Empirical analysis of finance mechanism for public projects delivery in Ondo state, Nigeria.

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ABSTRACT

Funding is the life-blood of any project, whether private or public organizations. It may be the release of funds, the ability to spend funds or the access to funds set aside to achieve a successful project delivery. The aim of this study is to assess the financing mechanism (Budget, Grant, Loan, Public Private Partnership (PPP) and NGO's) and some control variables on public projects finance in Ondo State, Nigeria with a view to provide a framework that will promote effective service delivery, performance and socio-economic development. Data on financing mechanism of public project funds were collected from the Ministries, Departments and Agencies (MDAs) that were directly involved in the implementation of such projects were analysed using descriptive statistics and Pearson Moment Correlation. Findings revealed that budget and grant were the main mechanisms; delays in the completion of public projects were caused by untimely release of funds, mismatch of financing mechanism to the nature of projects and excessive budgeting for capital expenditure above the available resources. Therefore, the study recommends that financing mechanisms should be considered alongside with the nature of public projects to determine the appropriate source. Also, timely and correct disbursement of funds appropriated for projects should be done to avoid inadequacy of funds, project delay and abandonment.

Keywords: Financing mechanism, public project funds, public private partnership, service delivery

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1.0 INTRODUCTION

Funding is the life-blood of any project, whether private or public organisations, and must be managed effectively. It may be the release of funds, the ability to spend funds or the access to funds set aside (McNally, Smith and Morrison, 2011). A lot of efforts have been made on the part of governments of various nations (both state and local) at one point in time or the other, to satisfy the burgeoning needs of the society through the execution of various projects. The outcome of these projects most times, has not been encouraging in meeting the actual needs of the society, due to insufficient funds or resources allocated for such projects. However, Wangwe, (2010) opines that service delivery requires resources for it to occur. Service delivery is a comprehensive concept in the context of governance; public service delivery is the result of the intentions, decision of government and government institutions, and the actions undertaken and decision made by people employed in government institutions (Rakate, 2006). Service delivery has an impact on human development directly if it is delivered to people in the form of basic services such as education, health and water and sanitation which contribute to promoting human development.

Black (2013) defines public projects as programmes executed under the government regulations, managed and controlled directly by the centre or state or through its active participation in allocating funds (budget). Most public projects relate to works done by the government to satisfy public interests. They usually include road construction and repairs, public building construction, schools as well as public parks. These developmental projects require a huge amount of finance that needs to be well managed and accounted for, in order to achieve the goals and objectives of the project. While budget appropriation remains the main source of finance for public infrastructure, recently, there are lot of reforms that tend to change the paradigm globally (Waldt, 2007). Many investors (both public and private) comes to the project finance market with the aspiration of financing their dream project with large amounts of (other people’s) funding, whilst spreading the unpalatable risks associated with their venture to others. Similarly, Chan, Forwood, Roper and Sayers (2009) assert that Australian and overseas governments alike have increasingly been drawing on capital markets to finance public infrastructure.

A successful project remains a project that is built in the time anticipated, that is completed at the cost which was anticipated, that operates smoothly to provide services to the end-user at an affordable price and which provides a sufficient return for the contractor, operator, supplier, sponsor and other project stakeholders. These attributes are not very common in public projects execution in Nigeria; rather there are lots of pandemonium, economic hardship, road hazards, poor quality of projects delivered or shoddy jobs, cost overruns and inflation on projects, continuous monumental waste of resources among others. These result from government’s inability to fulfil her obligation of providing basic infrastructure to the society. The dearth of infrastructure is a pain in the neck to the people of Nigeria and is causing a great headache; the social implication of lack of infrastructure is more than the financial implication.

Consequently, Anbari and Kwak (2010) assert that project failures are becoming generally expected and accepted. The factors that underlie such failures are not limited to inefficiency on the part of the professionals executing the project alone; but as a result of lack of basic resources needed most especially the finance which may be in form choosing and using wrong method of finance, inadequate and insufficient supply of finance, delay in the release of fund which may eventually leads to cost overruns. Thus, assessing the finance mechanism and the control variables that will
enhance effective project delivery forms the pre-occupation of this study.

2.0 LITERATURE REVIEW

2.1 Conceptual Issues on Financing Mechanisms

Projects are the cutting edge of development all over the world, Gittinger, (1982), for any nation or state to develop there is the need for the execution of public projects; a nation or a state where there is dearth of projects will lack economic development. Accordingly, Muller and Turner (2007) define project as “an organization of human materials and financial resources in a novel way, to undertake a unique scope of work, of given specification, within constraints of cost and time, defined by quantitative and qualitative objectives so as to achieve a beneficial change”

Public projects are projects executed by the government for the benefit of the society. Black (2013) defines public project as any project that is funded by a government, and is meant to be owned and operated by that government. These include projects such as road construction and repairs, public buildings, schools, and even public parks. These developmental projects often require a huge amount of finances that need to be well-managed and accounted for in order to achieve the goals and objectives of the project. Projects require resources, that is, men, materials and money. There is no project without a cost factor or a budget, a project has to be meticulously planned for the resources and should be properly approved and sanctioned (Ramakrishina, 2012).

Finance Mechanism for Public Projects

Public projects require a huge amount of finance that needs to be sourced from a sure base, having the understanding that fund is the life-blood of any successful project. Finance mechanism of public project funds can be referred to as the various means through which the government generates funds to finance her projects. In Nigeria, as highlighted by Omolehinwa and Naiyeju (2015), sources of revenues for State government operations are normally from the Share of Federation account allocation, Share of VAT and Internally Generated Revenue such as personal income tax, capital gain tax, rent, fees and fines. These might not be sufficient enough for a government that wants to invest in huge infrastructural projects for the society.

Thus, sourcing for public project funds or finances is a major decision that has to be taken as Slivker (2011) defines project finance as the preferred financing mechanism for large infrastructure projects that are essential for developing countries, emerging economies, and developed countries alike. Infrastructure projects are financed by a mechanism that engages a multitude of participants including multilateral organizations, governments, regional banks, and private entities. Chan, et al (2009) opines that the provision of public infrastructure involves interrelated activities of investment, funding and financing, which all have distinct implications for economic efficiency. For investment, the central issue is whether or not community welfare can be improved by governments allocating resources to create, expand or augment a particular infrastructure service. For funding, the central issue is whether governments should depend on user charges or taxes over time to pay for the ongoing costs of infrastructure operation, including interest payments and principal repayments. While for financing, the decision is whether to use fiscal reserves, sell assets, raise new taxes or other revenues, or borrow to pay for the investment’s total costs.

Public infrastructural projects can be financed through a lot of vehicles, but the core of the matter is that a nation should have her priority as choosing a vehicle that will aid successful financing of a particular project by considering the nature or characteristics of the project concerned and determining the efficient and effective financing vehicle that best manages the project risk (Chan et al. 2009). Apart from
these, the means of financing public projects includes: Budget Appropriations: Budget appropriations remain the main source of finance for public infrastructure investment in Nigeria. Budget financing avoids the transaction costs of raising finance and infrastructure investment can be presented as fiscally responsible and financially prudent if governments spend only what they can currently ‘afford’. Specific-Purpose Bonds: Specific-purpose securitised borrowing refers to the issuance of debt instruments such as bonds, debentures and inscribed stocks for the purpose of financing specific infrastructure by the public sector. These borrowings are usually secured on the asset, or against the revenue stream arising from the asset. Franchise Arrangements: Government franchising involves a government or public sector agency (the franchisor) granting an exclusive right to a private or other independent entity (the franchisee) to occupy, operate and maintain publicly owned infrastructure facilities to deliver services over a predetermined period of time. Development Contributions: This involve the principle of user pays, and limits on revenue raising of local government, development contributions have grown as a source of both funding and finance for urban infrastructure. Public-Private Partnership Financing: This is the engagement of private entities and their capital in financing public projects including infrastructure. According to Rao (2003), Project financing may be defined as the raising of funds to finance an economically separable capital investments project in which the providers of the funds look primarily to the cash flow from the project as the source of funds to service their loans and provide the return on their equity invested in the project. Also, Pyka (2010) describes project financing as a kind of financing method connected with industrial and infrastructural projects. It is referred to as the cooperation between the public and private entities, called the Public Private Partnership (PPP), as an instrument that is to ensure regional development. Grant - This is an amount of money given for a specific or special reason by government or other organisations. Non-governmental Organisation: This is a non-for-profit organisation that is independent from states and international governmental organisation. They are normally funded by donations but some avoid formal funding altogether and are run primarily by volunteers. Even though all these sources are sure base for generating public project fund, yet the neglect of some control variables such as adequacy of fund, timely disbursement of fund, correct appropriation can hinder effective service delivery.

**Empirical issues**

Merrow, McDonnell and Yilmaz-Arguden (1988) conducted a quantitative survey of forty-six (46) infrastructural projects and found that only four of them came in on the budget, with an average cost overrun of 88 percent of the thirty-six (36) projects with sufficient data, twenty-five (25) failed to achieve their profit objectives. The study concluded, amongst other things, that projects are more likely to fail, the greater the level of public ownership. Also Miller & Lessard (2000) conducted an empirical survey of sixty (60) large engineering projects of an average size of $1 billion, undertaken between 1980 and 2000. The study observes that almost forty (40) percent of projects performed badly and were either abandoned or restructured after experiencing financial difficulties.

Stephen’s (2006) on “an econometric analysis on the effect of project characteristics on success or failure of public private infrastructural project” applied a legit regression analysis with robust standard errors to explore data from the World Bank Private Participation in Infrastructure Database (PPID), augmented with the country-level data on corruption and institutional quality. Findings reveal a statistically significant correlation between the level of private involvement and project success in all models. Also, Oyedele (2013), on construction project financing for sustainable
development of Nigerian cities, opines that the agitation for construction projects are more in democratic governance while the means of providing them are limited. The financing methods have placed our infrastructures in horrible states across the country. This paper adopt the triangulation method of research (quantitative and qualitative) in order to have an in-depth knowledge of the challenges of Construction project finance methods like the Traditional Method (Direct Labour (DL) and Design, Bid and Build (DB&B)) and Modern Methods (Design and Build (DB); Build, Operate and Transfer (BOT); Partnering, Public-Private Partnership (PPP) etc, and concluded that there is no method of procurement that is not feasible but the situation, size, technicality and the people managing the procurement method. Olatunji and Diagwu (2013) studies ‘A project management perspective to the management of Federal roads in Nigeria, a case study of Minna-Jebba road’, the findings reveal that inadequate funding has contributed to the deplorable conditions of some roads, specifically the Minna-Jebba road and concluded that the nation needs a sustainable framework which would ensure the preservation of her roads.

3.0 RESEARCH METHODS

This research design is based on an empirical survey method using structured questionnaires to elicit information from the respondents on the perception of clients, consultants, contractors, accountants, financial managers and the public (the consumers of public projects and related individuals on the subject). The focus of the study is on the various Ministries Departments and Agencies (MDA’s) that are engaged in projects’ implementation in the public sectors of Ondo State. Data generated were analysed using descriptive and Pearson Moment Correlation to determine the relationship between finance mechanism and project outcome/ delivery. The analysis was guided by Karl Pearson model in Odugbemi and Oyesiku (2000).

Pearson Product Moment Correlation

\[ r = \frac{n \sum xy - \sum x \sum y}{\sqrt{(n \sum x^2 - (\sum x)^2)(n \sum y^2 - (\sum y)^2))}} \]

\( n \) = numbers of year \( r \) = correlation coefficient \( y \) = project outcome/ delivery \( x \) = finance mechanism:

The finance mechanism variables are sources of funds (SFUND) – budget, grant, public private partnership, loan and non – governmental organization. Other control variables are fund adequacy (AFUND), occurrence of underfunding (OUFUND), level of underfunding (LFUND), timely disbursement of fund (TDFUND), correct appropriation of fund (CADFUND), occurrence of cost overrun (OCCOV), level of cost overrun (LCOV). Dependent variable (PROJOUT)

4.0 RESULTS AND DISCUSSION

Finance Mechanism for Public Projects

Data on sources of funds for financing public construction projects in Ondo State in the last ten years were analysed in Table 1. Projects financed through budgets have the highest percentage with 42.2%, followed by grants with 31.3%, other sources (loans, bonds) have 15 as frequency and 23.4%, while PPP and NGO’S have 1% respectively.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Sources of Funds</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Budget</td>
<td>27</td>
<td>42.2</td>
</tr>
<tr>
<td>2.</td>
<td>Grants</td>
<td>20</td>
<td>31.3</td>
</tr>
<tr>
<td>3.</td>
<td>PPP</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>4.</td>
<td>NGOs</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>5.</td>
<td>Others (Loans, Bond)</td>
<td>15</td>
<td>23.4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>64</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 1: Finance Mechanism for Public Projects Source: Field survey (2015)
From the table, budgets and grants were the major sources of financing public projects in the state because all the resources of the State are cumulated into the budget, and it serves as the major sources of finance for projects in the ministries, and sometimes loans were used to finance projects in the ministries as well. Also, most projects, especially in the tertiary institutions, were financed by grants, such as Educational Trust Fund (ETF). Similarly, the result shows that PPP has only 1%, this agrees with the findings from Deloitte Research (2006) that the portion of PPP projects in overall public procurement is still not significant, that the biggest producer of PPP projects rated only 10 – 13% of all public infrastructure projects.

However, there were some special projects financed by Public and Private Partnership (PPP) arrangements. Examples are Akure Mall jointly financed by Ondo State and Top Services Ltd; Gani Fawehinmi Diagnostic Centre, Ondo financed by the State and Mecure Health Care Diagnostic Ltd. Also, Sunshine Housing Estate at Oba-Ile was between Ondo State and Locke Homes Nig. Ltd, and Independent Power Plant Project (IPPP) at Omotosho Industrial Park. All these projects were (PPP) projects: some have been completed successfully, while others are ongoing. If PPP delivers such at greater efficiency, timely delivery of public projects, better quality of service provisions etc., the use of PPP should be encouraged in financing future public projects. Moreover, Chan et al. (2009) reveal that public infrastructural projects can be financed through a lot of vehicles, but the core of the matter is that a nation or state should have it as her priority to choose a vehicle that will aid successful financing of a particular project by considering the nature or characteristics of the project concerned and determine the efficient and effective financing vehicle that best manages the project risk. Also Chan, (2009) assert that Australian and overseas governments alike have increasingly been drawing on capital markets to finance public infrastructure. The State can equally draw from capital market as another mechanism to finance her capital projects.

**Adequacy of Funds**

One of the controlled variables associated with the sources of funds examined is adequacy of funds. Figure 1.1 presents the level of fund adequacy for public construction projects irrespective of the various sources of funds. Majority, 20 (31.3%) of the respondents indicated that funds were moderately adequate for public projects, followed by 17 (26.6%) of the respondents that indicated that funds were very adequate for public construction projects in the study area. ‘Not adequate’ has 13 as frequency and 20.3%, and ‘rarely adequate’ has frequency of 8 and 12.5%, while ‘highly adequate’ has 9.4%.

**Figure 1.1: Adequacy of Funds for Public Projects**

![Figure 1.1](image_url)

Source: Field survey (2015)
From the analysis in Figure 1.1, funds were made available for most of the projects particularly those that were financed by grants, Private Partnership Projects (PPP) and budgets, in the various higher institutions. However, from the data obtained from the Ministry of Works analysed in figure 1.2, only 28 out of 73 (38.4%) projects financed mainly by budgets were well-funded and completed, while many were at various levels of completion and some totally abandoned as a result of inadequate funding. The main complaint given by respondents is that contractors left project sites as a result of lack of funds. This corroborates the findings of Miller & Lessard (2000), Olatunji & Diagwu (2013) and Ameh & Ogundare (2013) that delay in government projects were due to financial difficulties, intermittent funding pattern and delayed settlement of payment certificates. Similarly, this agrees with the interview conducted in some of the Ministries that government is only interested in playing politics leading to budgeting for excessive/massive capital projects beyond what the available resources can cope with, which is over-budgeting.

This consequently leads to starting a project they are not ready to finish, this is in agreement with the World Bank (2001) assertion that about 50% of projects in Nigeria are dead even before they commence, the projects are designed to fail because the objective is not to implement them but to use them as vehicles for looting public treasury, instead of adding value, they become economic drain pipe. Also, this supports the assertion of Oyedele (2013) that politicians use number of projects to show-case probably for the next election and not just for the benefits of the populace. From Figure 1.2, 95% of the uncompleted projects have exceeded their time limit for completion; this agrees with the report of the interview conducted in one of the ministries that untimely completion of project as a result of inadequate fund is the norm, leading to additional cost in terms of fund during inflation. The outstanding balance on the completed and uncompleted projects to the contractors was much and this supports the report of the interview conducted that the government would not consider the available resources before projecting into capital expenditure which consequently leads to borrowing of excessive funds and mortgaging the state into future debts.
Correlation results

From the result in Tables 2, three of the variables examined (LUFUND, OCCOV and LCOV) were found not significantly related with PROJ at 0.05 alpha levels and they were negatively correlated. There is positive correlation between PROJOUT and other variables examined (SFUND, AFUND, TDFUND and CADFUND), significant at 0.05 alpha level. However, there is negative correlation between OUFUND, SFUND and AFUND. This indicates that OUFUND will hinder successful project delivery.

| Source: Field survey (2015) |

Table 2: Correlations of Project Outcome, Mechanism of Funds and control Variables

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Project outcome</th>
<th>Sources of fund for public project</th>
<th>Adequacy of funds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>1</td>
<td>.970</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td>-.005</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>.970</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td>-.005</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>.983</td>
<td>.332</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>.728</td>
<td>.363</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.044</td>
<td>-.116</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>.680</td>
<td>.502</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.053</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>.896</td>
<td>.280</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.017</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>.911</td>
<td>.632</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.014</td>
<td>.061</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>.076</td>
<td>.370</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.224</td>
<td>.114</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>.585</td>
<td>.692</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.069</td>
<td>-.051</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>64</td>
<td>64</td>
</tr>
</tbody>
</table>

The most important variable is CADFUND, significant at 0.014 level. Correct appropriation of funds to project is very germane to the realization of public project outcome. It is one thing to get the right sources of fund but another thing to correctly appropriate the fund to the project concerned. Also, TDFUND is significant at 0.017 level. Timely release of fund for the execution of public projects cannot be over-emphasized as pointed out by Ameh and
Ogundare, (2013) that 70% of the delays encountered in government projects were due to intermittent funding pattern and delay in settlement of payment certificate. AFUND is significant at 0.003 level, funds must be adequately sourced for, from the right source from inception of the project to avoid failure, abandonment and incomplete jobs. Short term funds must not be used to finance long term projects, and vice versa.

SFUND is significant at 0.005 level: choosing the right sources of fund is very important to project delivery; it determines the success or failure of a project. This agrees with the findings of Cham et al. (2009) that a state or nation should have it as her priority to choose vehicles that will successfully deliver her projects. Whether by budget, grant, PPP, loan, etc., Consideration must be given to adequate, timely and correct appropriation of such funds for successful projects delivery or outcome. The result above signifies that there is positive correlation between PROJOUT and SFUND, AFUND, TDFUND, CADFUND but negative correlation with OUFUND. Therefore, successful project delivery is a function of SFUND + AFUND + TDFUND + CADFUND − OUFUND.

5.0 CONCLUSION

There is no doubt that this study has added to existing literature in assessing the financial mechanism for Public Project delivery in Ondo State. The study has examined the means of generating fund for capital projects in the study area and the factors that influenced the effectiveness and usability of such fund. Also, the study has explored different methodologies (both descriptive and inferential) in evaluating the prominent financing mechanism for public projects in Ondo State were budgets, grants, loans and Public-Private Partnership (PPP); sources of project funds in tertiary institutions were mainly through grants and projects financed by grants and PPP were always successful except on rare occasions. Delays in the completion of public projects were caused by untimely release of funds and excessive budgeting for capital expenditure above the available resources. The study therefore, concluded with the need for securing other finance mechanism like drawing from the capital market and effective usage of PPP since it just account for only 1% of previous projects. Also, that determining appropriate financing mechanism is not enough but adequacy, timely disbursement and correct appropriation of fund should be properly monitored from the policy formulation stage to implementation in order to enhance effective public project delivery.

RECOMMENDATIONS

Public project is the cutting edge of development in any nation and funding is the life blood of any project. Based on the findings above, the following recommendations are suggested:

1. Financing mechanisms should be considered alongside with the nature of public projects to determine the appropriate source.
2. Also, timely and correct disbursement of funds appropriated for projects should be done to avoid inadequacy of funds, project delay and abandonment.
3. The use of PPP arrangements for financing of projects should be embraced more than ever before, due to its effectiveness in delivery of projects. Moreover, over-budgeting for capital expenditure in the State as currently practiced should be discouraged.
4. Government must ensure that the policy and resources on public projects are linked and transparent, to solve the problem of over budgeting for capital expenditure.

REFERENCES


