

Web-Based Budget Support and Monitoring System for Nigeria Government (WBBSMS)

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ABSTRACT

The challenges of poor budget performance in Nigeria has become a tradition over the years, leading to lack of adequate social amenities, increase in poverty rate, corruption among others. Budget been a financial statement that shows details of anticipated revenue for specific period of time for government or private sector planning and control resources of such entity, the integrity of such document must be guaranteed. Budget padding occurs by duplication of non-recurrent expenditure entities or frivolous elements into the budget at its level of preparation. This apparently becomes difficult to monitor and control since budgets proposals are submitted by Government Ministries, Departments and Agencies (MDAs). The high volume of this documents make it tedious and impossible to effectively control and prevent such act except the using of information technology inclined system. The use of Web-based Budget Support and Monitoring System(WBBSMS) for budget preparation will effectively reduce the fraud in MDAs budgeting system by preventing replication and duplication of non-recurrent expenditures during budget preparation via an anti-budget padding mechanism. WBBSMS was implemented using PHP, Java Script, CSS was used for the front end scripting while MySQL relational Data Base Management System was used for the system data backend. WBBSMS was able to prevent users from inserting frivolous elements into samples of pseudo budget documents used in the system testing.

Keywords: Budget, Budget Padding, Non Recurrent Expenditure, Recurrent Expenditure, Web-based.

I. INTRODUCTION

Budget as an accounting device used to plan and control resources of operations of

Ministries, Departments and Agencies (MDAs) of Governments [1].This definition practically neglected the facts that budget involves planning and the control of activities of both private institutions. This device helps to exert control over both recurrent and non-expenditure of every financial year. As a planning document, a budget enables business, government and households to set the priorities and monitor progress towards selected goals[2].

[3] to meet the budgetary objectives, it is imperative to set aside savings or to borrowings from outside sources. For a budget to meet its objectives, it must be well designed, effectively and efficiently implemented and adequately monitored. Moreover, its performance must be effectively evaluated by providing a budget supporting and monitoring system. [2]

Budget support and monitoring system is not new but its nature are changing over the years due to repetition of non-recurrent expenditure in subsequent budgets (budget padding), failure to reducing poverty rate; declining importance of other program aid forms; and the change in the donor/recipient relationship paradigm towards a greater focus on partnership. In Nigeria, 2021 budget was inflated by inputting non-recurrent expenditure by over five hundred billion naira (#500bn) before transmitting the budget to the executive by adjusting the constituencies project via the increase in the Service Wide Vote, [4]. The Service Wide Vote (SWV) is a major component of nation's yearly budget where a lump sum of money is kept to tackle unforeseen expenditure both for recurrent and non-recurrent expenditure. Aside the SWV increase, projects are equally replicated over the years as tradition. Also, virtually all Ministries, Departments and Agencies (MDAs) are found of budget padding by inflating prices and duplication of items found in previous year budgets. Hence, this tides calls for a Web-Based Budget Support

and Monitoring System (WBBSMS) to mitigate the trend of this acts within governments MDAs during budget preparation states.

Budget support and monitoring system in Nigeria national budget office are done almost manually which gives room for budget padding and other forms of budget misappropriation.

II. BACKGROUND INFORMATION

A budget occupies a significant and strategic position in the holistic administration and sustenance of a nation's affairs. It is a policy document expressed in financial terms which contains government estimates of revenues and expenditures for a specified period, usually one year [5]. According to [6], a budget is an indispensable economic instrument used by the government to facilitate and realize its agenda in a given fiscal year. It is an essential fiscal mechanism for efficient resource mobilization, allocation and economic management to achieve set objectives [7].

By tradition, the government exists to serve the interest of the nation and its citizens [5]. It oversees the affairs and welfare of its populace using different contrivances of which budgeting is foremost. The government makes use of its annual budget to appropriate the nation's wealth and manage the economy. It is therefore believed that a nation's budget should help reduce poverty, improve infrastructures, create job opportunities, develop key sectors of the economy and improve the living standard of its populace [6]. According to the then Speaker of the House of Representatives, Aminu Tambuwal, budget and its implementation remain sore points of governance in nation building [8]. This is because a nation's development and economic growth substantively depend on its system of revenue generation and funds management. However, contrary to these expectations are when budgets are not properly monitored.

[9], [5], and [10], noted that each year, since independence, Nigerians have consistently decried the abject failure of the nation's annual budget in fulfilling its fiscal objectives and in managing and accounting for public funds. Doubts are being expressed and queries are raised on the nation's budgetary process and its implementation strategies. This, observably, has been traced to irregularities in governance, poor management of public funds and high level of corruption among public officers. [11]; [12].

In Nigeria, each fiscal year, funds are dispensed to each tier of government based on the

adopted official allocation formula, wherewith disbursements are made to the various ministries, departments and agencies based on the approved budget estimates [13],[14]. The Constitution of the Federal Republic of Nigeria, 1999, [15], Public Procurement Act, 2007, [16]. These funds, which are meant to take care of recurrent expenditures, capital projects and other developmental initiatives, where found to be duplicating on annual basis. This has been the trend every year. This action has led to capital. flight and high rate of corruption within and out government MDAs.

[17], [18], the Nigerian society is filled with stories of corrupt practices, such as fictional characters (ghost-workers) on government payrolls, contract inflation, budget padding and money laundering amongst others. It is therefore imperative that the current state of the nation's budgetary system be examined critically and exigent measures taken to ensuring transparency in government budget preparation and efficient management and accountability of public funds.

1. RELATED WORKS ON BUDGET AND BUDGETARY CONTROL IN NIGERIA

[19], investigated the budget as instrument of realizing the goal of public policy. Using data generated from secondary sources, it was found that the goals of most policies were not accomplished in Nigeria due to incessant budget failure at the stage of the formulation and implementation. Critical among the factors responsible for the failure were; delay in preparation, late submission and appropriation, cumbersome bureaucratic process of securing release of funds, short fall in revenue, poor implementation plan and above all corruption. Consequently, the researchers suggested the way forward which includes; effective monitoring, timely submission of the budget to legislature by the presidency, discouragement of unnecessary lobbying of National Assembly by MDAs and avoidance of temptations of allocating huge amount to new projects while the on-going projects are starved of funds.

[20], assessed the measures that would stem the tide of low budget implementation in Nigeria public sector using South-East geopolitical zone of Anambra, Enugu, Abia, Imo, Ebonyi and Enugu States as case study. To achieve this aim, conceptual, historical and theoretical framework was adopted in literature review. Three research hypotheses were formulated and tested in empirical setting using chi-square (X^2) statistical tools. Findings of the study revealed that poor budgetary implementation in the Nigerian public sector have

had significant negative effect on the Nigerian economy. The study showed that factors such as late presentation and passage of appropriation bills, delay in release of funds for capital projects, ineffective planning, corruption in the public sector amongst others have contributed to low budgetary implementation in Nigeria. The study concluded by highlighting that effective planning and the adoption of responsibility accounting system will assist in enhancing budget implementation in Nigeria.

[21], assess the factors responsible for budget failure in Nigeria. To achieve this broad goal, the econometric model of Analysis of variance regression test was employed for analysis and time series data span from 2010 to 2015. The finding shows that budget in the public sector of Nigeria has almost become a ritual or a yearly affair which though good in content but without appreciable result. The issue of budget failure in Nigeria is of concern to the general public. The dependent variable was represented by budgeted amount for the selected period, while the independent variables were gross domestic product (GDP) which represent the economic planning, and poverty index represents social development. The results revealed that budgeting has a strong relationship with Nigerian GDP. The results further showed a strong relationship between budgeting and poverty index (PI). The study recommends that government should enact an enabling law that will ensure the workability of its budgets according to plans and increase the proportion of capital expenditure to recurrent expenditure so that the budget can have impact on economic planning and social development; budget preparation should start in good time; more capital expenditure should be included in the budget plan to speed increase in the value of social development; money not accessed during the period of budget implementation could be moved to a more viable project.

[22], studied the impact of budget implementation and control reforms of the Federal Government of Nigeria with a view to analyzing their impact on resource management, level of productivity and efficiency and personnel and overhead costs in Nigeria. Their findings showed that poor project conceptualization, design or planning practices by Ministries, Departments and Agencies (MDAs) resulted into low resources management. The study concludes that the effectiveness of Medium Term Revenue Framework and Medium Term Expenditure Framework can be achieved through budget discipline. Participatory monitoring and assessment of government projects by host community-

members and identifications of opportunities/Challenges for Government Services are recommended.

[23], explored budgeting and budgetary control in the public sector using ministry of finance in Benue State as a case study. To ascertain the effectiveness of budgets control and the problems affecting budgeting and budgetary control, the researchers used literature review as their main source of data using ministry of Finance, Makurdi as a case study and also made use of personal observations. The researchers found that budgeting and budgetary control in the public sector is weak and despite the effort of government, budget and budgetary control has failed because of dependence on federation account, untrained budget staff, non-adherence to budgetary control measures, corruption, inflation and political environment. The authors recommended among others that there is a need for budget culture in the public sector, sharpening the budget monitoring and implementation procedures in the public sector, sustaining greater accountability and transparency and making the need for budgeting realistic and not just a formality.

[24], investigated the effect of dominant individuals on budget preparation in Nigeria. The study shows the activities of dominant individuals range from manipulation of budget items before and after approval of annual estimate: embezzlement and fraudulent activities: lack of proper budgeting processes is responsible for the failure of budget in Nigeria and he recommend the budget reforms in Nigeria.

[25], examine budget implementation and governance in Nigeria. In any polity, be it developed, developing or under-developed, the idea of governance conjures a theoretical undertone of the social contract and the common good which budget implementation is expected to assure. The paper contends that poor governance results to poor budget implementation which occurs when the desired result on the target beneficiaries is not actualized. The research after analyzing several ways through which governance can improve budget implementation in Nigeria, went further to recommend among other things, that all the parties concerned especially the target beneficiaries should be involved at the formulation stage of the budget so as to accommodate all inputs. This will go a long way in providing the needed commitment by all parties who will see the budget as originating from them.

[26], proposed A Web-based Monitoring and Evaluation System for Government Projects in Tanzania: The Case of Ministry of Health. In their

research, an Evolutionary Prototyping Model (EPM) problem solving approach was adopted and a prototyping system was developed to allow changes in every phase of the system testing to improve the prototype system, reduce the software risks, minimize work, critical and serious defects during the system testing. Their study result provided a remedying challenges such as delay of data submission during project implementation and data loss which usually occur in the paper-based data collection on a monthly or quarterly basis.

The authors of several research works and literature reviewed focused on delay of data submission during project implementation and data loss as stipulated in their research output. Specific research on areas where budget and budgetary fails were omitted. This research work focuses and addressed specific research area on budget padding in Nigeria public sector by introducing web-based budget preparation and support system in mitigating the effect of budget padding in Nigeria.

III. OBJECTIVES

The objective of this research work is to develop a budget support and monitoring system to prevent duplication of non-recurrent expenditures in budget preparation.

IV. METHODS

In developing a web-based budget support and monitoring system, an Evolutionary Prototyping Model (EPM) problem solving approach was adopted. The EPM allows for rapid changing of all non-recurrent expenditure elements in budget preparation. Rather than allowing individual Ministries, Departments and Agencies provide entities of non-recurrent expenditures into the budget, a pool of items will be provided at the user end for each MDAs to choose non-recurrent expenditures items with the system keeping logs of all entering from MDAs over a specific period by mapping all non-recurrent expenditures against a time stamp to avoid budget padding.

1.1 SYSTEM ARCHITECTURE

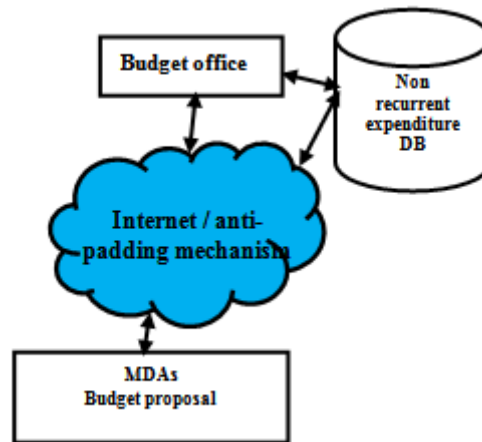


Fig. 1 Anti-budget padding system architecture

The system architecture in figure 1 present mechanism for an anti-budget padding system. It only allows the national budget office of the government executive to determine and present non recurrent expenditure entities in form of an independent lists. These lists are made available for the MDAs to make options within the range of a time lag in imposed upon specific non recurrent

entities by the budget office. This feature will impose restrictions upon all MDAs offices by preventing officers in charge of budget preparations from replicating expenditures, inserting or padding budget before, during and after budget vetting.

1.2 SYSTEM FLOW CHART

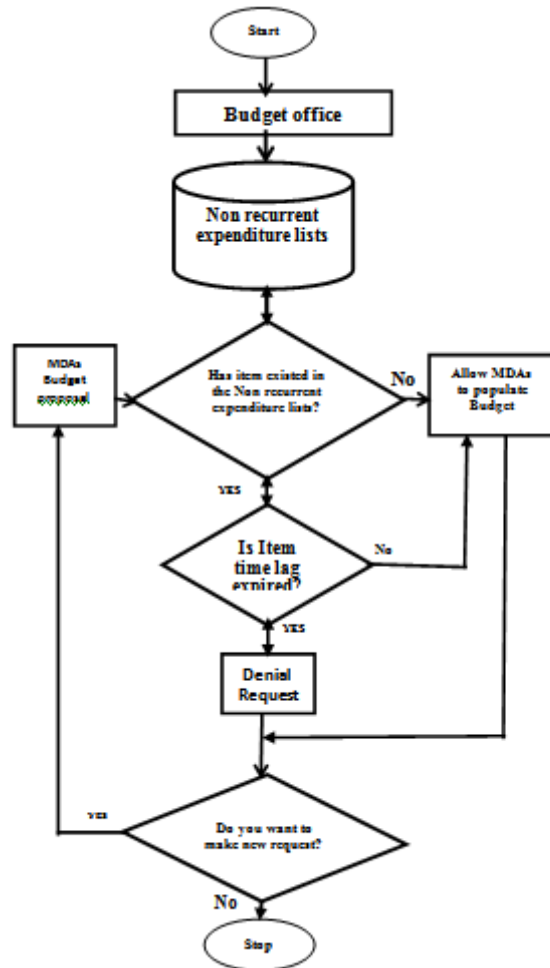


Fig. 2Flowchart of web based budget support and monitoring model

Figure 2 above, the flowchart shows how signal flows in the web based budget support and monitoring model. In the model, MDAs will not be able to create fictitious lists of items for budgeting except those created from the budget officer administrator.

1.3 TOOLS AND TECHNOLOGIES USED IN SYSTEM DEVELOPMENT

In the process of developing this system, Hypertext Pre-Processor (PHP) was used to manipulate MySQL database, a Relational Database Management System (RDBMS) where data are stored, while Hyper Text Markup Language (HTML), Cascading Style Sheet (CSS), were adopted to design the system user interface on web browser. Javascript is used to allow client-side data validation before the data are submitted to a database. The client-side validation is important

as it saves time, reduces the workload on the server, allows the server to concentrate on low-level verification and data processing.

1.4 SYSTEM INTERFACE DESCRIPTION

The welcome page in figure 3 is the index page which serves as the entering point for all system users. The administrative page in figure 4 is the power house of the system from the front end. From administrative page, the administrator assigned with responsibility at the national budget office will populate all likely non-recurrent expenditures elements into a list-view with a time lag which all MDAs budget officers can choose from options provided to prevent budget padding from the MDAs personnel in charge of budget preparation. The interface in figure 5 mandates all MDAS personnel in charge of budget preparation

to register according to their respective MDAs before proceeding to using the system. This is also another form of security measure. Figure 6 provides the system space for registered and verified MDAs personnel to view the lists of budgetary items from the pool of non-recurrent

expenditure made available from the national budget office. Each item is mapped against a time bound. The system will not allow any listed items appears on the proposal budget of the MDAs within the time lag of such object.



Fig. 3 Home page of WBBSMS



Fig. 4 Administrative tool page

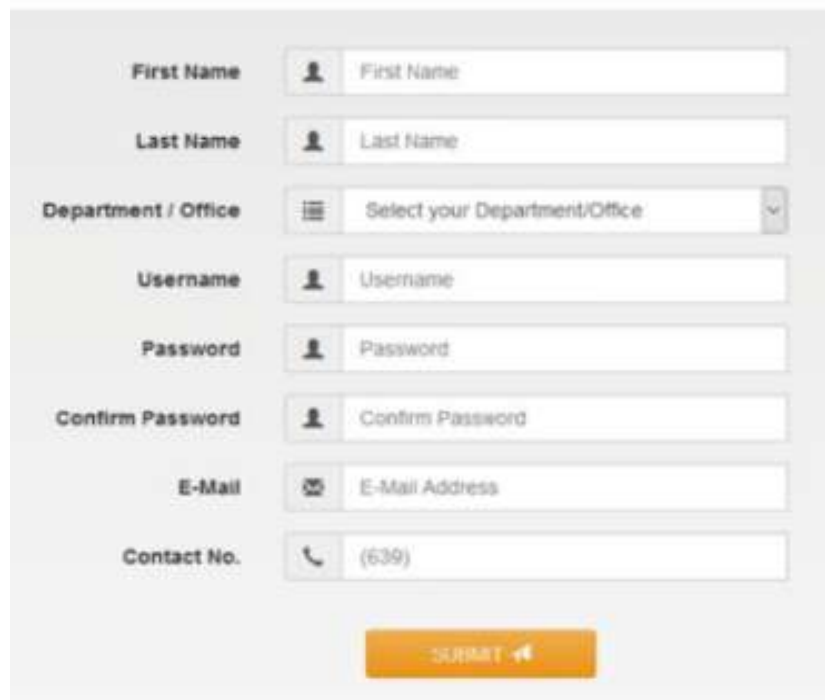
A registration form for MDAs with the following fields: First Name, Last Name, Department / Office (dropdown), Username, Password, Confirm Password, E-Mail, and Contact No. (with a phone icon and '(639)' placeholder). A yellow 'SUBMIT' button is at the bottom.

Fig.5 Registration page for MDAs

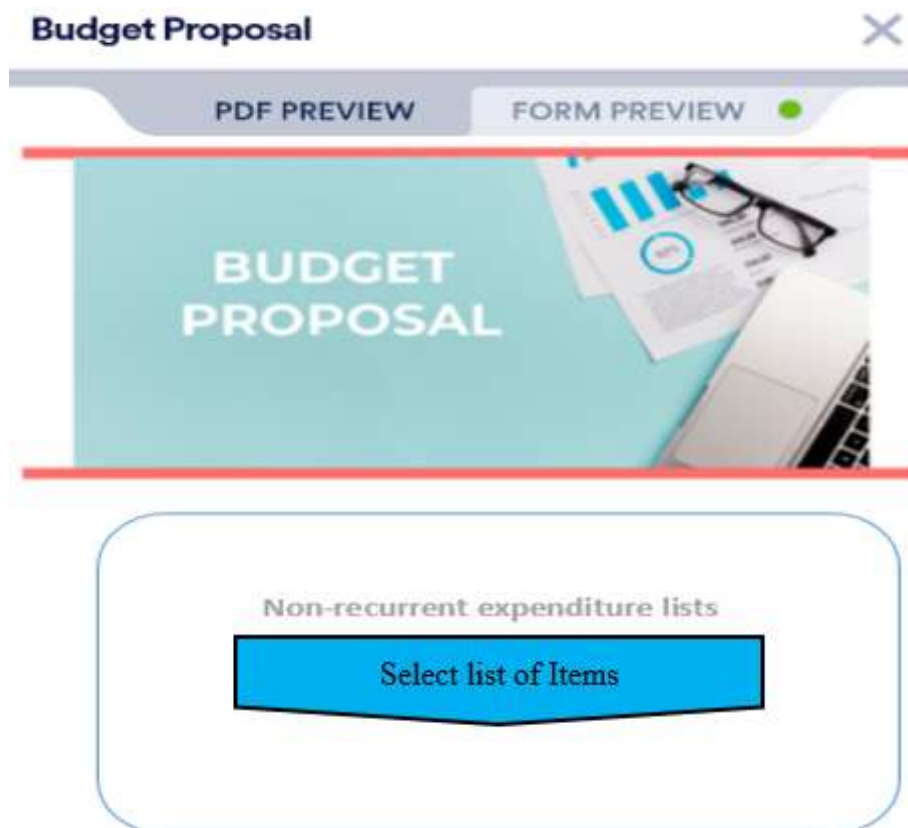
A 'Budget Proposal' form preview window. It has a title bar with a close button and two tabs: 'PDF PREVIEW' and 'FORM PREVIEW' (which is active). The main content area shows a light blue background with the text 'BUDGET PROPOSAL' and an image of a laptop, glasses, and documents. Below this is a rounded rectangle containing the text 'Non-recurrent expenditure lists' and a blue button labeled 'Select list of Items'.

Fig. 6 Non-Recurrent List of elements

1.5 RESULTS AND DISCUSSION

The system was tested as a prototype by engaging participants in the system testing on a local area network (LAN) to test for system efficiency, integrity and security. The system scale through the testing schedule and greeted a desired result by preventing pseudo time adjustments and padding tricks attempts.

1.6 SYSTEM REQUIREMENTS

This system can run on any personal computer (PC) or Mobile device that its configurations allow web browsers to run on independent of its browser type.

V. CONCLUSION

The introduction of Web-Based Budget Support and Monitoring System (WBBSMS) is to curtailing the wide spreading tides of budget padding in MDAs of the government across all levels. The system is capable of reducing budget padding during budget preparation by preventing replication or duplication of non-recurrent expenditures which has been the rallying points for corrupt personnel of government MDAs to operate. The system guarantees keeping the logs of activities of its users over the years and capable of comparing budget items for transparency purposes.

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