Goodluck Jonathan and the leadership of the National Assembly again met behind closed doors on Monday evening on issues arising from the differences on the 2013 budget as passed by the lawmakers.	Punch, March 6, 2013, p.28
Minister of Finance	Okonjo-Iweala told the South Africa correspondent of News Agency of Nigeria (NAN) in Cape Town that the executive arm of government is not responsible for the budget impasse.	Tribune, May 11, 2013, p.48
Ministry of Finance Officials	Minister of State for Finance, Alhaji Yerima Ngama said the total funds available for distribution in the month under review increased to N726.772 billion, exceeding the projected fund by N224.216 million in terms of the 2012 budget as a result of the higher price of crude oil.	This Day, April 30, 2012, p.30
National Assembly	It is not just a meeting but interaction on the budget of a core ministry. Preliminary analysis revealed that there were many projects in the 2010 budget which are not reflected in the 2011 budget.	Guardian, February 15, 2011, p.4
Non-Governmental Sources	The International Budget Partnership (IBP) has scored Nigeria low in Open Budget Index	The Nation, March 5, 2013, p.11
Top Government Officials	Despite the existence of the Fiscal Responsibility Act of 2007, the nation's dream of enthroning a regime of prudent, ethical and effective management of public fund and resources across all arms and tiers of government in the federation might not be realised anytime soon.	Guardian, March 13, 2012, p.96
Others	The 2010 budget is the only budget that was never formally presented to lawmakers by the President in recent times. It is a budget prepared by one President and implemented by another, it is also the biggest in the history of independent Nigeria, it is also a budget before elections. On that basis it is fit to say that the 2010 budget is in the catalogue of failed budgets.	Guardian, May 25, 2010, p.79

6.2 Results from Social Media

In the Open Data Readiness Assessment Framework proposed by The World Bank (2013), it is suggested that when journalism is organized mainly around large media organizations, and there are few freelance/independent journalists or there is a dominance of State-controlled media, it is harmful to a vibrant open data ecosystem. In Nigeria, though many outlets are privately owned, the organ of Government is still used to exercise control. Several Newspaper houses and Television stations have shut down by Government at one time or the other in the country, although, all were during military rule.

Social technologies can make networking and engagement with the public simple and powerful, make research faster, provide mechanisms for combating negative publicity, and measure public sentiment to help inform public policy (Powell et al., 2011). It is expected that the linkage between e-government and good governance will result in a more inclusive, effective, efficient, transparent and accountable public administration, which will be key to improved economic development and competitiveness (Mouka, 2010). Examination of discourse on social media was done as part of this study in order to seek evidence from an audience usually excluded from traditional media.

Online discourse around the budget of Nigeria for 2013 was gathered by extracting web content with the Google search engine using several search phrases. Criterion for extracting a post was that it had at least one feature of engagement, that is, “like”, “retweet”, “follow”, “comment”, “share”, and so on. This resulted in 83 primary posts and 528 sub-posts (that is, engagements with the primary posts).

The search phrases used and the number of primary posts extracted with each phrase is summarised in Table 6.18.

Table 6.18 Number of Posts generated by each search phrase

Number of Likes	No. of Posts	Percentage
2013 Budget	1	1.2%
El Rufai's response to Nigeria 2013 budget	5	6.0%
Nigeria 2013 Budget	57	68.7%
Nigeria 2013 budget analysis	1	1.2%
Nigeria 2013 Budget Comments	4	4.8%
Nigeria 2013 budget facebook	6	7.2%
Nigeria 2013 budget facebook discussions	1	1.2%
Nigeria 2013 budget presentation	7	8.4%
Nigeria 2013 budget summary	1	1.2%
TOTAL	83	100%

Nature of Posts

The proportion of posts attributable to various social media is shown Table 6.19. Very few posts were associated with Facebook perhaps as a result of privacy settings that make the

posts unavailable in the public domain. This was unexpected considering that the number of Facebook users in Nigeria had surpassed the 6million mark by 2012 (Internet World Stats, 2012).

Table 6.19 Number of posts generated per social medium

Social Medium	No. of Posts	Percentage
Blog post	26	31.3%
Facebook	4	4.8%
Twitter	53	63.9%
TOTAL	83	100%

The content extracted was examined for the associated number of “Likes”, “Comments” and “Shares/Retweets” to a Prompter’s Post.

The Post with the highest number of Likes (210 Likes) was a post originating from Dr. Okonjo-Iweala, the Coordinating Minister for the Economy and Minister of Finance of the Federal Republic of Nigeria. This was a Facebook post publishing the full text of the 2013 Budget presentation to the National Assembly by the President of Nigeria, Dr. Goodluck Ebele Jonathan. This Post also recorded the highest number of Comments (111 Comments) and the second highest Shares/Retweets (36).

Engagement with a particular line of discourse can be assessed by how much others redistribute the posted content. These are known as “Shares” (on the Facebook platform) and “Retweets” (on the Twitter platform). The highest number of such redistribution of posts were Retweets (69 retweets) of the following Tweet:

A country that spends 5% of its budget on education and 30% on security is doomed.
But common sense isn't so common. #publicaffairs
(<https://twitter.com/VEEGGroup/status/374975508938629120>)

The above tweet also received 12 Comments. One of such comments was:

@VEEGGroup @elrufai #publicaffairs "it isn't common, it even comes with a price tag...." (by Jolly segun @drjollyseg)

Thus, it is possible to quickly build a picture of citizen engagement on social media which will be very difficult to do with print media.

The Posts were examined and coded based on a pre-determined schedule as described in the methodology section.

Impressions from Prompter’s Posts

Prompter posts were evaluated for direction and nearly half of them (49.4%) were found to be criticisms of some kind. About 25% were categorised as informing in nature. Table 6.20 shows the distribution of prompter’s posts according to the direction of the content. There

were a number of comparisons made. For example a prompter tweeted: “*Nigeria's new debt to China for 4 new international terminals - N80bn. National Assembly Budget - N150bn. #Nigeria #2013*”.

Table 6.20 Direction of Prompters Posts

Direction	Frequency	Percentage
Analysis	6	7.2%
Comparison	13	15.7%
Critical	41	49.4%
Informing	21	25.3%
Optimistic	1	1.2%
Suggestion	1	1.2%
TOTAL	83	100%

The tone of prompter posts varied between moderate (35%), harsh (30%) and neutral (22%). Interestingly there were a few calls to action (7%) (see Table 6.21). One of such calls to action was: *Economist Calls On National Assembly To Cut Down Its Budget* <http://dlvr.it/420vNs> #Headlines #Nigeria.

Table 6.21 Tone of Prompters Posts

Direction	Frequency	Percentage
Call to action	6	7.2%
Harsh	25	30.1%
Moderate	29	34.9%
Neutral	22	26.5%
Soft	1	1.2%
TOTAL	83	100%

Prompter posts were attributed to various assumed sources as shown in Table 6.22. As envisaged, the top posts came from Citizens (28%), Online media (24%) and Civil society (19%). Traditional media also contributed 14.5% of the posts. The following call to action was attributed to a legislator:

Speaker Aminu Tambuwal on Monday called on stakeholders to come up with a bill to compel implementation of the national budget by MDAs.

Table 6.22 Source of Prompters Posts

Direction	Frequency	Percentage
Citizen	23	27.7%
Civil society	16	19.3%
Government	2	2.4%
Legislators	2	2.4%
Minister of Finance	1	1.2%
Online media	20	24.1%
Political party	3	3.6%

Top government official	4	4.8%
Traditional media	12	14.5%
TOTAL	83	100%

Prompter posts were categorised according to the target for whom the post was meant. The posts by assumed target are presented in Table 6.23. As expected the highest target was the budget allocations (37%), followed by performance of the budget (16%). Government was the target of several of the posts (11%) while a few were targeted at both Legislators and Government. One of the posts targeted at both Government and Legislators is: *“Nigeria Needs Budget Management Law to Address Budget Crisis <http://bit.ly/10YzU40>”*. Another is *“Nigeria: President Forwards Budget Amendment Proposal to Assembly <http://wp.me/p2RMFg-1PE>”*.

Table 6.23 Target of Prompters Posts

Direction	Frequency	Percentage
Accountability	7	8.4%
Budget Allocations	31	37.3%
Budget performance	13	15.7%
Citizens	1	1.2%
Government	9	10.8%
Government/Legislators	4	4.8%
Legislators	4	4.8%
MDAs	1	1.2%
Revenue source for budget	5	6.0%
Timeliness	8	9.6%
TOTAL	83	100%

6.3 Discussion of Media Analysis Results

Online social media discourse was analysed in the quest for objective evidence citizen engagement with the budget, from an audience which normally is excluded from traditional media such as newspapers, also analysed as part the study component on media analysis. The assumption that items in the newspapers are most likely to be contributions from journalists who may not be able to express critical opinions is justified by the results from both the print media and social media analysis. For instance, comparing “Tone” from both media, it is clear that there was more with critical undertones on social media compared to print media (cf. Figure 6.4 and Figure 6.5).

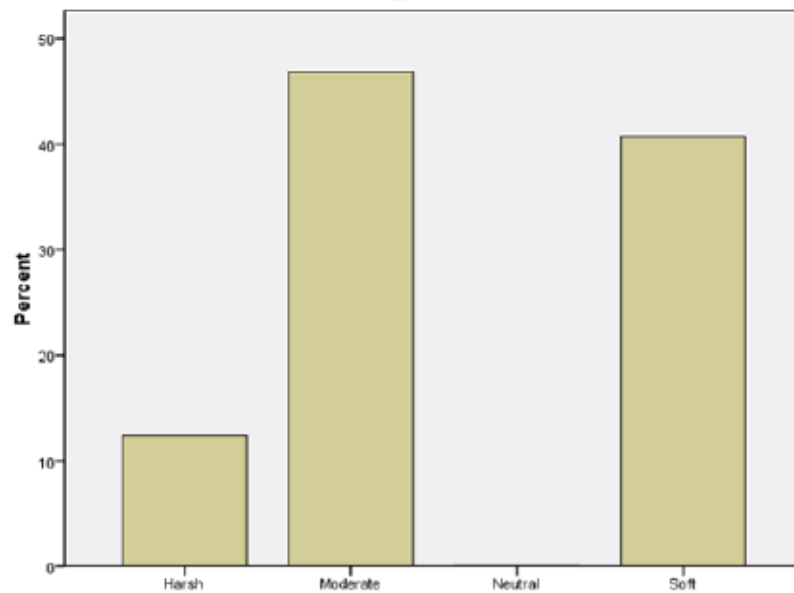


Figure 6.4 Tone of Newspaper stories

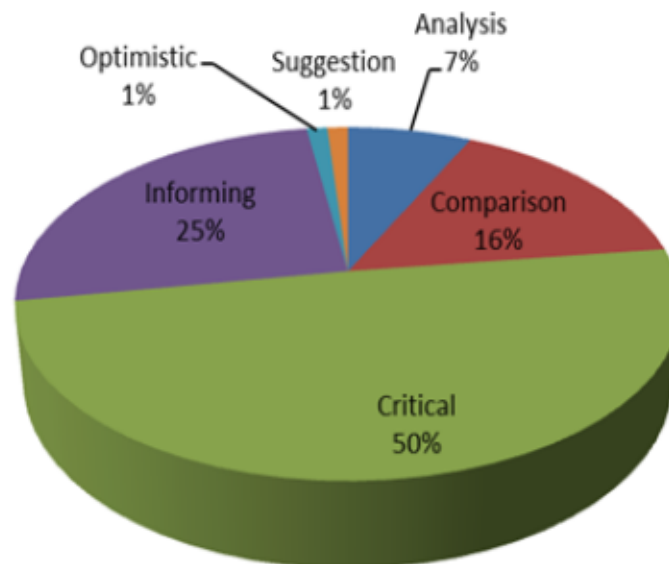


Figure 6.5 Tone of Posts on Social Media

Thus, citizen engagement was more visible and with critical undertones on social media compared to print media. This confirms the position of Powell et al. (2011), that the traditional world, newspapers, corporations, governments, or other types of leading organizations simply had to give out information, and people would consume it by reading or looking at it, but this is no longer enough for today's public because today's audiences expect to be able to contribute content and opinions, too.

Obviously, it was hard to find stories or posts alluding directly to Open Data in Nigeria from the media analysis. It could be argued, however, that perhaps the methodology did not particularly seek out such a theme. This is not a tenable argument because all our content

analysts were trained and well primed to look out for any mention of “open data” in the Nigerian context. Rather, the more tenable explanation is that open data is still at its infancy in Nigeria and that while that is true, citizen engagement with the budget is still low. Even on social media, with over 6 million Facebook users, the reaction to posting the 2013 National Budget on Facebook, only garnered 210 Likes, 111 Comments, and 36 Shares.

During our Research Dissemination Stakeholders’ Workshop held in Abuja on 7th April, 2014, we asked one of the four groups to consider the Question: How can the media be used to institutionalise open data in Nigeria? **They suggested that the media should do more on dissemination of Information as it pertains to Open data, and how citizens can use these data to monitor government performance and citizens welfare; that the media should be trained to do more of fact based analysis and reporting; and that the media should use such open data, also, for monitoring and evaluation.** We see the suggestions, coming from a mixed group of media, civil society, government and professionals, as worthy of note.

7. SUMMARY, FINDINGS AND RECOMMENDATIONS

7.1 SUMMARY

This study investigated the use of the online national budget of Nigerian with the aim of determining the context for open data, including the political, organisational, legal, technical, social and economic context; the supply of open data, including data availability, legal frameworks for data, data licenses, and the stakeholders involved in providing data; technical platforms and standards – including data formats and data standards use, and any data catalogues, APIs or analysis tools provided by an open data initiative; the context of the specific governance setting, including a description and history of the issues in focus, details of key stakeholders, and analysis of how data plays a potential role in this setting.; intermediaries and data flow – documenting the means by which data is made accessible in the governance setting: how, and by who? and data use and impacts – documenting the experience of those seeking to use data, and providing evidence of an intended or unintended consequences.

So, the specific objectives and tasks of this study are the following:

1. To review and assess newspaper coverage on the budget of Nigeria from 2009 to 2013 and social media discussions around the 2013 budget;
2. To benchmark the current budget governance process in Nigeria, according to international best practice and standards;
3. To describe the nature and characteristics of the online budget data with reference to the standards of open data;
4. To identify the sources of information for budget data analysis by stakeholders;
5. To identify the intermediaries in the flow of budget information between source and end-users and determine the sustainability of that role;
6. To determine the level of knowledge and awareness of open data in general and the availability of Nigeria's national budget as open data;
7. To identify any challenges or impediments to the implementation and use of open data, in general, by stakeholders; and
8. To organise a stakeholder workshop for the dissemination of the research findings and create awareness as to the location and uses of the budget data of Nigeria.

These objectives and tasks were aimed at addressing one of the priorities of the ODDC call which is to develop knowledge and action that will enhance the potential of open data to foster greater transparency and accountability in the national budgeting process of Nigeria while building an evidence base.

From the above outlined problem and objectives, the study therefore sought to answer the following questions:

1. What is the degree of citizen engagement and nature of media coverage upon the release of Nigeria's annual budget?
2. Does Nigeria's current budget process reflect emerging best practice and standards in open budget governance and does the budget data available online meet the standards of open data?
3. What are the sources of information for budget data analysis by stakeholders?
4. What is the level of knowledge and awareness of open data by stakeholders?
5. Are relevant stakeholders aware of the availability of the Nigerian national budget as open data?
6. Who are the intermediaries in the budget data flow, what is their motivation and capacity to facilitate and enable open data access and how sustainable is this role?
7. Are there any challenges or impediments to the implementation of open data by the relevant institutions?
8. Are there any challenges or impediments to the use of open data by public?

The study adopted different approaches to ensure that the expected outcomes of the ODDC project were achieved. Such approaches included attending network meetings, regional meetings, web meetings; organisation and hosting a hackathon, dissemination stakeholders workshop; conducting interviews, survey and media monitoring. From these, answers to the research questions are provided and evidence addressing the ODDC framework elicited.

7.2 Findings

7.2.1 Answers to Research Questions

What is the degree of citizen engagement and nature of media coverage upon the release of Nigeria's annual budget?

The study found and established that the media played a very significant role in stimulating robust citizen engagement through their extensive and insightful coverage of issues

surrounding the process of appropriation as well as the implementation of the budget. Although the Nigerian newspapers seemed not to have given utmost prominence to the issues on the budget because they buried most of the stories and other news items on the budget inside their papers, the critical and harsh tone/direction with which they covered issues on the budget demonstrated that they intended not only to make the issues on budget very important to the citizenry but also intended to influence critical opinion of the people about the issues surrounding the national budget so as to stimulate critical engagement with the government and consequently encourage transparency and good governance.

So, given the prominence, quality and quantity of reports on budget issues within the study period, it could imply that the agenda-setting role of the media (McCombs and Shaw, 1972) is at the center of the Nigerian newspapers' focus on the budget issue. Through this, they are able to prime the issue and thereby made it an important issue that the Nigerian audience considered as important (McCombs and Shaw, 1972)), discussed, and which prodded them for a robust citizen engagement with their government.

The engagement that the social media such as Facebook and Tweeter generated on the issues of the national budget was even much more robust than that of the conventional media in terms of not only the wide or extensive sharing among Nigerians, but also in terms of the potency and snide constructiveness of remarks/comments on the various prompter posts that initiated the engagement. This is obviously because of the nature of the social media that are not under anybody's control and which are not limited by the professional principles or ethics of the conventional media.

In general, the media, both the conventional, particularly the newspapers, and the social media, have in recent time stimulated much interest of Nigerian people in the national budget of Nigeria, and have thereby laid foundations for robust citizen engagement through their coverage and provision of platforms or prompters for discussing and interrogating the government on the process of appropriation and implementation of the national budget.

Does Nigeria's current budget process reflect emerging best practice and standards in open budget governance and does the budget data available online meet the standards of open data?

The finding in respect of the above question is succinctly that the current budget process does not reflect the emerging best practice and standards in open budget governance and that the budget data available online does not really meet the standard of open data.

The widely accepted standard of open data is that it must be open and re-usable. In other words, it must be freely available to the public, businesses and the world over for use, reuse and to republish without any form of restriction. To achieve this, the standard is to make anything called open available in machine-readable format, which is reusable, in as close to

the 5-star format of open data. However, the national budget of Nigerian being made available online is in PDF format.

Both on the demand and supply side, a majority of the stakeholders in the national budget of Nigeria accepted that open data must satisfy the standard of being available and reusable without permission and restriction. But it is interesting to find that while the most preferred format for open data by members of Civil Society is Excel, the most preferred format by the media professionals is PDF. This divide presents a window of collaboration between Civil Society and the Media because it suggests that the media professionals may not be analysing the budget data as much as they should, probably because they lack the skills to do so. In other words, they use the online data just to report issues surrounding budget, rather using it to interrogate and correlate or analyse critically salient areas of the national budget.

The contrast between respondents from Government on the demand and supply sides is quite glaring from the pie-charts shown in Figure 5.2.4b. While all government respondents on the demand side indicated a preference for open data in the PDF format, the exposure of government officials on the supply side to the concept of open data is evident in the choice of the Excel format (39% respondents) over the PDF format (26% respondents), suggesting a knowledge gap even in government circles which may impede the drive for Nigeria's open government data initiative.

It is worthy of mentioning that the few stakeholders that preferred the online budget in PDF format wanted it so because, in their opinion, there is a need to safeguard or protect the data from manipulation. The same reason why the Budget Office chooses to publish the budget data only in PDF format. Specifically, reasons given by the staff of the Budget Office for publishing the data in PDF format include "ensure data integrity", "to avoid alteration", "to protect the data from intruders". There is the pervasive belief that if it is available machine-readable form, it could be tampered with, modified and falsified. So data integrity issues have implications for both policy and practice in Nigeria.

What is the level of knowledge and awareness of open data by stakeholders?

As established by this study, most stakeholders, both on the demand and supply sides, were fully aware of the phrase "open data" and their knowledge of open data is good. Indeed, awareness of open data has been gaining momentum at a steady pace since 2010. Many respondents that became aware of open data in 2014 said they were part of the Open Data Roundtable organized by the Federal Ministry of Communication Technology and the World Bank in January 2014. Nevertheless, it seems various stakeholders had become aware of open data before 2011, coinciding with the global open data movement.

In respect of how they became aware of open data, it is found that, on the demand side, stakeholders became aware of open data at workshops, seminars and conferences or while

preparing academic papers. On the supply side, legislators first awareness of Open Data came through training workshops on data processing and management for legislative activities while officers involved with budget preparation were introduced to the subject through service provider meetings on the introduction of GIFMIS into the Public Service in Nigeria and also through workshops on data analysis. Meanwhile, few stakeholders became aware of Open Data through the media – reading newspapers and listening to the news.

Nevertheless, a greater level of knowledge and awareness of open data as an emerging concept and global good governance indicator is admittedly recommended as this, according to the finding of this study, will in a greater measure impact on the monitoring, transparency, accountability, accuracy, tracking and implementation of the national budget.

It is also unanimously admitted that the media could play a greater role in increasing the knowledge and awareness of the citizenry about open data in general and online budget data in particular. They could do this by intensifying their dissemination of Information as it pertains to Open data, and how citizens can use these data, particularly the online budget data, to monitor government performance and to evaluate citizens welfare.

Are relevant stakeholders aware of the availability of the Nigerian national budget as open data?

Given the fact that a majority of the stakeholders in the national budget of Nigeria are aware and have knowledge about open data, this study empathically confirmed that they are also fully aware that the Nigerian national budget is available online as open data. Not only that they know it exists, they also access it regularly. It must be mentioned, however, that even though it was expected that the majority of them would have accessed the online budget in the recent last one month, the study established that the majority had accessed the document in the last six months. Nevertheless, it is not surprising that the majority of the stakeholders that most often access the online document are the media professional. This could imply that the media practitioners accessed the online budget of Nigeria most, perhaps because of their need for easy and frequent access to the data to perform their duties of watchdog as the Fourth Estate of the Realm.

As is already established, a majority of the stakeholders accessed the online budget document in PDF format, which is not the best internationally accepted standard or format for open data.

What are the sources of information for budget data analysis by stakeholders?

It is revealed that stakeholders analyze the budget of Nigeria in order to push for budget performance that would alleviate poverty among the citizen. Many of them, particularly the media professionals, also analyze the national budget so as to sensitize and mobilize public evaluation of government performance. They also analyze the budget in order to raise public consciousness on government issues, to fight against financial mismanagement, to

entrench transparency and accountability, to educate the public on the probity or otherwise of public spending, and thereby consequently push for good governance.

The major source of information for these forms of analysis by the stakeholders, as found in this study, is primarily the online budget data made available on the website of the Budget Office. As established earlier, a majority of them are aware of the existence of such online data.

Nevertheless, many stakeholders have access to the national budget not essentially through the online version, but also from electronic and hardcopies obtained from the Budget Office and copies obtained from the National Assembly. It is worth noting however to find that a good numbers of citizens and stakeholders have access to the national budget so as to make their analysis essentially through the serializations of the budget document in the newspapers and through the press briefings given at the release of the budget by the Ministry of Finance.

Who are the intermediaries in the budget data flow, what is their motivation and capacity to facilitate and enable open data access and how sustainable is this role?

This study asserts that the media professionals, civil society organisations and re-packagers like Budgetit, Connected Development, Society for Social Justice are the main intermediaries in the budget data flow in Nigeria. These intermediaries analyse and re-present budget information they obtain essentially from the online documents and other sources enumerated above to stimulate public engagement, interrogation of government spending, transparency and accountability for instilling good governance. The media professionals, for example, interpret the budget data to drive civic engagement and participation. The re-packagers visualize the budget data to make it simple for the public to understand. The media and civil society organizations disaggregate the information into specific and simple pieces for the knowledge and information of the public.

Academia in Nigeria are also part of the intermediaries given our research activities which have done a lot create awareness and provide a meeting point between the above mentioned intermediaries, suppliers of the budget data and other government officials.

The effects of these roles on public empowerment, political and decision making process, stimulation of transparency and accountability, as is established by this study, have been tremendous.

The capacity of the intermediaries to facilitate and enable open data access is great and sustainable. As it is found in this study, the media professionals, in particular, have the capacity to facilitate and enable open data access through their regular sensitization of the public as to the availability of different types of data with which people can scrutinize government policies and spending using open data on the net.

Are there any challenges or impediments to the use of open data by public?

As is established in this study, there is a consensus among the stakeholders that there are multitudes of challenges or impediments to the use of open data in general and online national budget document in particular by the public. The majority of the stakeholders assert that it is very difficult to use the online budget of Nigeria. Although a few believe that it is easy to access it, yet a majority hold that it is complex to work on and analyse, which then nullify it as a good open data document.

The study identified some basic factors that are hindering or impeding the access to or use of the online budget of Nigeria, and which are invariably impeding open data initiatives in Nigeria. The factors include: illiteracy; ignorance; apathy; peoples' lack of trust in government/corruption; nonchalant attitude of Nigerians. The solution would be for CSOs and non-State actors to educate citizens to help people understand data and use data-driven tools to help get the budget to the people. Other factors were: power outages; accessibility to Internet; legal constraints; format in which the data is made open. The more advanced data users, identified the lack of GIS representation of the online budget (geo specification) as a problem.

7.2.2 Evidence for the ODDC Research Framework

The above answers to the research questions of this study have provided necessary information on the ODDC Research Framework desired components. But a summary of the needed information might be desirable.

Context for Open Data: The agitation for opening up of government policies and spending for good governance has recently risen to a level that the Nigerian government has taken serious issue of open data initiative.

The political, social and legal contexts that have prodded and spurred the agitation are multifarious. One of such context is the promulgation of the 2007 Fiscal Responsibility Act and enactment of Freedom of Information Law in 2011, aimed to curb financial mismanagement by government officials and politicians as well as the impunity with which corruption has eaten deep into the fabric of Nigerian public service system.

Edo state was the first tier of government that responded to such high tempo of agitation through the launching of an open data portal. Edo state therefore became one of the leading technology – driven states in Nigeria when it launched her open data Portal making it the first of its kind within the Country. The open data was launched on the 13th of September, 2013 at the 3rd Annual Technology day by Governor Oshiomole where a data centre at the Directorate of ICT in the state with data Communication links between all its Government Offices was also launched (The Tribune, 2013).

Also, the Federal Ministry of Communication and Technology kicked off a one of its kind Open Government Data development initiative in January, 2014. A consultative approach expected to open up high value datasets from across government ministries to Nigerian citizens and the rest of the world at large, is being applied to the process. Thus making Nigeria the world's first federal Open Data initiative to simultaneously launch inclusive and continuing consultations with both government and non-government communities on their Open Data priorities to develop the country's national Open Data implementation plan (Ifebhor, 2014).

The supply of Open Data: Even though there are many government data that are relatively open to the public, like the data on the Nigerian Extractive Industry, the online national budget of Nigeria could not be adequately described as open data. Furthermore, its availability does not comply with the internationally accepted standard. It is available only in PDF that is difficult to work on, reuse, reprocessed and analyzed for easy understanding. The interesting observations made by the respondents from the budget data supply side about the online budget of Nigeria is that the data cannot be used without permission; it cannot be and it cannot be manipulated without permission. This is buttressed by the copyright notice now on the website of the Budget Office. Respondents were asked if they were familiar with the Creative Commons publication attributions and the finding is that the majority of the stakeholders do not know anything about the license. The lack of awareness of the Creative Commons license, a common license for open data, suggests a need for capacity building.

Indeed, open data in Nigeria are also restricted by the formats in which they are made available and paucity of their details and breakdowns.

The stakeholders identified particularly in respect of the national online budget of Nigeria include the media professionals, civil society organizations and re-packagers like the BudGIT, on the demand side, and the Government officials like the legislators and Budget Office senior staff, on the supply side. The stakeholders on the demand side make use of the data to drive civic engagement, transparency, accountability and good governance. The stakeholders on the supply side are responsible for making the data available in the format they want and for explicit and implicit reasons for which they supply the data.

Technical platforms and standards: Open data in Nigeria, particularly the online national budget of Nigeria, are made available essentially in PDF format. Many stakeholders, who were the respondents in this study, condemned this format because it nullifies the qualification of the data as open since it is not amenable or reusable or could not be processed for easy understanding of the public. Nevertheless, some stakeholders- media professionals on the demand side- accessed the open data (online national budget) through PDF and they are somehow contented with the format because they do not really reuse or process it, rather they access it to obtain information to support or contextualize their reports on the budget. Other stakeholders on the demand side - civil society organizations

and re-packagers - who reuse and process the data noted that the best and standard format in which they expect the data is in Excel. It should be noted that respondents were not all familiar with the higher level machine-readable file formats. Mention of CSV or SQL was not recognized except for those repackaging the data.

Whatever format the online budget is being presented, many stakeholders use, reuse and process the data, even though with difficulties. Thus, the online budget has initiated, introduced and provided many applications or analysis tools with which the re-packagers and civil society organisations repackage, reuse and process the data for easy understanding of the public. Such tools that were identified through this study include:

- Spreadsheet,
- Statistical software,
- Map tools (map box, Arc GIS, tile mill, data rapper, powerpoint, infographic tools, graphic design tools like adobe illustrator, anonations, USHAHID, tableau)
- Charts – Pie chart, Bar chart, Histogram
- Newsprints
- Social media.

The academic community is now involved through the activities of the Unilorin Open Data Research group.

The context of the specific governance setting: Political independence achieved by Nigeria more than 50 years ago has not translated into improvements in the quality of lives of the citizenry (Okeke, 2010) and that this is mainly as a result of corruption. Thus, a palpable developmental problem exists in Nigeria which Ogundiya (2010) argues is a problem of governance. In order to ensure good governance and foster socio-economic development, Nigeria, in 2007, crafted the Vision 20:2020 framework through which it aims to develop efficient, transparent and participatory governance; promote government effectiveness; tackle corruption, establish a private sector led business environment; develop sufficient and efficient infrastructure to support sustained economic growth; and reform the Public Service.

In order to drive the much desired good governance built on transparency and accountability, the budget of Nigeria has been made available on the Budget Office website since 2007 although it is not in an organized manner. For example, although the budget of the country for 2007, 2008 and 2009 can be obtained through the links on the page: <http://www.budgetoffice.gov.ng/downloads.html>, the link description for each year varies from year to year and it is not clear if the data is the final approved budget or the budget as initially proposed to the National Assembly for consideration. Furthermore, along with the budget for the stated years is a link to 'The Nigeria Constitution'. For 2010 and 2012 budget data, the links can be found on the lower segment of the home page under the frame caption '2012 Budget'. As for 2011, the budget data has to be pieced together from the 2011 quarterly reports on budget implementation available under the 'Publications' frame

on the right-hand side of the home page. Although the data files are published as PDF files, the release of the budget data into the public domain marks a vast improvement from the past when such data were only available as hard copies.

To further entrench open data initiative in Nigeria, the states in the Western region of the country are coming together to launch a joint open portal for the governments in the region.

The chosen course of investigation for this research was based on the premise that by publishing the budget data on its website, the data qualifies as being “open” and that it is important to understand how it has been driving good governance with underlying issues concerning citizen engagement with the data given the hue and cry about corruption and lack of transparency in Nigeria.

The stakeholders involved in this case are: The executive with the the Budget Office, the legislative, the Accountant General Office and other stakeholders with whom the Budget Office holds wide consultation with. Such stakeholders include organized private sector, civil society and the media

The Budget Office can be deemed to be in the forefront of seeking citizen engagement with the budget process, budget content, and budget performance. The budget preparation commences when the President gives directives to the Minister of Finance and the Budget Office of the Federation to prepare the Budget in line with the government’s vision and direction for the nation.

After the budget is assented to by the President, the budget data is published on the website of the Budget Office in PDF format by the ICT section.

Intermediaries and data flow: This study asserts that the media professionals, civil society organisations, Non-Government Organizations, and re-packagers like Budgetit, Social/Policy/Financial Analysts, research institutes/researchers are the main intermediaries in getting the data to the public in simplified and useful format.

Data use and impacts: According to the Budget Office, there has been “uncountable requests from Researchers, Businessmen, MDAs, World Bank and other international organisations demanding for the annual budget and the financial statements. This is to confirm the use of the budget data, which invariably means the budget data have been recording some impacts. Such impacts, as found in this study, centred on issues of transparency and accountability with several respondents suggesting that open government data increases citizen awareness and participation in governance. The findings from the study suggest that open government data has unleashed a new set of civic entrepreneurs and also created new jobs. Several respondents were also of the opinion that open government data have been driving public sector effective planning.

So opening the annual budget to the public to access, use and reuse has ignited transparency and accountability that aims at instilling good governance; it has positively impacted the environmental sustainability in the country, it has increased the inclusion of marginalized groups in policy making and accessing government services; it has highly impacted on the economy of the country; and it has increased citizen engagement and participation.

Emerging impacts: There is no doubt that the wave of open data initiatives is already blowing stronger in the Nigerian governance system with some emerging impacts. Indeed, the new parlance in the government circle is open government and transparency with the effect that good governance is now being defined within the framework of transparency and public participation that are driven by open data.

Thus, States of the Federation, pioneered by the Edo State government, as well as the Federal government, are taking up and vigorously pursuing the realisation of the objectives of open data initiatives. Edo State had launched its open portal and the states in the Western region of the country are coming together to launch a joint open portal for the governments in the region. The World Bank is also assisting the Federal Government of Nigeria to launch an open government data portal that will become a pool of information on government services and activities from all the Federal government ministries, departments and agencies.

The emerging impacts of open data in Nigeria, as reflected in this study, portend higher hope of improvement in the ranking of the country in the next Open Data Barometer assessments. The impacts are essentially manifest in the emergence of various re-packagers as intermediaries. These re-packagers reuse and re-process the online budget of Nigeria for easy understanding of the public and for driving transparency, accountability and good governance. Such re-packagers identified in this study include: BudGIT, Connected Development and Centre for Social Justice.

Other intermediaries such as the media professionals and civic society who have been participating in open data themed activities are bound to have an impact in the times ahead on open data practice in Nigeria.

The emerging impacts of open data in Nigeria are also visibly reflected in the organization of hackathons that has now become an established event through which citizens compete to work on or re-process online budget data of Nigeria. This kind of event is hitherto not known in Nigeria, but the acceptance and popularity of open data initiative have introduced and popularized the event as an emerging impact.

Furthermore, increased research focus by academia is bound to increasingly have an impact on the open data ecosystem in Nigeria as proficiencies in data use and meta-data

specifications are acquired and applied to providing open data that approaches the 5-star mark.

As an illustration of the emerging impact, we have been approached by CISLAC, Abuja, to find ways to tag and publish as open data, the numerous publications they have from the National Assembly. According to them, they, and not the National Assembly is the place to come when in need of a National Gazette, a copy of a bill passed by the legislature. Students have since commenced work on a web-based document management system. Furthermore, We have been asked by an NGO, FOMWAN, Abuja, to look through their annual reports and identify what data they can open up that the public might be interested in.

7.3 Recommendations

From the foregoing, we make the following recommendations:

Clear terms of use that support open data - Supply of any type of data intended for public use should have clear terms of use that support its access as open data. The Federal Ministry of Finance and the Budget Office of the Federation should aggregate all the budget data on its website and make it accessible through a page that has open use license attributions as a way around the copyright notice on its web pages.

Distribution of digital instead of hard copies - Enough evidence of preferred use of digital formats of the budget over other sources, is sufficient reason for the Budget Office of the Federation to start meeting requests for the budget with electronic copies rather than hard copies. Nearly half of the respondents working with the budget data did so with digital copies sourced from the websites including that of the Budget Office.

Improve understanding of open data among government data users - The level of awareness of open data among government officers on the demand side was found to be low. Also, there was a lot of expressed scepticism about the workability of the FOI Act as well as the suggestion that government officers were “frustrating” those who make requests for data or information. It is recommended that Government create awareness among government officers about what open data is, how it relates to the FOI Act, and their resultant responsibility to the public’s right to information..

Incorporate active social media into open data portals - Use of social media rather than newspapers can generate interest and engagement from a wide spectrum of citizens and should be incorporated in the design of open data portals.

Advocacy and capacity building -

Lack of awareness of what to do with the budget data ranked highly as one of the reasons why citizens were not using the open budget data much. Members of civil society have a role to play in preparing citizens to access and interpret the budget for the good of all.

Understanding of what open data is or is not, was low. So also, was the understanding of licensing issues for data in the public domain and how the different data formats hinder or promote use of open data. Civil society and the re-packagers of open data should combine to work on building capacity of citizens on these areas.

Members of civil society working with the re-packagers, should also embark on capacity building for members of the Fourth Estate, the media. This is because most respondents from the media in this study indicated a preference for open data in PDF format from a list that included machine-readable formats such as Excel (XLS) and SQL (for CSV). Such capacity building will better equip members of the media to do their own analysis of the budget.

If open data practice would have high impact in Nigeria, the differences in opinion about the best data formats for open data must be addressed, possibly as a point of action for academia, researchers and NGOs/CSOs.

Data integrity - This study found data integrity to be an issue for the different stakeholders. For the data suppliers, it was a fear that the data on the website could be tampered with. For the data users, some expressed the view that the government does not publish the true data for fear of reprisals from citizens. We think the issue is a complex one, fuelled by distrust on both sides, and so we recommend that the topic should be a point of discussion at every opportunity where the different stakeholders in the Nigeria open data ecosystem are present. The re-packagers of open data are uniquely placed to develop explanatory materials that can remove the misconceptions since they understand the technicalities around data.

Simplify terms for more general understanding- To the global open data community, it is necessary to recognise and use terms that up and coming open data users will understand. This is important for those from the international community working with governments. Talking about machine-readable data is very likely to sound like gibberish to some but using software names that people are already familiar with means, for example, that the intention in speaking about PDF and EXCEL is conveyed.

Expenditure data as open data - There is growing awareness of open data in Nigeria and the demand is strong for expenditure data to be published in the open domain. International organisations working with Nigeria to start the national OGD portal should take note of this as a very important data set of interest to citizens.

Use of social media to promote citizen engagement - Availability of social media has increased citizen participation in governance all over the world. The evidence from this research suggests that Nigerian citizens are not taking enough advantage of this medium. In a country of 170 million, where over 7 million have Facebook accounts, the reaction to posting the 2013 National Budget on Facebook, generated only 210 Likes, 111 Comments, and 36 Shares. The youth have a role to play in this, because this group accounts for 25% of

the population. We recommend that advocacy groups plan programmes that inter-relate open data, governance, accountability and social media.

Improve prominence given to budget and open data stories - The media has to do more in bringing the stories and issues around the budget of Nigeria to the front burner. From the newspapers analysed over a five-year period, only 15% of budget issues made the front page, and less than 5% made the back pages.

Use of learning events to promote collaboration - Finally, we recommend that learning events that will bring together academics, government, professionals and civil society organisations should be organized regularly to establish collaboration among them for the good and growth of open data initiative in Nigeria.

For future research -

Research, particularly through action research, into innovative ways of removing infrastructural, social and technical impediments to the optimal use of open data should be undertaken.

There should be continuous investigation of citizen engagement with open data in order to build the evidence on this.

Further research, to address the limitations of this study is recommended. This could be by way of improved methodologies or including a wider scope in such a study.

Next steps -

The project team intends to continue with research into the capacities necessary for achieving a flourishing open data ecosystem in Nigeria.

More work will be done, starting with the NGOs that have made specific requests, in helping groups to make their data open.

Within the university community, students will continue to be exposed to open data work and research while the Unilorin ODDC will continue with open data activities such as hackathon competitions and awareness building lectures and workshops.

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APPENDICES

APPENDIX 1 – Supply Side Questionnaire

Questionnaire on Open Data & Use of the Online National Budget of Nigeria

(Budget Data Supply Side)

PARTICIPANT CONSENT FORM

Before you answer the questions in this questionnaire or provide responses to the interview questions, we would like you to read the statements on the Participant Consent Form, and confirm your agreement to take part in this study, to be quoted or not, and whether you want to receive a copy of the results of the study. Thank you.

1. I confirm that the interview with me: **(Tick one)**
 - can be recorded ()
 - should not be recorded ()
2. I confirm that information I provide for this research: **(Tick one)**
 - can be quoted, stating me as the source. ()
 - can be quoted without stating me as the source. ()
3. I confirm that I have read and understood the aim of the research and that I am free to withdraw from the study at any time, without giving reason. **Tick to confirm** ()
4. Tick the appropriate box if you would like to receive a summary of the results of this study: **(Tick one)**
 - By Email () Give e-mail address: _____
 - By Personal Copy () Give mailing address: _____

Participant's name (please print): _____ Signature: _____ Date: _____

Questionnaire

Where there are options, please pick only one, unless otherwise stated.

There are six (6) sections – Section A, B, C, D, & E. Thank you.

A. General information about yourself

1. Your Gender: Male () Female ()
2. Email: _____

3. Phone no.: _____
4. Job title or activity role: _____
5. Your specialty: *(Tick as many as apply)*
 - a) Public/Civil servant ()
 - b) Media professional ()
 - c) ICT professional ()
 - d) Researcher ()
 - e) Financial Analyst ()
 - f) Finance/Accounts Expert ()
 - g) Other (pls specify) _____
6. Your length of work experience:
 - a) 1 to 3 years experience ()
 - b) 3 to 7 years experience ()
 - c) 7 to 10 years experience ()
 - d) 10 to 15 years experience ()
 - e) 15 to 25 years experience ()
 - f) more than 25 years experience ()

B. Open Data issues

Open data has also been defined as a non-personally identifiable data produced in the course of an organization's ordinary business, which has been released under an unrestricted license (Open Data Dialogue, 2012). Simply put, Open data can be described as data that is available to the public without restrictions.

1. Before seeing this questionnaire were you aware of the phrase "Open Data"?

Yes () No ()
2. When did you first become aware of the phrase "Open Data"?
 - a. in 2014 ()
 - b. in 2013 ()
 - c. in 2012 ()
 - d. between 2010 and 2011 ()
 - e. before 2011 ()
3. Describe how you got to know about Open data:

4. From the statements below, pick as many as describe your understanding of Open Data: *(you can pick more than one)*
 - a. Open data is data that is available online without any restrictions. ()
 - b. Open data is data that is online and copyrighted. ()

- c. Open data is data that can be repackaged and reused without the data owners' permission. ()
- d. Open data does not require any statement to be made about copyright attributions. ()
- e. None of the above applies to Open Data. ()
5. In what format would you prefer to see published Open data?
Oracle file () PDF () SQL () MySQL () Excel file () Uncertain ()
6. In what ways do you think Open Government Data could create value?

7. Please outline below, other types of data or information you would like to see made readily available to the public online, by the Government of Nigeria and its MDAs:

8. a) Are you aware of the Freedom of Information (Fol) Act? Yes () No () If Yes:
b) Have you had cause to invoke the Fol Act in the course of your work? Yes () No ()
c) (i) Has anyone invoked the Fol Act in the course of your work to get you to give them information? Yes () No ().
(ii) If Yes, was the request successful? Yes () No ().
d) To what extent would you agree that the Fol Act promotes data access for citizens?

e) How, in your opinion would the Fol Act impact on the drive for Open Data?

9. To what extent has open data had a noticeable impact on increasing government efficiency and effectiveness?
Extremely High () Very High () High () Low () Very Low () Not at all ()

10. To what extent has open data had a noticeable impact on increasing transparency and accountability in the country?
Extremely High() Very High() High() Low() Very Low() Not at all ()
11. To what extent has open data had a noticeable impact on environmental sustainability in the country?
Extremely High() Very High() High() Low() Very Low() Not at all ()
12. To what extent has open data had a noticeable impact on increasing the inclusion of marginalised groups in policy making and accessing government services?
Extremely High() Very High() High() Low() Very Low() Not at all ()
13. To what extent has open data had a noticeable positive impact on the economy?
Extremely High() Very High() High() Low() Very Low() Not at all ()
14. To what extent are entrepreneurs successfully using open data to build new businesses in the country?
Extremely High() Very High() High() Low() Very Low() Not at all ()
15. To what extent are academic institutions in the country opening up their data?
Extremely High() Very High() High() Low() Very Low() Not at all ()
16. To what extent are businesses in the country opening up their own data?
Extremely High() Very High() High() Low() Very Low() Not at all ()
17. To what extent are civil society in the country opening up their own data?
Extremely High() Very High() High() Low() Very Low() Not at all ()

C. Budget of Nigeria

1. How would you summarise the role of your office/establishment in the budget process/cycle?
 - a) Coordinate and package the national budget for presentation to the National Assembly ()
 - b) Consider the budget and give legislative backing to it ()
 - c) Manage performance of the budget ()
 - d) Monitor performance of the budget ()
 - e) Provision of estimate data for input to the budget ()
 - f) Other (pls specify)_____
2. a) Is your office responsible for making the document of the annual budget of Nigeria available to the general public? Yes () No () Uncertain()
 - b) If Yes, through which media do you make the document available?
 - i. National Newspapers ()

- ii. News Magazine ()
 - iii. Business Magazine ()
 - iv. Online ()
 - v. Press Briefing ()
 - vi. Others, please specify _____
- c) Which category of Nigerian citizen is likely to understand the budget as presented for public consumption? *(Tick as many as apply)*
- i. The elite ()
 - ii. The illiterate ()
 - iii. The literate ()
 - iv. Experts in financial analysis ()
 - v. Others, please specify _____
3. Who are the categories of intermediaries through which the annual budget of Nigeria gets to the public in simplified and useful format?
- a) Non-governmental organisations (NGO's) / CSO's ()
 - b) Government MDAs ()
 - c) Legislators ()
 - d) Journalists ()
 - e) Social/Policy/Financial Analysts ()
 - f) Research Institutes / Academia ()
 - g) Others, please specify _____
4. How do the stakeholders on the supply side i.e. the Ministry of Finance, the Presidency, the National Assembly, view the idea of publishing the national budget of Nigeria online?
- _____
- _____
5. Those that analyse the budget data want the data in machine-readable format such as Spreadsheet files (e.g. Excel), Database files (e.g. MySQL, Access), etc. -
- a) Would you be willing to support the publication of the budget data in its original creation format such as any of the above?
- Yes () No () Uncertain()
- b) If No, what are your reasons for not supporting this?
- _____
- _____
- c) If Yes, are you able to authorise this? Yes () No () Uncertain()
- d) If it is not your responsibility to authorise this, whose responsibility is it?
- _____
- _____

6. There is a clamour for the Spend (Expenditure) data to be placed in the open domain as soon as awards are made -

a) Is the Spend data available to the public from any website known to you?

Yes () No () Uncertain()

(i) If Yes, please provide the website name and possibly URL

(ii) If No, would you be willing to support the publication of the Spend data?

Yes () No () Uncertain()

If Yes, are you able to authorise this? Yes () No () Uncertain()

If No, what are your reasons for not supporting this?

(iii) If it is not your responsibility to authorise this, whose responsibility is it?

Within what legal obligations is the data made public?

7. What is the legal limitation on the accessibility and usability of the online National budget document? *(Tick as many as apply)*

a) It cannot be used without permission ()

b) It cannot be presented as evidence or exhibit in court ()

c) It cannot be manipulated without permission ()

d) Other (pls specify) _____

8. Presently, the budget data as published online from the Budget Office does not carry any publication attributions. Are there any plans to add this to the data in future?

Yes () No () Uncertain()

9. Are you familiar with the Creative Commons publication attributions?

Yes () No () Uncertain()

What is the probable impact of having the budget data online?

10. Do you have an instrument/mechanism for monitoring and measuring public access to the document? Yes () No () Not sure ()

If Yes, please describe the instrument/mechanism: _____

11. What potential benefit do you think is likely to emerge from having the budget of Nigeria readily available online?

12. In your opinion, how has been the impact on the political and decision making process in Nigeria of having the national budget online?

Extremely high () High () Low () Very low () Absent ()

Give reasons for your choice: _____

13. In your opinion, how has been the effect on public empowerment from having the budget online has been?

Extremely high () High () Low () Very low () Absent ()

Give reasons for your choice: _____

14. In your opinion, how has been the impact on civic engagement from having the budget online?

Extremely high () High () Low () Very low () Absent ()

Give reasons for your choice: _____

What are the probable impediments to public use of the online budget data?

15. What factors are impeding against the use of the online budget data by the populace? (*Tick as many as apply*)

- a) The format of the document ()
- b) Legal constraints ()
- c) Lack of awareness of what to do with the data ()
- d) Illiteracy ()
- e) Apathy ()
- f) Lack of infrastructure such as electricity ()
- g) Lack of computer literacy ()
- h) Other reasons (pls specify) _____

16. What other challenges or impediments to accessing the budget from the Internet can you identify? _____

17. What potential disadvantage or problem do you think is likely to emerge from having the budget of Nigeria readily available online? _____

D. The Online Budget data of Nigeria

1. Are you directly involved with the publication of the online version of the budget or are you involved with managing the Budget Office website?

Yes () No (). *If "No", please go to last page.*

2. Is it correct to say the budget of Nigeria has been published on the website of the Budget Office of the Federation since 2007?

Yes () No () Uncertain ()

If No, please give correct date: _____

3. What is the source of funding for the initiative? *(tick as many as apply)*

a) Founders of the initiative ()

b) Government of Nigeria ()

c) Nigerian NGOs ()

d) Nigerian CSOs ()

e) International organizations/agencies ()

f) Individual donations ()

g) Uncertain ()

h) Other, please specify: _____

4. What plans are in place for sustaining the initiative?

5. What strategies have been put in place to motivate and ease public access to the open budget data?

For what reason is the data posted?

6. What motivated this initiative and who were its key drivers?

7. Could any of the under-listed have been a motivating factor for opening the National budget of Nigeria to the public through the website? *(Tick as many as apply)*

a) For better transparency and democratic control ()

b) To increase participation by the citizens in governance ()

c) Empowerment of citizens to demand accountability ()

d) Creation of new private products and services through data-centric businesses ()

e) Improved efficiency of government services ()

f) Improved effectiveness of government services ()

g) To aid impact measurement of policies ()

h) To promote the creation of new knowledge from combined data sources and emergent patterns from large data volumes ()

i) Others, please outline _____

8. Kindly outline the types of budget-related data that are posted online:

9. What do you think the public is likely to use your data for?

10. Describe any evidence you have of such usage:

Who posts the data?

11. Describe the process of posting the data online, identifying the roles of personnel involved:

For whom is it posted?

12. Who are the categories of people or stakeholders to whom you want to make the online National budget available and or accessible?

- a) Business Community ()
- b) Media Practitioners ()
- c) NGO's ()
- d) Other Ministries and Government Parastatal /Agencies ()
- e) Foreign Investors ()
- f) Uncertain ()
- g) Others (Please specify) _____

In what format is it posted?

13. In what file format is the online budget data published online?

- a) Database i.e. Oracle, SQL, MySQL, etc. ()
- b) PDF ()
- c) Spreadsheet i.e. XLS, XLSX, ODS, CSV, etc. ()
- d) Other (pls specify) _____

14. What are the reasons for publishing the budget in this format? _____

15. Has the format through which you make the document available online posed any challenges to the easy accessibility of the public to the document?

Yes () No () Not Sure ()

16. How do you represent the data in materials for public communication? *(Tick all that apply)*

- a) Maps or geographic representation (online) ()
- b) Maps or geographic representation (in print) ()
- c) Infographics ()
- d) Data tables online using APIs ()
- e) Inclusion of specific figures/charts within a report / poster / policy response, etc ()
- f) Other (pls specify) _____

What is the technical framework supporting the posting and data access?

17. Do you provide any additional analysis to make the document not only accessible, but also understandable by the public? Yes () No () Not Sure ()

If "Yes", what are the specific analysis tools? _____

18. What tools do you use in the processing stages to analyse the budget data? *(Tick all that apply)*

- a) Calculator ()
- b) GIS () pls give name _____ free () or commercial ()
- c) Programming Language () pls give name _____ free () or commercial ()
- d) Spread sheet () pls give name _____ free () or commercial ()
- e) Statistical tool () pls give name _____ free () or commercial ()
- f) Other (pls specify) _____

19. What tools do you use to visualise the budget data? *(Tick all that apply)*

- a) Design software () pls give name _____ free () or commercial ()
- b) GIS () pls give name _____ free () or commercial ()
- c) Programming Language () pls give name _____ free () or commercial ()
- d) Spread sheet () pls give name _____ free () or commercial ()
- e) Statistical tool () pls give name _____ free () or commercial ()
- f) Other (pls specify) _____

What is the process for data requests?

20. Do you know of any requests for the budget data in electronic format that has been made to your office? Yes () No ()

If Yes, please describe one such instance: _____

21. Kindly outline the process for data requests that come from outside your office: _____

22. In what format is the budget data given upon such a request?

- a) Not applicable ()
- b) Database i.e. Oracle, SQL, MySQL, etc. ()
- c) PDF ()
- d) Spreadsheet i.e. XLS, XLSX, ODS, CSV, etc. ()
- e) Hard copy of the document ()
- f) Other (pls specify) _____

23. Briefly describe situations in which your office provided data usage support to another organisation:

24. How do you think publication of the budget online has impacted on the level of knowledge that stakeholders such as the media, CSO's, Professional associations, etc. now have about the national budget: _____

How user-friendly is the online data?

25. How easy do you think it is for the public to find the specific information they need from the online document?

Extremely easy () Very easy () Not too easy () Not easy at all ()

26. How would you describe the usability of the online budget data? (Tick as many as apply)

- a) It is simple and understandable ()
- b) It is comprehensive ()
- c) It is easily analysed with computer software ()
- d) It is easily accessible ()
- e) It is complex to understand ()
- f) It is not easily processed by computer for further analysis ()
- g) A lot of work must be done on the data in order to analyse it further ()
- h) Others (pls specify) _____

27. Have you ever participated in a Data Hackathon or Data Hack event? Yes () No ()

a) If Yes, please describe the times and your role at such events:

Thank you for taking the time to respond to the questions.

**Open Data Research Group,
University of Ilorin,
Ilorin, Nigeria**

Name & Phone no. of interviewer:

APPENDIX II – General Demand Side Questionnaire

Questionnaire on Open Data & Use of the Online National Budget of Nigeria (General Demand Side) - Abridged

Where there are options, please pick only one, unless otherwise stated.

There are six (6) sections – Section A, B, C, D, E & F. Thank you.

E. General information about yourself

7. Your Gender: Male (☐) Female (☐)
8. Email: _____
9. Phone no.: _____
10. Job title or activity role: _____
11. Your specialty (*Tick as many as apply*):
 - a) Public/Civil servant (☐)
 - b) Civil society representative (☐)
 - c) Media professional (☐)
 - d) Journalist (☐)
 - e) Independent Social critic (☐)
 - f) Entrepreneur (☐)
 - g) ICT professional (☐)
 - h) Other (pls specify) _____
12. Your length of work experience:
 - a) 1 to 3 years experience (☐)
 - b) 3 to 7 years experience (☐)
 - c) 7 to 10 years experience (☐)
 - d) 10 to 15 years experience (☐)
 - e) more than 15 years experience (☐)

- 7b) Are you aware that the national budget of Nigeria is available online i.e. on the Internet?
Yes (☐) No (☐)

F. Open Data issues

Open data has also been defined as a non-personally identifiable data produced in the course of an organization's ordinary business, which has been released under an unrestricted license (Open Data Dialogue, 2012). Simply put, Open data can be described as data that is available to the public without restrictions.

3. Before seeing this questionnaire were you aware of the phrase "Open Data"?
Yes (☐) No (☐) **If "No", go to Section D.**
4. When did you first become aware of the phrase "Open Data"?
 - a. in 2014 (☐)
 - b. in 2013 (☐)
 - c. in 2012 (☐)
 - d. between 2010 and 2011 (☐)
 - e. before 2011 (☐)

4. Describe how you got to know about Open data: _____

5. From the statements below, pick as many as describe your understanding of Open Data: *(you can pick more than one)*
- f. Open data is data that is available online without any restrictions. ()
 - g. Open data is data that is online and copyrighted. ()
 - h. Open data is data that can be repackaged and reused without the data owners' permission. ()
 - i. Open data does not require any statement to be made about copyright attributions. ()
 - j. None of the above applies to Open Data. ()
6. In what format would you prefer to see published Open data?
Oracle file () PDF () SQL () MySQL () Excel file () Uncertain ()
9. In what ways do you think Open Government Data could create value?

10. Please outline below, other types of data or information you would like to see made readily available to the public online, by the Government of Nigeria and its MDAs:

11. a) Are you aware of the Freedom of Information (Fol) Act? Yes () No ()
- d) If Yes, Have you had cause to invoke the Fol Act in the course of your work? Yes () No ()
- e) (i) Has anyone invoked the Fol Act in the course of your work to get you to give them information? Yes () No ().
- (iii) If Yes, was the request successful? Yes () No ().
- f) To what extent would you agree that the Fol Act promotes data access for citizens?

- g) How, in your opinion would the Fol Act impact on the drive for Open Data?

18. To what extent has open data had a noticeable impact on increasing government efficiency and effectiveness?
Extremely High() Very High() High() Low() Very Low() Not at all ()

19. To what extent has open data had a noticeable impact on increasing transparency and accountability in the country?
Extremely High() Very High() High() Low() Very Low() Not at all ()
20. To what extent has open data had a noticeable impact on environmental sustainability in the country?
Extremely High() Very High() High() Low() Very Low() Not at all ()
21. To what extent has open data had a noticeable impact on increasing the inclusion of marginalised groups in policy making and accessing government services?
Extremely High() Very High() High() Low() Very Low() Not at all ()
22. To what extent has open data had a noticeable positive impact on the economy?
Extremely High() Very High() High() Low() Very Low() Not at all ()
23. To what extent are entrepreneurs successfully using open data to build new businesses in the country?
Extremely High() Very High() High() Low() Very Low() Not at all ()
24. To what extent are academic institutions in the country opening up their data?
Extremely High() Very High() High() Low() Very Low() Not at all ()
25. To what extent are businesses in the country opening up their own data?
Extremely High() Very High() High() Low() Very Low() Not at all ()
26. To what extent are civil society in the country opening up their own data?
Extremely High() Very High() High() Low() Very Low() Not at all ()

G. Budget of Nigeria

1. a) Have you ever looked through the budget of Nigeria? Yes () No () *If "No", go to Section E*

If Yes,

- b) For what reason(s) did you go through the budget? _____

- c) How did you access the information in the budget? *(Tick as many as apply)*
 - i. Obtained the hard copy from the Budget office ()
 - ii. Obtained the electronic copy from the Budget office ()
 - iii. Obtained the data from the Budget office website ()
 - iv. Obtained the data from online sources other than the Budget office website ()
... pls give name of website.....
 - v. From serialization of the budget document in the newspaper ()
... pls give name of newspaper.....
 - vi. Requested for a copy from the Ministry/Department/Agency (MDA) ()
... pls give name of MDA.....
 - vii. Obtained a copy from the National Assembly ()

- viii. From information given during press briefing by the Finance Ministry ()
- ix. From information given during Legislative sittings on the budget ()
- x. Obtained a copy through personal confidential contacts ()
- xi. Others (pls specify).....

d) Why did you use the medium selected above to access the budget?

(Pick as many as apply)

- i. It provides an understandable breakdown analysis of the document ()
- ii. It provides comprehensive and complete details of the budget ()
- iii. It provides a reusable form of the budget ()
- iv. It provides an easily analysable form of the budget ()
- v. It was the only option available to me ()
- vi. Please indicate any other reason(s) why you used the above medium: _____

e) How reliable would you say the information obtained through this medium was?

- i. Very reliable ()
- ii. Reasonably reliable ()
- iii. Not very reliable ()
- iv. Not reliable at all ()

2. How do you make use of the budget information?

- a) Extract details that concern my organisation ()
- b) Repackage the budget information for circulation in print ()
- c) Repackage the budget information for publication on a website ()
- d) Other (pls specify)_____

3. a) Do you carry out your own analysis of the budget? Yes () No ()

b) If Yes, please describe how you carry out the analysis – including tools used such as pen & paper, calculators, computers, etc.: _____

4. What is the motive for analysing the budget of Nigeria? (pls tick as many as apply)

- a) For organisational financial management ()
- b) To entrench transparency and accountability ()
- c) To push for good governance ()
- d) To fight against corruption ()
- e) To match government performance with the allocations in the budget ()
- f) To sensitize and mobilize public evaluation of government performance ()
- g) To raise public consciousness on governance issues ()
- h) To fight against financial recklessness of MDAs ()
- i) To educate the public on the probity or otherwise of public spending ()
- j) To push for budget performance that would alleviate poverty ()
- k) To engineer action for improvement in all of the above ()
- l) Others (pls specify)_____

5. How useful has the budget you access been to your mission and activities?

Extremely useful () Somewhat useful () Not very useful () Not useful at all ()

Give reasons for your choice: _____

H. Potential to use the Online Budget data of Nigeria

1. a) How likely are you to access the online version of the national budget?

Very likely () Not likely ()

- b) Give reason(s) for your answer: _____
2. Do you foresee any likely challenges or impediments to accessing the budget from the Internet?
Yes () No ()
- If Yes, please describe those challenges or impediments: _____
3. What potential disadvantage or problem do you think is likely to emerge from having the budget of Nigeria readily available online? _____
4. What potential benefit do you think is likely to emerge from having the budget of Nigeria readily available online? _____
5. Please outline below, other types of data or information you would like to see made readily available to the public online, by the Government of Nigeria: _____

I. Users of the Online Budget data of Nigeria

Kindly complete this section if you have accessed the budget of Nigeria from any online source.

1. When was the last time that you accessed an online budget of Nigeria?
- a) In the last one month ()
 - b) In the last 3 months ()
 - c) In the last 6 months ()
 - d) In the past 1 year ()
 - e) more than 1 year ago ()
2. In what file format was the online budget data that you accessed?
- e) Database i.e. Oracle, SQL, MySQL, etc. ()
 - f) PDF ()
 - g) Spreadsheet i.e. XLS, XLSX, ODS, CSV, etc. ()
 - h) Other (pls specify) _____
3. What factors are impeding against the use of the online budget data by the populace? *(Tick as many as apply)*
- i) The format of the document ()
 - j) Legal constraints ()
 - k) Lack of awareness of what to do with the data ()
 - l) Illiteracy ()
 - m) Apathy ()
 - n) Other reasons (pls specify) _____
4. What do you look out for from the online budget document?
- a) Fiscal policies for the year ()
 - b) Monetary policies ()
 - c) Allocations for sectors ()
 - d) Income projections ()
 - e) Allocation for loan services ()
 - f) Capital Expenditure for the year ()

- g) Recurrent expenditure for the year ()
 h) Others (pls specify) _____

5. How easy is it for you to find the specific information you look out for in the online document?

Extremely easy () Very easy () Not too easy () Not easy at all ()

6. How would you describe the usability of the online budget data? *(Tick as many as apply)*

- i) It is simple and understandable ()
 j) It is comprehensive ()
 k) It is easily analysed with computer software ()
 l) It is easily accessible ()
 m) It is complex to understand ()
 n) It is not easily processed computer for further analysis ()
 o) A lot of work must be done on the data in order to analyse it further ()
 p) Others (pls specify) _____

7. What do you use the information you obtain from the online national budget for? *(Tick as many as apply)*

- a) Interpreting the budget for public understanding ()
 b) Interpreting the budget to drive civic engagement and participation ()
 c) Disaggregating the information into specific and simple pieces for the knowledge and information of the public ()
 d) Visualizing the data to make it simpler for the public to understand ()
 e) Others (pls specify) _____

8. What specific benefits do you derive from using the online budget data? _____

In your opinion;

9. The impact on the political and decision making process in Nigeria of having the national budget online, has been:

Extremely high () High () Low () Very low () Absent ()

Give reasons for your choice: _____

10. The effect on public empowerment from having the budget online has been:

Extremely high () High () Low () Very low () Absent ()

Give reasons for your choice: _____

11. The impact on civic engagement from having the budget online, has been:

Extremely high () High () Low () Very low () Absent ()

Give reasons for your choice: _____

Thank you for taking the time to respond to the questions.

Open Data Research Group,
University of Ilorin,
Ilorin, Nigeria

Name & Phone no. of interviewer:

APPENDIX III – Demand Side Questionnaire for Repackagers

Questionnaire on Open Data & Use of the Online National Budget of Nigeria (Repackagers)

Where there are options, please pick only one, unless otherwise stated.

There are six (6) sections – Section A, B, C, D, E, F and G.

Thank you.

J. General information about yourself

13. Your Name: _____
14. Your Gender: Male () Female ()
15. Email: _____
16. Phone no.: _____
17. Job title or activity role: _____
18. Your specialty (*Tick as many as apply*):
- a) Public/Civil servant ()
 - b) Civil society representative ()
 - c) Media professional ()
 - d) Journalist ()
 - e) Independent Social critic ()
 - f) Entrepreneur ()
 - g) Developer ()
 - h) Designer/Web Creative ()
 - i) ICT professional ()
 - j) Other (pls specify) _____
19. Your length of work experience:
- a) 1 to 3 years experience ()
 - b) 3 to 7 years experience ()
 - c) 7 to 10 years experience ()
 - d) 10 to 15 years experience ()
 - e) more than 15 years experience ()

K. General information about your Organisation

You may skip this section if you are an independent social critic

20. Name and address of Organization: _____

21. Established on (*Example: November 8, 2007*): _____
22. How many people work with the organisation? _____
23. What percentage of total workers is female? _____ %

24. a) What sections of the organisation work with the budget of Nigeria? _____

b) What percentage of this group are females? _____ %

25. What does the organisation do with the budget?

a) Extract details that concern the organisation ()

b) Repackage the budget information for circulation in print ()

c) Repackage the budget information for publication on a website ()

d) Other (pls specify) _____

L. Open Data issues

Open data has also been defined as a non-personally identifiable data produced in the course of an organization's ordinary business, which has been released under an unrestricted license (Open Data Dialogue, 2012). Simply put, Open data can be described as data that is available to the public without restrictions.

5. Before seeing this questionnaire were you aware of the phrase "Open Data"?

Yes () No ()

6. When did you first become aware of the phrase "Open Data"?

a. in 2014 ()

b. in 2013 ()

c. in 2012 ()

d. between 2010 and 2011 ()

e. before 2011 ()

5. Describe how you got to know about Open data:

6. From the statements below, pick as many as describe your understanding of Open Data: (*you can pick more than one*)

k. Open data is data that is available online without any restrictions. ()

l. Open data is data that is online and copyrighted. ()

m. Open data is data that can be repackaged and reused without the data owners' permission. ()

n. Open data does not require any statement to be made about copyright attributions. ()

o. None of the above applies to Open Data. ()

7. In what format would you prefer to see published Open data?

Oracle file () PDF () SQL () MySQL () Excel file () Uncertain ()

12. In what ways do you think Open Government Data could create value?

13. Please outline below, other types of data or information you would like to see made readily available to the public online, by the Government of Nigeria and its MDAs:

14. a) Are you aware of the Freedom of Information (Fol) Act? Yes () No ()

f) If Yes, Have you had cause to invoke the Fol Act in the course of your work? Yes () No ()

g) (i) Has anyone invoked the Fol Act in the course of your work to get you to give them information? Yes () No ().

(iv) If Yes, was the request successful? Yes () No ().

h) To what extent would you agree that the Fol Act promotes data access for citizens?

i) How, in your opinion would the Fol Act impact on the drive for Open Data?

27. To what extent has open data had a noticeable impact on increasing government efficiency and effectiveness?

Extremely High() Very High() High() Low() Very Low() Not at all ()

28. To what extent has open data had a noticeable impact on increasing transparency and accountability in the country?

Extremely High() Very High() High() Low() Very Low() Not at all ()

29. To what extent has open data had a noticeable impact on environmental sustainability in the country?

Extremely High() Very High() High() Low() Very Low() Not at all ()

30. To what extent has open data had a noticeable impact on increasing the inclusion of marginalised groups in policy making and accessing government services?

Extremely High() Very High() High() Low() Very Low() Not at all ()

31. To what extent has open data had a noticeable positive impact on the economy?

Extremely High() Very High() High() Low() Very Low() Not at all ()

32. To what extent are entrepreneurs successfully using open data to build new businesses in the country?
Extremely High() Very High() High() Low() Very Low() Not at all ()
33. To what extent are academic institutions in the country opening up their data?
Extremely High() Very High() High() Low() Very Low() Not at all ()
34. To what extent are businesses in the country opening up their own data?
Extremely High() Very High() High() Low() Very Low() Not at all ()
35. To what extent are civil society in the country opening up their own data?
Extremely High() Very High() High() Low() Very Low() Not at all ()

M. Budget of Nigeria

6. a) Have you ever looked through the budget of Nigeria? Yes () No () *If "No", go to Section E*

If Yes,

- b) For what reason(s) did you go through the budget?

- c) How did you access the information in the budget? *(Tick as many as apply)*

- xii. Obtained the hard copy from the Budget office ()
- xiii. Obtained the electronic copy from the Budget office ()
- xiv. Obtained the data from the Budget office website ()
- xv. Obtained the data from online sources other than the Budget office website ()
... pls give name of website.....
- xvi. From serialization of the budget document in the newspaper ()
... pls give name of newspaper.....
- xvii. Requested for a copy from the Ministry/Department/Agency (MDA) ()
... pls give name of MDA.....
- xviii. Obtained a copy from the National Assembly ()
- xix. From information given during press briefing by the Finance Ministry ()
- xx. From information given during Legislative sittings on the budget ()
- xxi. Obtained a copy through personal confidential contacts ()
- xxii. Others (pls specify).....

- d) Why did you use the medium selected above to access the budget?

(Pick as many as apply)

- vii. It provides an understandable breakdown analysis of the document ()

- viii. It provides comprehensive and complete details of the budget ()
- ix. It provides a reusable form of the budget ()
- x. It provides an easily analysable form of the budget ()
- xi. It was the only option available to me ()
- xii. Please indicate any other reason(s) why you used the above medium:

e) How reliable would you say the information obtained through this medium was?

- i. Very reliable () ii. Reasonably reliable ()
- iii. Not very reliable () iv. Not reliable at all ()

7. How do you make use of the budget information?

- a) Extract details that concern my organisation ()
- b) Repackage the budget information for circulation in print ()
- c) Repackage the budget information for publication on a website ()
- d) Other (pls specify) _____

8. a) Do you carry out your own analysis of the budget? Yes () No ()

c) If Yes, please describe how you carry out the analysis – including tools used such as pen & paper, calculators, computers, etc.:

9. What is the motive for analysing the budget of Nigeria? *(pls tick as many as apply)*

- m) For organisational financial management ()
- n) To entrench transparency and accountability ()
- o) To push for good governance ()
- p) To fight against corruption ()
- q) To match government performance with the allocations in the budget ()
- r) To sensitize and mobilize public evaluation of government performance ()
- s) To raise public consciousness on governance issues ()
- t) To fight against financial recklessness of MDAs ()
- u) To educate the public on the probity or otherwise of public spending ()
- v) To push for budget performance that would alleviate poverty ()
- w) To engineer action for improvement in all of the above ()
- x) Others (pls specify) _____

10. How useful has the budget you access been to your mission and activities?

Extremely useful () Somewhat useful () Not very useful () Not useful at all ()

Give reasons for your choice: _____

11. Are you aware that the national budget of Nigeria is available online i.e. on the Internet?

Yes () No ()

N. Potential to use the Online Budget data of Nigeria

6. a) How likely are you to access the online version of the national budget? Very likely () Not likely ()

b) Give reason(s) for your answer:

7. Do you foresee any likely challenges or impediments to accessing the budget from the Internet? Yes () No ()

If Yes, please describe those challenges or impediments:

8. What potential disadvantage or problem do you think is likely to emerge from having the budget of Nigeria readily available online?

9. What potential benefit do you think is likely to emerge from having the budget of Nigeria readily available online?

10. Please outline below, other types of data or information you would like to see made readily available to the public online, by the Government of Nigeria:

O. Users of the Online Budget data of Nigeria

Kindly complete this section if you have accessed the budget of Nigeria from any online source.

1. When was the last time that you accessed an online budget of Nigeria?
 - f) In the last one month ()
 - g) In the last 3 months ()
 - h) In the last 6 months ()
 - i) In the past 1 year ()
 - j) more than 1 year ago ()

2. In what file format was the online budget data that you accessed?
 - i) Database i.e. Oracle, SQL, MySQL, etc. ()
 - j) PDF ()
 - k) Spreadsheet i.e. XLS, XLSX, ODS, CSV, etc. ()
 - l) Other (pls specify) _____

4. What factors are impeding against the use of the online budget data by the populace? *(Tick as many as apply)*
 - o) The format of the document ()
 - p) Legal constraints ()
 - q) Lack of awareness of what to do with the data ()
 - r) Illiteracy
 - s) Apathy
 - t) Other reasons (pls specify) _____

5. What do you look out for from the online budget document?
 - i) Fiscal policies for the year ()
 - j) Monetary policies ()
 - k) Allocations for sectors ()
 - l) Income projections ()
 - m) Allocation for loan services ()
 - n) Capital Expenditure for the year ()
 - o) Recurrent expenditure for the year ()
 - p) Others (pls specify) _____

6. How easy is it for you to find the specific information you look out for in the online document?
Extremely easy () Very easy () Not too easy () Not easy at all ()

7. How would you describe the usability of the online budget data? *(Tick as many as apply)*
 - q) It is simple and understandable ()
 - r) It is comprehensive ()
 - s) It is easily analysed with computer software ()
 - t) It is easily accessible ()
 - u) It is complex to understand ()
 - v) It is not easily processed computer for further analysis ()
 - w) A lot of work must be done on the data in order to analyse it further ()

x) Others (pls specify) _____

8. What do you use the information you obtain from the online national budget for? *(Tick as many as apply)*

f) Interpreting the budget for public understanding ()

g) Interpreting the budget to drive civic engagement and participation ()

h) Disaggregating the information into specific and simple pieces for the knowledge and information of the public ()

i) Visualizing the data to make it simpler for the public to understand ()

j) Others (pls specify) _____

9. What specific benefits do you derive from using the online budget data?

In your opinion;

10. The impact on the political and decision making process in Nigeria of having the national budget online, has been:

Extremely high () High () Low () Very low () Absent ()

Give reasons for your choice: _____

11. The effect on public empowerment from having the budget online has been:

Extremely high () High () Low () Very low () Absent ()

Give reasons for your choice: _____

12. The impact on civic engagement from having the budget online, has been:

Extremely high () High () Low () Very low () Absent ()

Give reasons for your choice: _____

P. Re-packagers of the Budget data of Nigeria

Kindly complete this section if you are involved with re-packaging the budget of Nigeria.

1. What is the name of your initiative?

2. When did you start the initiative? *(Example: November 8, 2007)*: _____

3. Can you provide samples of the work being done? E.g.
- a) Link to website where the work can be found (), give URL:
- _____
- b) Samples of the work if in print () Record how many samples given: _____
4. What is the source of funding for the initiative? *(tick as many as apply)*
- i) Founders of the initiative ()
- j) Government of Nigeria()
- k) Nigerian NGOs ()
- l) Nigerian CSOs ()
- m) International organizations/agencies ()
- n) Individual donations ()
5. What are your plans for sustaining the initiative at the end of any external funding?
- _____
- _____
6. What is the major factor – Social, Economic or Political – that informed or necessitated starting the initiative?
- _____
- _____
7. What strategy have you put in place to motivate and ease public access to your open data?
- _____
- _____
8. What do you think the public is likely to use your data for?
- _____
- _____
9. Describe any evidence you have of such usage:
- _____
- _____
10. How do you think your initiative will lead to action on transparency, accountability and poverty alleviation in Nigeria?
- _____

11. In what format is the budget data that you use for the re-packaging?

- g) Database i.e. Oracle, SQL, MySQL, etc. ()
- h) PDF ()
- i) Spreadsheet i.e. XLS, XLSX, ODS, CSV, etc. ()
- j) Photocopy of government documents ()
- k) Other (pls specify) _____

12. Where do you get the budget data from?

13. How easy is it to obtain the budget data?

14. How does your re-packaging initiative represent the data for communication? *(Tick all that apply)*

- g) Maps or geographic representation (online) ()
- h) Maps or geographic representation (in print) ()
- i) Infographics ()
- j) Data tables online using APIs ()
- k) Publish specific figures/charts within a report / poster / policy response, etc ()
- l) Other (pls specify) _____

15. What tools do you use in the processing stages to analyse the data? *(Tick all that apply)*

- g) Calculator ()
- h) GIS () pls give name _____ free () or commercial ()
- i) Programming Language () pls give name _____ free () or commercial ()
- j) Spread sheet () pls give name _____ free () or commercial ()
- k) Statistical tool () pls give name _____ free () or commercial ()
- l) Other (pls specify) _____

16. What tools do you use to visualise the budget data? *(Tick all that apply)*

- g) Design software () pls give name _____ free () or commercial ()
- h) GIS () pls give name _____ free () or commercial ()
- i) Programming Language () pls give name _____ free () or commercial ()
- j) Spread sheet () pls give name _____ free () or commercial ()

k) Statistical tool () pls give name _____ free () or commercial ()

l) Other (pls specify) _____

17. Briefly describe situations in which your initiative provided data usage support to another organisation:

18. How do you think your initiative has impacted on the level of knowledge that stakeholders such as the media, CSO's, Professional associations, etc. now have about the national budget:

19. Have you ever participated in a Data Hackathon or Data Hack event? Yes () No ()

b) Describe the times and your role at such events:

Thank you for taking the time to respond to the questions.