

A Nexus between Project Management Offices (PMOs) and the Value of Project Management Performance of Public Tertiary Institutions in Nigeria

¹OGBU, J.M. and ^{*2}AMADE, B.

¹Ferryhills Consulting Limited, Suite AS16 Annex A, Metro Plaza
Central Area Abuja, Nigeria

^{*2}Department of Project Management Technology
Federal University of Technology, P.M.B. 1526 Owerri, Nigeria

ABSTRACT

This paper specifically explored the Works and Estate Departments (WED) of tertiary institutions as specialized and distinct Project Management Offices (PMOs). The study adopted a field survey and exploratory research design methods of investigation, while a purposive sampling technique was deployed in selecting the population size. The instrument for data collection and measurement were well structured standardized questionnaire in addition to a semi-structured interview, multiple case study, and personal observations used in eliciting responses from four (4) case study organizations/tertiary academic institutions in Ebonyi State, Nigeria. The questionnaires were pre-tested and validated for reliability. The data collected were presented using charts, figures and descriptive statistical tools, while a multi-case analysis was used in analyzing the major issues in the case study organizations with the aid of Nvivo and Microsoft excel. Findings from the study suggest that the case organizations share certain common views on the WED structure and functions which places them as Project Management Offices. The WED is also situated as a PMO from their structures and functions using the PMO descriptive model and PMO functions. The findings further elicit some common themes from the interview transcripts and questionnaire responses that matched the descriptive model and PMO functions such that individual departments follow a traditional organizational structure where the Director is in absolute control. The Director of WED coordinates all projects in collaboration with the unit heads while projects are assigned to staff with the professional competence. Even though the WEDs are not known and addressed as project management office, they are impliedly and made to serve as central clearing houses for all projects in the case organizations. And finally the WED of the case organizations under review are charged with the mandates to provide leadership, guidance and support to all the projects within their organizations and are thus adjudged to be typical PMOs. The results contribute to a better understanding of how a project management office (PMO) creates benefits to organizations.

Key words: project management, project management value, project management offices, organizational performance.

INTRODUCTION

The actual value emanating from investments in project management has been difficult to define and evaluate (Thomas & Mullaly, 2007; Aubry & Hobbs 2010). It is a universal idea that projects have a great influence in society, but projects are not protected from the vagaries of

their socio-political environment (Thomas & Mullaly, 2007; Zhai, Xin, & Cheng, 2009). Andersen and Vaagaasar (2009) averred that value creation is increasingly being achieved through projects, while organizations are deploying more efforts in improving their project management competencies. Most private sector firms seek profits and returns on their investment, while the public sector agencies are primarily responsible for ensuring that their projects generate benefits to the society without degrading the environment (Sallinen et al., 2011). Public sector organizations are increasingly expecting value from their project management investment, this one the other hand is attributable to the geometric increase in the number of projects they handle annually while the revenue is generated in an arithmetic progression. Crawford and Helm (2009) expressed how governments around the world gave considerable support for project management implementation, with corresponding expectations of measurable value attributable to the project management implementation in the public sector.

Developing and maintaining public governance are through projects and programs investment. Strategy and policy implementations are equally delivered using projects platforms. These projects and programs require allocation of funds; therefore, there is increased demand for ability to achieve outcomes with a more structured, traceable, transparent and accountable processes (Thomas & Mullaly, 2007; Crawford & Helm, 2009). According to Milin, Morača, Radaković, Jašarević and Hadžistević (2012), “PMO is an organizational unit that is established to help project managers, project teams as well as different levels of management in carrying out the principles of project management” (p.213).

Milin et al. (2012) further stated that PMO coordinates and manages all projects in the company and it is engaged in the collection of best practices for project management, selection of methodologies for project management and selection of tools and techniques used in project management.

The definition of PMO brought many organizations into the category, but they are not isolated from the parent organization. The key results from the PMO researches have unveiled a considerable variation between PMOs and their resulting performance and/or values. This variation is made more complex by the location, industry, sector (public/private) where the PMO is implemented. Thomas and Mullaly (2008); expressed the view that it is extremely impossible to calculate any explicit correlation between project management implementation and return on investment (ROI) especially from the public sector point of view. Aubry et al. (2011) strengthened this view by showing that public sector strategic objectives are usually not expressed in terms of profit, but rather in terms of user satisfaction and value for a wide range of stakeholders, including politicians.

The construct of value direction by Thomas and Mullaly (2008) explored the ability of project management implementation to continue to deliver value. It generates insights into the appropriateness and contribution of different forms of project management to organizational performance (Mullaly & Thomas, 2009). Project management is more widely used in most organizations, and its value gradually attracts the interest of organizations. It is been suggested that organizations will happily increase their investment in project management, if they can identify their values in measureable terms (Thomas & Mullaly, 2007; Zhai, Xin, & Cheng, 2009).

Statement of the Problem

The knowledge and understanding of project management has advanced and most organizations are cognizant of the importance of project management in business development (Santos & Varajão, 2015). Despite the attention accorded project management in recent time (Santos & Varajão, 2015), many cases of projects not providing the desired success to its clients abound. For instance, failure to meet schedule are still very common, regardless of the type of sector as well as the inability of most organizations to compete with their peers. In Nigeria, there are incidents of unsuccessful projects, ranging from low quality projects, abandoned projects to completely failed projects within the academic institutions. Majority of these projects are adjudged unsuccessful when evaluated from the Project Initiation Document (PID) and approved acceptance criteria content. However, these institutions have Works and Physical Planning departments populated with highly experienced staff. But, there are traceable low usages of standardized project management approaches among them. The high rate of such unsuccessful project scenarios in the Nigerian Academic institutions have made it imperative to examine the structure and functions of these Works and Physical Planning departments and also their level of Project management implementation. Any improvement on their project performance traceable to project management implementation will be evaluated to justify such investment.

Objective of the study

The research was chiefly aimed at enriching the current discuss on the value of project management and the performance of project management offices (PMOs) especially in public academic institutions.

The specific objectives of the study are to:-

Evaluate the functions and characteristics of Project Management Office as it relates to the structure of Works and Estate Departments of tertiary academic institutions in Ebonyi state.

LITERATURE REVIEW

Project Management Office (PMO) is defined as "an organizational body or entity assigned various responsibilities related to the centralized and coordinated management of those projects under its domain (PMI, 2008). It is also described as a unit in an organization that develops and maintains project management standards and processes within an organization. The PMO tries to equip project managers and other project team members with the best methodologies and tools available while also striving to improve project performance. It is emphasized that studying the structures and roles of PMOs in organizations are practical means of examining project management as it is practiced in these organizations (Aubry & Hobbs, 2010). According to Santos and Varajão (2015) "PMOs typically perform a number of functions: project definition and planning; cost/benefit analysis of projects; risk management; monitoring and control; supply of experience and knowledge; support in undertaking Project Management (PM) processes and procedures; knowledge capture and dissemination; provision of specialist skills; maintenance of projects tools; standards and processes" (p.1192).

Project Management Office Typology

Several researches on PMOs agreed that PMOs have varying mandate, structure and roles (Hobbs & Aubry, 2007; Hobbs & Aubry, 2008; Crawford, 2010). The typology of PMO has received diverse opinions from researchers and practitioners within the field. Some classify it into strategic, tactical, or operational PMOs which is a function of the organizational level the PMO is operating (Hill, 2001; Hobbs & Aubry, 2008; Crawford, 2010). Others call them Supportive, Controlling and Executing PMO depending on whether the PMO is offering support functions or being wholly responsible for the direct management of the project (Kendall & Rollins, 2003; Hurt & Thomas, 2009).

Crawford (2010) collaborating (Van de Ven, 2007) posited that PMOs can be described best by looking at their basic characteristics. Hobbs and Aubry (2010) elucidate the PMO features further by developing the descriptive model shown in figure 1.

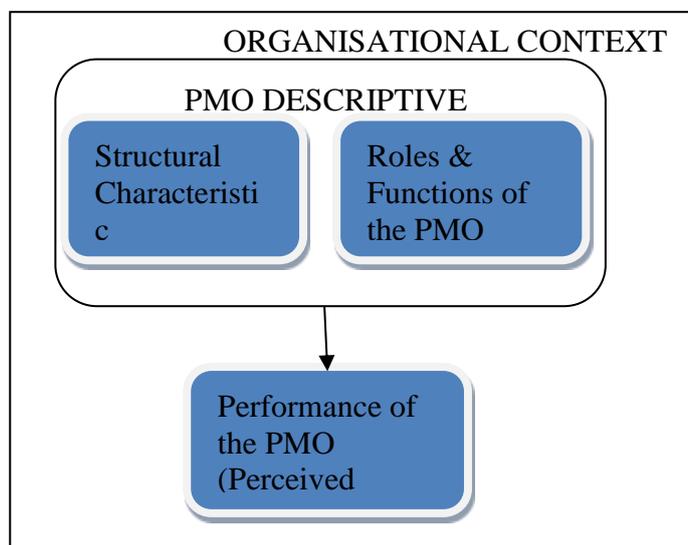


Figure 1: PMO descriptive model after Hobbs and Aubry (2010a)

Organizations create units and charge them with responsibilities very similar to those of PMOs without necessarily calling it a Project Management Office or Project Office. However, discerning their primary duties will help in situating them as PMOs. In the works of Aubry et al. (2011), the “Transition Support Office (TSO)” is treated as a PMO without bearing the name PMO.

Functions of Project Management Office

PMOs are known to perform numerous functions in an organization. But, there are variation in the description of the functions of PMO according to different views from commentaries and researches in the field of project management (see, for example, Hill, 2001; Aubry et al., 2011; Hurt & Thomas, 2009). However, the views put forward by the empirical work of Hobbs and Aubry (2007) as depicted in figure 2 offered a more broadening description of the functions of

PMOs. Mengel et al. (2009) was able to categorize the functions of PMO into five main group as typified in table 1.

Table 1: Important PMO functions grouped into five

<p>1. Monitoring and Controlling Project Performance</p> <ul style="list-style-type: none"> • Report project status to upper management • Monitor and control of project performance • Implement and operate a project information system • Develop and maintain a project Scoreboard 	<p>2. Development of Project Management Competencies and Methodologies</p> <ul style="list-style-type: none"> • Develop and implement a standard methodology • Promote project management within organization • Develop competency of personnel, including training • Provide mentoring for project managers • Provide a set of tools without an effort to standardize 	<p>3. Multi project Management</p> <ul style="list-style-type: none"> • Coordinate between projects • Identify, select, and prioritize new projects • Manage one or more portfolios • Manage one or more programs • Allocate resources between projects
<p>4. Strategic Management</p> <ul style="list-style-type: none"> • Provide advice to upper management • Participate in strategic planning • Benefits management • Network and environmental scanning 	<p>5. Organization Learning</p> <ul style="list-style-type: none"> • Monitor and control performance of PMO • Manage archives of project documentation • Conduct post project reviews • Conduct project audits • Implement and manage database of lessons learned • Implement and manage risk database 	<p>Other Functions (Not in Any Group):</p> <ul style="list-style-type: none"> • Execute specialized tasks for project managers • Manage customer interfaces • Recruit, select, evaluate, and determine salaries for project managers

(adapted from Mengel et al., 2009)

The Value of Project Management Implementation

The empirical work of Aubry and Hobbs (2010) reported the diverse perceptions of the ways PMOs adds value to organizations. It posited that studying the role of PMOs is, therefore, a practical means of studying project management as it is practiced in these organizations. A PMO would be justifiable if it could prove its contribution to organizational performance. However, the evaluation of its contribution to organizational performance is a complex question that may have as many variations as the PMO itself (Hurt & Thomas, 2009; Aubry & Hobbs, 2010).

Though a lot of researchers have argued favourably about the value of PMO to organizational performance, but the work of Hobbs and Aubry (2007) have questioned the value of PMOs to organizational performance. This highlights the subjective side of organizational performance. The contribution to organizational performance by the PMO seems to take different dimensions and this should be distinguished from the contribution of projects. The PMO's contribution is seen to be behind the performance of each individual project. There are two sides to organizational performance, they include; what actually constitute organizational performance, what is its pragmatic measurement (Aubry & Hobbs, 2010). The literature on organizational value of project management implementation just reviewed revealed the ambiguity of the value case for PMOs and Project management investment (Thomas & Mullaly, 2007, 2008; Hobbs and Aubry, 2007; Hurt & Thomas, 2009). Andersen and Vaagaasar (2009) in their work on studying the value of project management argued that value creation in organizations are realized through projects and thus organizations continuously strive to improve their project management competencies. It will be pertinent to fully discern the concepts of "value of a project" and "value of project management" in order to proceed positively with our current discussion. Zhai, Xin and Cheng (2009) described the "value of Project" as a function (both direct and indirect) which the project has with respect to the needs of stakeholders. It went further to postulate that the stakeholders' need might be the minimization or maximization of one or more of the following goals (time, cost, quality, commercial interests, social benefits and technological development as well as environmental protection). It sees the "value of project management" as realizing the value of a project which implies meeting the project requirements. Thus, the "value of project management" is a super set of the "value of project".

There are dual ideas of project performance that dominate the project management literature: financial and pragmatic. In the financial conception, researchers and practitioners struggle to show the explicit impacts of project management to the organization (Dai & Wells, 2004; Ibbs, Reginato, & Kwak, 2004). But, no researcher has been able to prove in practical terms the economic value of investment in project management. The economic perception received a huge knock when Thomas and Mullaly (2008) opined that the works of Ibbs et al. (2004) are statistically insignificant. It equally posited that, it is hard to measure the direct influence of project management on return on investment (ROI). Other researchers (Turner & Keegan, 2004; Winch, 2004; Thamhain, 2004) cited by Thomas and Mullaly (2008) argued that reducing the value of project management exclusively to financial indicators limits the major contributions that project management brings to organizational success.

Sometimes, investment on project management rarely has noticeable effects on revenue or cost saving especially in the short term (Thomas et al., 2002). Aubry and Hobbs (2010) pointed out that categories of investment in project management generate categories of benefits. In government sector, organizational performance are primarily measured in terms of services delivered to the public, the transparency and accountability of the processes used in expending public fund and protection of the environment. The financial returns perception in terms of cost savings and profit making are secondary (Crawford & Helm, 2009).

The Conceptual Model of Project Management Value

The conceptual model shown in figure 2 was developed by Thomas and Mullaly (2005) and adapted from Aubry and Hobbs (2010). It will help in increasing the comprehension of how

project management creates value in organizations. The model showed the attributes to be measured in the quest to find the relationship between project management investment and value creation in organisations.

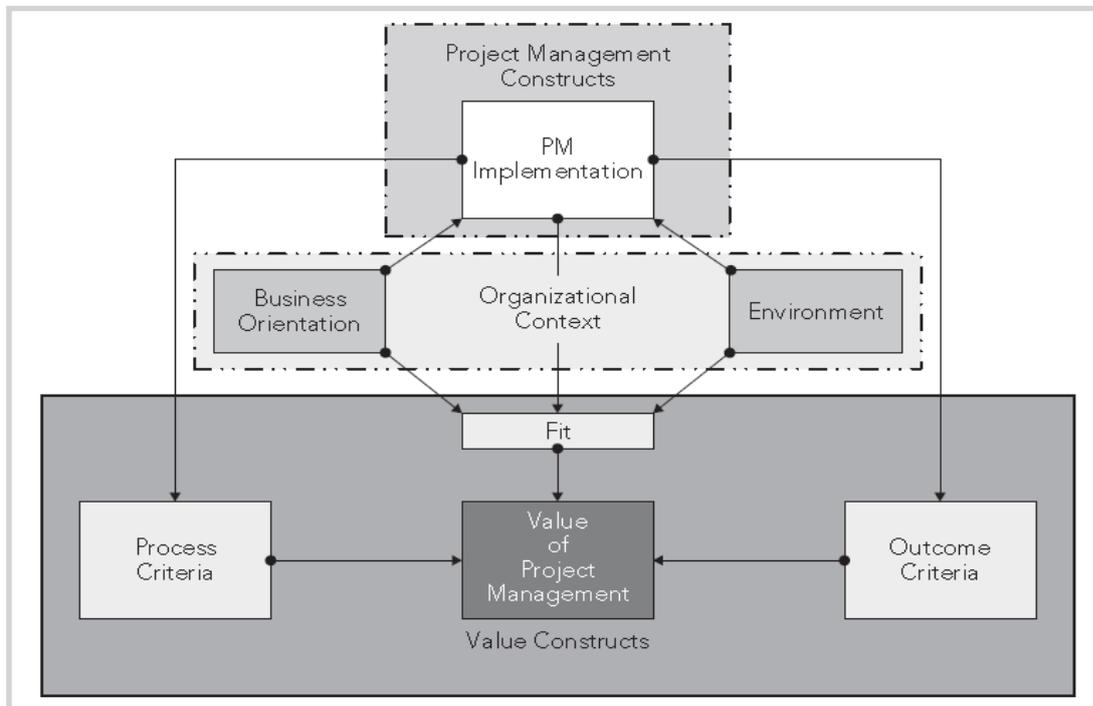


Figure 2.0: Conceptual model developed by Thomas and Mullaly (2005).

Measuring Organizational Value of Project Management Investment

Thomas and Mullaly, 2007 opined that the actual value emanating from investments in project management has been hard to define. There is no consensus among researchers on the way to assess either performance or the value of project management. Numerous methods have been developed to assess organizational performance such as return on investment (ROI); Cost-benefit ratio; balanced scorecard; and organizational competency. Thomas & Mullaly, 2008 questioned the capability of the existing conceptual approaches (return on investment (ROI); balanced scorecard; and organizational competency) to realistically measure values derived from project management implementation.

A. Financial Approaches

The most basic financial approaches used in measuring organizational performance are Return on Investment (ROI) and Cost-Benefit analysis. Measuring organizational performance using ROI is hinged on the value of its financial assets (like revenue, real property, or equipment). It is assumed that every invested fund has an explicit correlated financial return linked to that investment. Several research efforts has been directed to the value of project management investment since the last ten years especially the studies from Ibbs, Kwak, and Reginato (Ibbs,

2000; Ibbs & Kwak, 2000; Ibbs & Reginato, 2002; Kwak & Ibbs, 2000; Kwak & Ibbs, 2002; Reginato & Ibbs, 2002; Ibbs et al., 2004).

The financial approach alone cannot give a correct measure of the value of project management for the organization (Thomas & Mullaly, 2007, 2008). The use of financial ratios to assess the value of project management is rational since financial results are very critical to organizational survival and sustenance. But, employing monetary evaluation alone is grossly inadequate since it cannot capture intangible benefits (such as corporate culture, organization efficiency, and client satisfaction) that cannot be denoted in financial terms (Thomas & Mullaly, 2008; also see Andersen & Vaagaasar, 2009; Mengel, Cowan-Sahadath & Follert, 2009).

In the public sector, measuring organizational performance using financial parameters is unrealistic. Translating employees and other stakeholders' satisfaction into any currency value is very difficult to calculate in any valid or credible manner. In recent years, the capability of the financial approaches to measuring organizational performance is largely undermined by the change in the asset classes (emergence of intangible assets such as business processes, trademarks and patents, knowledge, skills and business reputation) of organizations (Thomas & Mullaley, 2008).

B. Balanced Scorecard Metrics

The balanced scorecard approach has been proposed to assess project management performance (Norrie & Walker, 2004; Stewart, 2001) cited by Thomas and Mullaly (2007). The argument in its favour over and above financial approach is that it presents a wider spectrum for the measurement of project management performance. The work of Cooke-Davies (2004) proposes a set of 12 factors related to three distinct ways of looking at performance: project management success (time, cost, quality, etc.), project success (benefits), and corporate success (processes and decisions that translate strategy into programs and projects).

The Balanced scorecard (BSC) metrics combines both financial and non-financial parameters in measuring organizational performance. Examples of non-financial factors used by BSC include learning and growth, internal measures and customer perspectives. The BSC approach tries to evaluate the knowledge base and intangible benefits associated with organizational performance. See Webber and Torti (2004) for a thorough review of the application of this approach. The BSC metrics attempts to evaluate all the benefits (both tangible and intangible) of organization investing in project management; it has the challenge of selecting suitable metrics for any meaningful measure to be achieved (Thomas & Mullaly, 2007). Several researchers have criticized the BSC approach see (Ittner & Larcker, 2003; Crawford & Pennypacker, 2001; Voepel, 2006). They argued that the internal focus of the BSC approach encourages organisations to ignore external circumstances that may offer very critical impact.

C. Organizational Competency Approaches

Competency based approaches places enormous emphasis on the impact of the internal competencies of the organization. This approach considers the unique mixture of corporate assets and capabilities that organizations develop as a result of the exploitation of these competencies (Barney, 1991; Thomas and Mullaly, 2007). Competencies can reproduce the

abilities and definite skills that a firm possesses that allow the organization to deploy these skills in a specific way. The general insight generated is that these specific competencies are knowledge –related and can be copied thereby failing to guarantee sustained competitive advantage to organizations (Jugdev & Thomas, 2002). It equally postulates that project management is an enabler and an organizational strategic asset since it generates organizational competencies through maturity models which are easily duplicated.

The Five Levels of Project Management Value

There are reports on the five levels of the value of project management by researchers in the field (Hurt & Thomas, 2009; Mengel et al., 2009). They analyze the value of project management implementation using the following five levels:

Level 1—Satisfaction: The satisfaction of stakeholders with the management of projects and with project management implementation is a typical value measurement criterion. It can be evaluated by asking the following questions: Do the key stakeholders perceive that the project management implementation provided any value? This is measured through perceptions/self-report satisfaction levels as well as through the use of objective measures (such as repeat customers) wherever possible.

Level 2—Aligned Use of Practices: When projects adhere well to guidelines and adopted methodologies, it tends to achieve the project objectives (expressed in terms of time, cost, quality and stakeholders satisfaction). It is seen as organizational benefit emanating from project management implementation. This value level can be measured through the following questions: Did the project management implementation result in the desired processes? Did they do what they say they did? Do project team members know what they are supposed to do? This is assessed through a comparison of practices, policies, and procedures with what actually happens on projects.

Level 3—Process Outcomes: When transparency, low rework cycles, optimum resource utilization are associated with project management investment, it is considerably perceived as value creation from such investment. Assessing this value level requires answering these questions: What project process improvements have been reaped from the project management implementation? How effective is the project management process?

Level 4—Business Outcomes: Measuring business outcomes from project management is not easy. But, increasing organization's competency in project management will increase appropriate business volume which can be viewed as a benefit of project management investment. What business outcomes are related to these process improvements (e.g., improve customer satisfaction and retention; the organization's ability to attract new customers through their reputation, word of mouth, etc.; increased ability to achieve strategic goals)?

Level 5— Return on Investment: This try to measure the financial returns from every fund invested in project management initiative. What returns in terms of cost savings, revenue, etc., can be attributed to it?

The Competing Value Framework

The competing value framework has been popular among researchers studying values of project management implementation. The framework is known to possess great potential for evaluating the contribution of PMO to organizational performance (Aubry & Hobbs, 2011; Thomas & Mullaly, 2007). The framework depicts the relationships between various attributes that needs to be measured when seeking to identify the value of project management investments in organizations. The model recognizes that there is an external context that influences the managerial practices within each organization and ultimately determines the success of any organizational initiative (Thomas & Mullaly, 2007).

The competing value framework is hinged on the theoretical basis of existence of competition in organisations between different variables (needs, tasks, values and perceptions). These variables are identified as a set of 17 unique criteria and grouped into three significant dimensions: **the structure dimension (flexibility and control)**, **the focus dimension (internal and external)**, and **the dimension of purpose and orientation** (Thomas & Mullaly, 2009; Aubry & Hobbs, 2010). These dimensions formed three sets of values that explicitly expressed the inconsistency present in organizations. These values are in constant competition in organizations. In this context, organizational performance depends on the values of those who are evaluating (Cameron, 1986) cited by Aubry and Hobbs, 2010. In most value case of project management implementation researches, only **the structure dimension (paradox between flexibility and control)** and **the focus dimension (paradox between internal and external)** are employed.

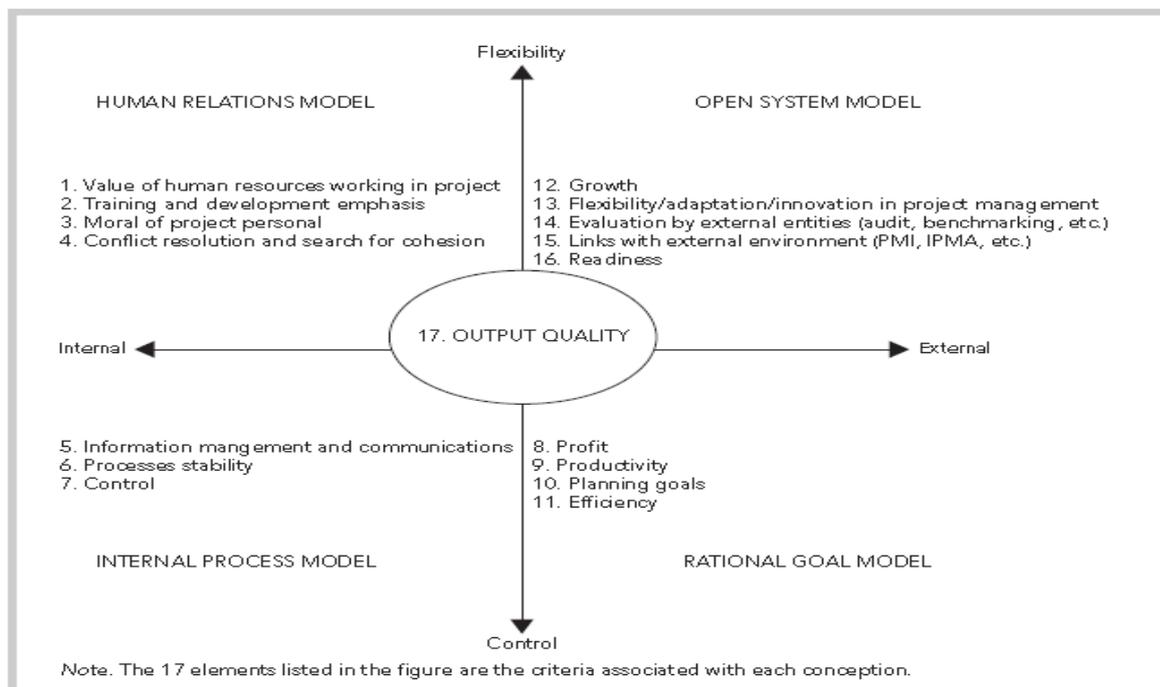


Figure 3.0: Competing value framework (Aubry & Hobbs, 2010)

RESEARCH METHODOLOGY

Researches on PMOs and value of project management implementation within the context of academic institutions in Nigeria is particularly novel. Case methodology has been shown to be suitable in finding fresh perspectives on an established area or areas of research (see, Eisenhardt, 1989). Sallinen et al. (2011) collaborated the idea put forward above by expressing that the use of secondary data alone (such as company documents) is grossly inadequate to handle institutional analysis since the true nature of people's behaviour is rarely published or documented.

Triangulation minimizes method-specific biases in surveys, thus, the use of a multiple data collection methods (Interview, questionnaire and document reviews). This is consistent with those of other studies on the value of project management implementation and PMOs (Thomas & Mullaly, 2008; Cicmil, Dord evi´c, & Zivanovic, 2009; Aubry, Müller, & Glückler, 2011; Andersen & Vaagaasar, 2009; Zhai, Xin, & Cheng, 2009). Four case studies of public tertiary institutions in Nigeria were used to address the research aim. Crouch and Housden (2003) opined that "the main limitations of structured questionnaires are that they can only collect the data made possible by the contents of the questionnaire. The questionnaire can validly handle quantitative aspects of the research, but may not adequately elicit subjective information like perceptions of people to issues. This is complimented by the interviews which would add some insights into the survey because it is largely attributed to small sample sizes, but it is known to be largely susceptible to high level of bias. The research instruments (questionnaires, structured interviews) were pilot tested before being administered.

The potential population includes all tertiary academic institution in Nigeria, but since it is not ideal to study all the tertiary academic institutions within the catchment area of the study; a selection of a representative of the samples becomes imperative. Some state and federal government owned tertiary academic institutions in Ebonyi state were chosen as the sample population. The respondents represent varying cadres of staff working in the Works and Estate departments of the case institutions.

A pre-test of the research instruments was performed to determine their validity and reliability. The instrument validation procedures were initiated with subject-matter experts within the domain under consideration to check for the items' clarity and readability (i.e., face and content validity). A total of 8 experts, comprising five Project Management Professional (PMP) certified members and three doctoral students in a project management program who are members of the project management institute (PMI) reviewed the instruments and provided comments and suggestions on the clarity, readability and appropriateness of the interviews and questionnaire items. Pilot testing of the questionnaires ensures detection and removal of errors which translates into higher and better response rates (Oppenheim, 1992; Cooper & Emory, 1995; Chisnall, 1992; Ticehurst & Veal, 2000).

Four case study organizations within the research catchment area were selected for an in-depth investigation. The four organizations where the case studies took place were referred to as ORG1, ORG2, ORG3 and ORG4. The case organizations are described in this work.

All the interviewees requested to take part in this research voluntarily, although the Directors of the Works and Estate Departments (WED) of the selected case organizations gave their approval. The selection of interviewees was guided by the need to achieve comprehension of the research setting and theoretical underpinning. The interviewees represented a broad spectrum of expertise within the Works & Estate Departments of the case organizations. The researchers orally described the study to each participant and they were assigned codes to ensure their confidentiality and anonymity was protected for purposes of the research. For the demographic details of the interviewees, see Table 4.1. The interviews lasted about forty minutes per interviewee and were digitally recorded and transcribed into a text.

A very critical part of the data collection for the case studies consists of interviews with Directors, Chief Engineers, Principal Engineers, Chief Estate Officers, Senior Estate Officers and Chief Technologists. The main element of the interviews was to identify and discuss the structure and functions of WED and also evaluate most recent efforts in improving project management practices within their organizations. A total of 19 interviews were conducted and thirty five (35) respondents completed the questionnaires. The respondents were given two weeks to complete and return the questionnaires with a tolerance of one additional week. Thirty-five completed questionnaires out of the one hundred and twenty questionnaires sent out were returned, which represents an aggregate response rate of about 29.17%. The returned questionnaires consists of 37.14% from ORG1, 25.71% from ORG2, 20.00% from ORG3 and 17.15% from ORG4 as shown in table 4.0. The overall response rate of 29.17% is commendable for a questionnaire survey since Hillson (2002) received a 46.7%, Olsson (2007) received slightly above 30% while Kayis et al. (2006) received a 43.8% response rates to their questionnaire survey. The distribution of questionnaires and their percentage responses by the case organizations are depicted in figures 4.1 and 4.2. Table 2.0 summarized the respondents by their current job titles.

The research is a qualitative one. Qualitative research is a multi-method involving an interpretive, naturalistic approach to the subject matter. This means that qualitative researchers study things in their natural settings, while also attempting to make sense of, or interpret the phenomena in terms of the meanings people attach to them. Qualitative analysis is Interpretive (Explaining meaning). It is based on context (Implying it is tied to a specific setting and population and will change over time). Data analytical tools like NVIVO, and MS Excel were used to present the data sets and other information to aid their comprehension. The researchers used Audio recorder and the qualitative data sets were transcribed before deploying the Nvivo (Qualitative analysis software). The use of a qualitative data analysis tool/software such as Nvivo is consistent with similar works of **Aubry et al. (2011)**.

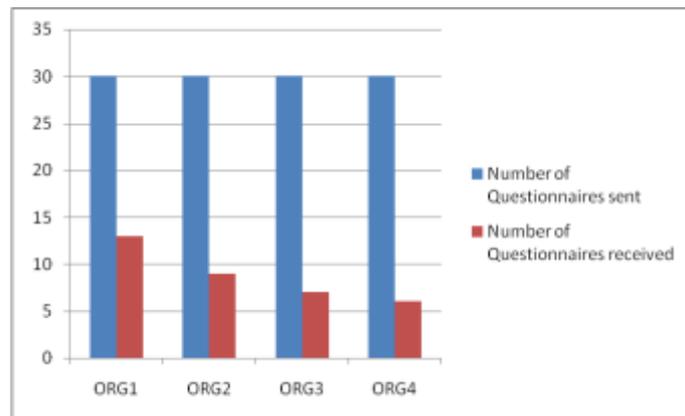


Figure 4.0: The distribution of questionnaires by case organization.

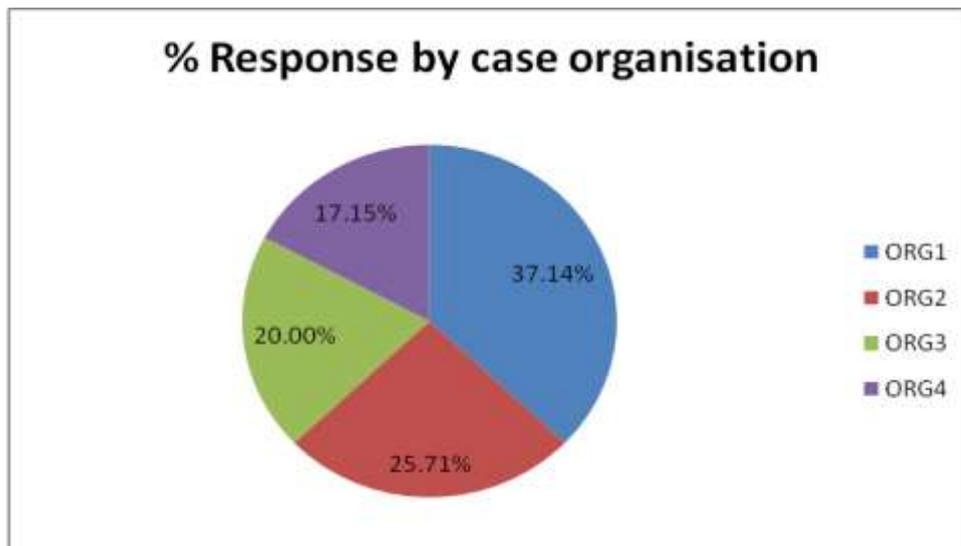


Figure 4.1: The percentage responses to the questionnaires by case organisations

Table 2.0: Summary of Questionnaire Responses by Job Titles in each Organization.

Positions	ORG1	ORG2	ORG3	ORG4	Totals
Director of WED	1	1	1	1	4
Chief Civil Engineer	1	1	-	1	3
Chief Mechanical Engineer	1	1	1	-	3
Chief Electrical Engineer	1	-	1	-	2
Chief Agric Engineer	-	-	1	1	2
Chief Estate Officer	1	-	1	-	2

Principal Civil Engineer	2	1	1	-	4
Principal Mechanical Engineer	1	-	-	-	1
Principal Electrical Engineer	1	1	-	1	3
Senior Estate Officer	1	2	-	1	4
Chief Technologist (Civil)	1	1	-	-	2
Chief Technologist (Mechanical)	2	1	-	-	3
Chief Technologist (Electrical)	-	-	1	1	2
Total	13	9	7	6	35

The interviewees are classified by their case organizations and job titles as shown in tables 3.0 and 4.0. The wide spread of the interviewees across the different units and job titles generated some perceptions which was a close representation of the organizations under study.

Table 3.0: Summary of cases and interviews conducted in each organization

Interviews	ORG1	ORG2	ORG3	ORG4	Totals
Director of WED	1	1	-	1	3
Chief Civil Engineer	1	-	1	-	2
Chief Mechanical Engineer	-	1	1	1	3
Chief Electrical Engineer	1	-	1	-	2
Chief Agric Engineer	-	-	1	-	1
Principal Civil Engineer	1	1	-	-	2
Principal Mechanical Engineer	-	-	-	1	1
Principal Electrical Engineer	-	1	-	1	2
Chief Technologist (Civil)	1	-	-	-	1
Chief Technologist (Mechanical)	-	1	-	-	1
Chief Technologist (Electrical)	1	-	-	-	1
Total	6	5	4	4	19

Table 4.0: Interviewees classification by units in each case organization

Organisations	Directors of WED	Civil Engr. Unit	Mechanical Engr. Unit	Electrical Engr. Unit	Totals
ORG 1	1	3	-	2	6
ORG 2	1	1	2	1	5
ORG 3	-	1	2	1	4
ORG 4	1	-	2	1	4
Total	3	5	6	5	19

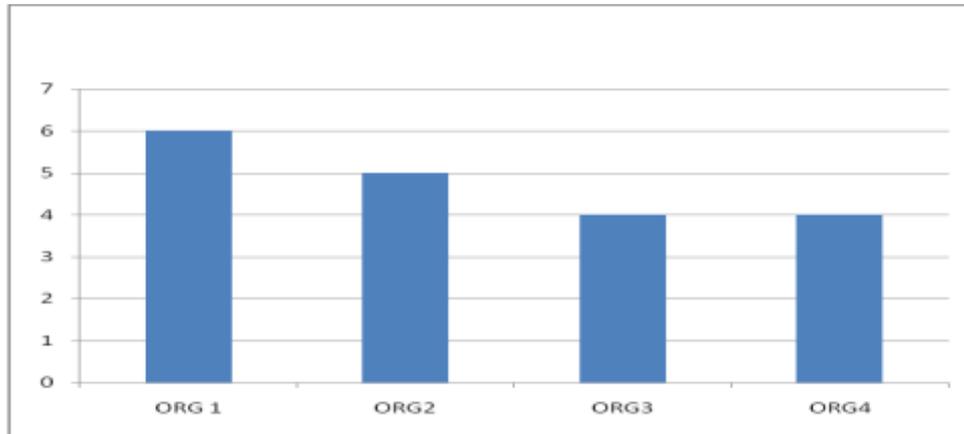


Figure 4.2: Showing the number of interviewees by case organisation

Characteristics of Respondents and Interviewees in their Organizations

All the Directors who responded to the questionnaire and were interviewed had relevant working experience spanning over 15 years. The respondents are well experienced people such that 68.57% of them have working experiences ranging between 11 and 20 years as shown in figure 4.3.

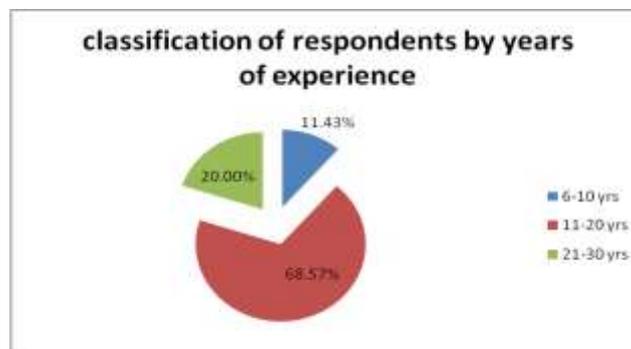


Figure 4.3: Distribution of respondents by their years of working experience

Description of Case Organizations

ORG1 is a state government owed university with several faculties and departments. The Works and Estate Department (WED) is organized and saddled with the responsibility of planning and implementing several projects for the university. It ranges from Buildings, Roads, Electrification, and Transportation to maintenance. It has about 10 projects running concurrently, but can handle about 70 projects per annum. In some of the projects, they are merely supervising contractors while they execute other projects through direct labour. The project is often of interest to the university management and state government and has a myriad of stakeholders. There is increasing pressure on WED to improve on their project governance. The administration of these projects are centralized and housed within the WED department.

Projects are usually handled using the traditional Engineering methods of executing projects and works. There is no known project management approach in place here, but they try to follow the prescribed procedures of project procurement as enshrined in the national procurement act.

ORG 2 is a Federal Government owed Polytechnic running several courses and many non-academic departments. It is the oldest of the case organizations and has very large staff strength. The WED has a very strong functional structure, though they handle several projects annually which are basically construction and engineering related projects. The interviews unveiled that their project management activities revolves around prescribed project procurement processes. It is a regulatory requirement and they always strive to comply. ORG 2 places more emphasis on which projects to select during the last several years. It delivers around 150 projects a year, with most of the projects taking at least three years to complete. Historically, there is a very limited project management capacity in the organization. There is now a growing awareness of the need to develop and deploy project management approach, but none is currently in operation at the moment.

ORG3 is College of Education wholly owned by the state government. It is the youngest of the case organizations under review. The WED here is very young, though with some experienced staff who joined from other agencies of the state government. It has a cross functional organizational structure. Projects are delivered through the expertise of the technical staff without any recourse to any project management methodologies. They handle up to 35 projects annually, and these projects are coordinated and controlled through the WED, though with specific unit's heads as the project leaders and other supporting units making inputs.

ORG4 is a College of Agriculture owned and managed by the Federal Government. It is relatively old but has a pure functional organizational structure. It has a WED that is responsible for organizing, planning, and completing construction and agricultural projects within set constraints. Agricultural projects are more prevalent, but they are usually delivered through traditional methods while adhering strictly to the national procurement act. The project management capabilities here are extremely low and there are no foreseeable plans of adopting any project management standard. See the profiles of the case organizations in table 5.0

Table 5.0: Attributes of WEDs of Case Organizations

Attributes	ORG 1	ORG 2	ORG 3	ORG 4
Ownership	State Government	Federal Government	Federal Government	State Government
Type	University	Polytechnic	College of Agric	College of Education
Structure of WED	Matrix	Functional/Product	Cross-Functional	Functional
Function of WED	<ul style="list-style-type: none"> •Multi-Project Management •Monitoring & Controlling Project Performance 	<ul style="list-style-type: none"> •Multi-Project Management •Monitoring & Controlling Project Performance 	<ul style="list-style-type: none"> •Multi-Project Management •Monitoring & Controlling Project Performance 	<ul style="list-style-type: none"> •Multi-Project Management •Monitoring & Controlling Project Performance
Size of WED	Medium	Medium	Small	Small
Age of Project Management	2yrs	1yr	NA	NA

Capability				
Organizational Commitment to Project management	Low	Low	Very low	None
Types of projects	Building, Roads, Maintenance, Transport	Building, Roads, Maintenance, Transport	Building, Roads, Maintenance, Transport	Building, Roads, Maintenance, Transport
Number of projects per annum	50 & above	70 & above	47 & above	30 & above
Project management methodology	Informal with low adherence	formal with very low adherence	None	None
PM Qualifications Present	● Certificate in Basic PM	● Certificate in Basic PM	● None	● None
PM training offered	● Bill of Engineering Measurement & Evaluation (BEME)	● Bill of Engineering Measurement & Evaluation (BEME)	● PM Basics	● PM Basics
Tangible Benefits	● Reduced time overrun ● Reduced project abandonment	● Reduced time overrun ● Reduced project failure	● Reduced project variations ● Reduced project abandonment	● Reduced cost overrun ● Reduced project abandonment
Intangible Benefits	● Attainment of tactical objectives ● More human capital management ● Improved reputation	● Increased management confidence ● Better use of resources ● Improved project decision making	● Attainment of strategic objectives ● More effective human resources management	● Attainment of operational objectives ● Reduced friction in projects
Perception of value of Project Management	● Medium ● reduced projects failure and abandonment	● significant ● Increased concurrent handling of multiple projects	● indifferent	● indifferent

Typical interviewee’s comments

We will show some typical comments from the interviewees on the question of structure and functions of their department. First, from ORG1: Mixed structure depending on situations. (ORG 1, several interviewees) Sometimes project teams are constituted to handle a particular project while others are run by a particular unit. We design, plan and monitor our projects from the department (ORG 1, Director) We monitor and control several projects at the same time (ORG 1, several interviewees). From ORG 2: We have professional units that handle projects

that fall within their specific expertise (ORG2, several interviewees). Projects are managed partly by the school management while we handle the supervision (ORG2, Chief Civil Engineer). Some of our projects are designed, planned and awarded from Abuja (ORG2, several interviewees). ORG3: The department follows a traditional organizational structure, where the Director is in absolute control (ORG3, Chief Agric Engineer). We follow clearly defined communication channels in every transaction (ORG3, Chief Technologist-Electrical). The Director of WED coordinates all projects in collaboration with the unit heads (ORG3, several interviewees). Projects are assigned to staff with the professional competence (ORG3, Director). From ORG4: There is hard core function-based classification here, where you mind only jobs and duties assigned to you (ORG4, Senior Estate Officer). Duties and projects are allocated according to your professional training (ORG4, Director). We plan, supervise and control projects assigned to us (ORG4, Principal Electrical Engineer).

Considering the question of project management education, capabilities and approaches available, the following responses came up, ORG1: We are have attended some project management trainings and workshops as part of compulsory annual capacity building (ORG1, Chief Mechanical Engineer). I have taken some PM modules during PG program but have never used it at work (ORG1, Chief Estate Officer). PM is not practiced here, though we have all heard and trained on it (ORG2, Several Interviewees). There is none of our staff with any PM qualification, but we will soon send some out for the basic PM training (ORG4, Director).

Though, there are no formal project management approaches existing in the case organizations. It is therefore of interest to summarize how the interviewees perceive the positive effects of their Pseudo PM efforts. The efforts are said to:

- reduce time overrun (ORG1, ORG2);
- reduce project variations (ORG3, ORG4);
- provide reduced project abandonment (ORG1, ORG3, and ORG4);
- Increase management confidence (ORG2);
- Increase concurrent handling of multiple projects (ORG2);
- help to reduce project failure (ORG1);
- contribute to make the department feel important (ORG 1);
- result in reduced frictions in projects (ORG4).

Comparing the Four Case Study Organizations

Context

There are similarities in the specifics of the context of the four organizations since they are all public owned institutions operating within the tertiary education sector of the same country. ORG2 and ORG4 are federal government owned and are required to comply with the national procurement act when procuring their projects. “*Our projects pass through the national procurement acts procedures*” (ORG2). There are many projects in ORG1 with very informal project management procedures in place. But the Public-Private partnership (PPP) partners who are expatriates have brought in a project management standards. Our partners on PPP from USA who are involved in developing our permanent site have introduced some PM standards and methods in the projects they are delivering (ORG1, Director).

Common Issues

There is a strong engineering culture in all the four organizations. The impact of this is that discipline based projects are assigned to the specific engineering unit to handle as mirrored in their views: We have professional units that handle projects that fall within their specific expertise (ORG2, several interviewees). Projects are assigned to staff with the professional competence (ORG3, Director). Duties and projects are allocated according to your professional training (ORG4, Director).

Public-Sector Governance and the Value of Project Management

These four case studies provide a considerable bandwidth to evaluate the value of project management from public-sector perspective. Using the same themes, drawn from the preceding literature review, the text of the interviews and questionnaire survey was analyzed to provide insights into the nature of the context and specific expectation and realization of project management value from a public tertiary institution perspective:

Theme 1: Accountability and Transparency

Sound processes and systems that support and enhance accountability are critical for good governance within the public sector. All four organizations had a strong awareness of the need for effective accountability and reporting mechanisms. This was a predominant theme throughout the interviews and in the questionnaire. In the area of project governance, we are required to follow all the procedures prescribed by the national procurement act during all the phases of the project. It constrains both the clients and the contractors from playing games (ORG2, Director).

Theme 2: Control and Compliance

Control and Compliance are associated with accountability. All these case organizations are constantly scrutinized by the Audit departments, politicians and the public. They try always to deliver projects that meet the diverse expectations of the various stakeholders. Our projects are constantly monitored by different agents of government ranging from legislators performing their oversight functions to other public officers who are carrying out inspections to ensure compliance to set rules and procedures in the public service (ORG1, Director; ORG2, Chief Civil Engineer; Several respondents from the four case organizations).

Results and Discussions

Findings suggest that the case organizations share certain common views on the WED structure and functions which places them as Project Management Offices. Situating WED as a PMO from their structures and functions using the PMO descriptive model in figure 2.0 and PMO functions grouped into five in table 2.0. We can elicit some common themes from the interview transcripts and questionnaire responses that can match the descriptive model and PMO functions such as *...We design, plan and monitor our projects from the department; ...We monitor and control several projects at the same time. ...We have professional units that handle projects that fall within their specific expertise.* The department follows a traditional organizational structure,

where the Director is in absolute control. The Director of WED coordinates all projects in collaboration with the unit heads. Projects are assigned to staff with the professional competence. We plan, supervise and control projects assigned to us.

Though the WEDs are not known and addressed as project management office, they are impliedly and made to serve as central clearing houses for all projects in their organizations. When they are not executing, they are either controlling or supporting which are in consonance with views canvassed by several authors (Kendall & Rollins, 2003; Hurt & Thomas, 2009). The Works and Estate Departments (WED) of the case organizations under review were charged with mandates to provide leadership, guidance and support to all projects within their organizations. Thus, these WEDs are typical PMOs.

CONCLUSIONS AND LIMITATIONS

The Works and Estate Departments of the tertiary academic institutions in Nigeria are organized and ran as project management offices. They perform different functions to different projects which ranges from controlling, executing to supporting. They have an assemblage of specialist skills that can be called upon at different stages to work on the project. The WEDs as PMOs creates value for different stakeholders of the projects. The value is a mixture of both tangible and intangible benefits. They include reduced time overrun, reduced project abandonment, reduced project failures, reduced cost overrun, attainment of strategic; tactical and operational objectives; increased management confidence, better use of project resources and improved reputation.

The results of this analysis demonstrates how the WED in the tertiary academic institutions in Nigeria behaves and functions as PMO. It provides constructive and vital insights of the concept of PMO. Specifically, the analysis demonstrates what Aubry et al. (2011) illuminate by canvassing that the definition of PMO brought several entities under its fold. Equally, the analysis underpins the construct of value creation from project management implementation. It suggests that there are values and benefits derivable from project management deployment in organizations. It will equally enrich the current discussion on the values of PMOs in organizations.

As with any research paper, this study has several limitations that need to be addressed in further research. First, the locations of the case organizations in a single region cannot be an entire representation of the Nigerian perspective. Some other institutions in other regions may have a robust and matured WED with formal Project management standards and procedures in place. To analyze this PMO value direction more effectively, a larger sample survey will be needed and live projects need to be studied.

REFERENCES

- Andersen, E.S., & Vaagaasar, A.L. (2009). Project management improvement efforts-Creating project management value by uniqueness or mainstream thinking? *Project Management Journal*, 40(1), 19–27.
- Aubry, M., Richer, M., Lavoie-Tremblay, M., & Cyr, G. (2011). Pluralism in PMO performance: The case of a PMO dedicated to a major organizational transformation. *Project Management Journal*, 42(6), 60–77.
- Aubry, M., & Hobbs, B. (2011). A fresh look at the contribution of project management to organizational performance. *Project Management Journal*, 42(1), 3–16.
- Aubry, M., Müller, R., & Glückler, J. (2011). Exploring PMOs through community of practice theory. *Project Management Journal*, 42(5), 42–56.
- Aubry, M., Müller, R., Hobbs, B., & Blomquist, T. (2010). Project management offices in transition. *International Journal of Project Management*, 28(8), 766–778.
- Chisnall, P.M., (1992) *Market Research* (4th edition) Maidenhead: McGraw-Hill
- Cicmil, S., Dord evi'c, Z., & Zivanovic, S. (2009). Understanding the adoption of project management in Serbian organizations: Insights from an exploratory study. *Project Management Journal*, 40 (1), 88–98.
- Cooke-Davies, T. J. (2004). Project management maturity models. In P. W. G. Morris & J. K. Pinto (Eds.), *The Wiley guide to managing projects* (pp. 1234–1264). Hoboken, NJ: Wiley.
- Cooper, D.R., & Emory, C.W., (1995) *Business research methods*. Chicago: Irwin.
- Crawford, L. (2006). Developing organizational project management capability: Theory and practice. *Project Management Journal*, 37(3), 74–86.
- Crawford, L. H. & Helm, J. (2009) .Government and governance: The value of project management in the public sector. *Project Management Journal*, 40 (1), 73–87.
- Crawford, L. H. (2010). Deconstructing the PMO. Paper presented at the EURAM, May, 2010, Rome.
- Crouch, S., Housden, M., (2003). *Marketing research for managers*. Butterworth-Heinemann, Oxford.
- Dai, C. X., & Wells, W. G. (2004). An exploration of project management office features and their relationship to project performance. *International Journal of Project Management*, 22, 523–532.
- Eisenhardt, K. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532–550.
- Hill, G. M. (2004). Evolving the project management office: A competency continuum. *Information Systems Management*, 21(4), 45–51.
- Hobbs, B., & Aubry, M. (2007). A multiphase research program investigating project management offices (PMOs): The results of phase I. *Project Management Journal*, 38(1), 74–86.
- Hobbs, B., & Aubry, M. (2008). An empirically grounded search for a typology of project management offices. *Project Management Journal*, 39(S1), S69–S82.

Hobbs, B., & Aubry, M. (2010b). What really affects the performance of PMOs. Paper presented at the EURAM 2010, Rome.

Hobbs, B., Aubry, M., & Thuillier, D. (2008). The project management office as an organisational innovation. *International Journal of Project Management*, 26, 547–555.

Hobbs, B., & Aubry, M. (2010a). *The project management office or PMO: A quest for understanding*. Newtown Square, PA: Project Management Institute.

Huemann, M., Keegan, A., & Turner, R. J. (2007). Human resource management in the project-oriented company: A review. *International Journal of Project Management*, 25, 315–329.

Hurt, M., & Thomas, J. L. (2009). Building value through sustainable project management offices. *Project Management Journal*, 40(1), 55–72.

Ittner, C. D., & Larcker, D. F. (2003). Coming up short on non-financial performance measurement. *Harvard Business Review*, 81(11), 88–95.

Jonas, D. (2010). Empowering project portfolio managers: How management involvement impacts project portfolio management performance. *International Journal of Project Management*, 28(8), 818–831.

Jugdev, K. (2002). Blueprint for value creation: Developing and sustaining a project management competitive advantage through the resource-based view. Paper presented at the PMI Research Conference.

Jugdev, K., & Thomas, J. (2002). Project management maturity models: The silver bullet of competitive advantage? *Project Management Journal*, 33(4)

Kerzner, H. (2003). Strategic planning for a project office. *Project Management Journal*, 34(2), 13–25.

Kinney, T. C., Taylor, J. R., (1991). *Marketing research: An applied approach*, McGraw-Hill, New York, NY.

Mengel, T., Cowan-Sahadath, K., & Follert, F. (2009). The value of project management to organizations in Canada and Germany, or Do Values Add Value? Five Case Studies. *Project Management Journal*, 40 (1), 28–41.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: A source*

Milin, D., Morača, S., Radaković, N., Jašarević, S. & Hadžistević, M. (2012) Analysis of the possibility for establishing project management office (PMO) in companies in Serbia. *International Journal for Quality Research*, 6 (3), 213-219

Mullaly, M., & Thomas, J. L. (2009). Exploring the dynamics of value and fit: Insights from project management. *Project Management Journal*, 40(1), 124–135.

Office of Government Commerce (OGC). (2007b). *Managing successful projects with PRINCE2 Manual 2005 (6th ed.)*. London: The Stationery Office.

Oppenheim, A. N., 1992. Questionnaire design, interviewing and attitude measurement. London, UK: Pinter Publishers.

Project Management Institute. (2008). A guide to the project management body of knowledge (PMBOK® guide; 4th ed.). Newtown Square, PA.

Sallinen, L., Ahola, T., & Ruuska, I. (2011). Governmental stakeholder and project owner's views on the regulative framework in nuclear projects. *Project Management Journal*, 42(6), 33–47.

Santos, V. & Varajão, J. (2015) PMO as a key ingredient of public sector projects' success – position paper. *Procedia Computer Science*, 64, 1190 – 1199. www.sciencedirect.com

Thomas, J., & Mullaly, M. (2007). Understanding the value of project management: First steps on an international investigation in search of value. *Project Management Journal*, 38 (3), 74–89.

Thomas, J., & Mullaly, M. (2008). Researching the value of project management. Newtown Square, PA: Project Management Institute.

Ticehurst, G.W., Veal, A. (2000); *Business research methods: a managerial approach*.

Yin, R. (2003). *Case study research: Design and methods* (3rd ed.)

Zhai, L., Xin, Y., & Cheng, C. (2009). Understanding the value of project management from a stakeholder's perspective: Case study of mega-project management. *Project Management Journal*, 40 (1), 99–109.

About the Authors



Jeff Moses Ogbu

Abuja, Nigeria



Jeff Moses Ogbu, is a Prince2 Practitioner and PMP holder, working currently as a Project Management Consultant at Ferryhills Consulting Limited, Abuja, Nigeria with over 12 years progressive experience in the practice of Engineering and Project Management. He holds a PhD in Project Management Technology from Federal University of Technology, Owerri. He has a double M.Sc degrees in Project Management and Telecommunications Engineering from the University of Sunderland and Newcastle University respectively. His research interests focus on Managing Risks in Information Systems Projects, Project Management Office Performance in a Developing Economy, Measuring Values of Project Management investments and Electromagnetic compatibility of computer devices. He has published more than 6 refereed publications including papers that have appeared and accepted in local and international Journals. He is a member of the Nigerian Society of Engineers, Nigerian Computer Society (NCS) and Project Management Institute (PMI), USA. He can be reached on ogbujeff@yahoo.com



Benedict Amade, PhD

Federal University of Technology
Owerri, Nigeria



Benedict Amade is a Project Manager by Profession. He read and obtained a PhD (Doctor of Philosophy) Degree in Project Management Technology from the Federal University of Technology, Owerri, Nigeria. He is a member of the Project Management Institute (PMI) U.S.A. and presently lectures in the Department of Project Management Technology of the Federal University of Technology, Owerri, Nigeria for the past 8 years. His areas of research interest include construction project management, computer based project management and construction supply chain management. He has authored over 20 scientific publications in international refereed journals and is actively involved in other consultancy works. He can be reached on benedictamade@yahoo.com or benedictamade@futo.edu.ng