

A systems approach to assessing organisational viability in project based organisations

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Abstract

Purpose – Extant literature highlights the increasing inability of project-based organisations (PBOs) to meet infrastructure client's expectations, particularly as it concerns the delivery of socio-economic outcomes during the delivery process. Unclear communication channels and poor processing of information especially as it pertains to client's strategic objectives results in a misalignment of objectives among participating parties. As its central proposition, the purpose of this paper is to hold that unclear communication channels between parties within infrastructure project PBOs affects their degree of internal cohesion hence posing strong challenges to their overall viability.

Design/methodology/approach – Applying the Viable Infrastructure Delivery Systems Model (VIDM); a model premised on the tenets of the Viable Systems Model, this qualitative study proceeds to assess a particular PBO within a developing country to understand its communication and control channels and to identify where gaps likely to affect the internal cohesiveness of the PBO, if any, existed. Whereas semi-structured interviews and project/policy documents were used as data collection tools, data were analysed using pre-set themes.

Findings – According to the study's findings, an absence of a prevalent common identity was observed among the various parties to the PBO. Contractors' capabilities to deliver on time and to budget based on their expertise remained pivotal within the PBO thus abandoning the attainment of the client's pre-defined socio-economic objectives. Cases of faulty and ineffective organisational architecture, functional and communication issues were observed.

Research limitations/implications – Based upon these findings, it is recommended that the VIDM be adopted at the commencement of the PBO lifecycle and used at various intervals by project managers and other stakeholders for assessing the levels of organisational viability.

Originality/value – The methodology and findings resulting from this study represent information from fieldwork conducted by the author and as such have not been used elsewhere.

Keywords Nigeria, Implementation, Social benefits, Infrastructure delivery, Organizational viability, Project-based organizations, Socio-economic benefits, Systems analysis

Paper type Case study

Introduction

Project-based organisations (PBOs) within the realm of infrastructure delivery consist of multi-disciplinary, inter-organisational project teams with diverse cultures, and values (Hobday, 2000; Thiry and Deguire, 2007). Projects of such magnitude are increasingly being delivered through collaboration between the public sector and the private sector (Public-Private Partnerships (PPP)) (Van Marrewijk *et al.*, 2008). This is especially so in developing countries where there is a shortage of funds (Gidado, 2010b). The involvement of several parties representing the public and private sector within PPP has increased the complexity in the delivery process thus resulting in



unclear communication and prevalence of acrimonious relationships between parties. This poses a major challenge to the overall governance of such projects (Gidado, 2010a). The inability of project managers to manage this attendant complexity has been cited severally as a root cause of the failure of PBOs to meet the expectations of infrastructure clients (Adetola *et al.*, 2011; Akinyosoye, 2010; Estache and Limi, 2008).

Unfortunately, the Nigerian government sits among the league of unsatisfied clients (Foster and Pushak, 2011; Okonjo-Iweala and Osafo-Kwaako, 2007). This disappointment stems from the inability of PBOs responsible for delivering economic infrastructure to achieve the policy goals of the government as it concerns the provision of socio-economic benefits within the local economy. Globally, governments have decided to heed the increasing advocacy for the utilisation of the expenditure committed to public procurement in driving socio-economic objectives aside the key issues of time, cost and quality (Arrowsmith, 2002, 2010; Esteves *et al.*, 2009; Hawkins and Wells, 2006). In recent times, countries have put up several policy initiatives to ensure that the capital investment on infrastructure development and other aspects of public procurement leaves a positive impact on the local economy.

The Nigerian government appears committed to delivering socio-economic benefits through the procurement of infrastructure across several sectors of its economy, particularly the oil and gas industry. This is evident in the plethora of public policy documents and legislations, namely: NEEDS; Vision 20:2020; and the Nigerian Oil and Gas Content Act. The government has not hidden its intention to develop local competencies within its oil and gas industry, thus enabling the domestic suppliers to achieve a higher degree of international competitiveness. Transfer and exchange of knowledge is one of the media through which government intends to achieve this. The oil and gas industry is critical to revamping the Nigerian economy as it is responsible for, approximately 86 per cent of the country's total revenue (Adewuyi and Oyejide, 2012; Iwayemi, 2008). To this effect, the government has promulgated laws seeking to develop and monitor local content within the industry (Ehondor, 2009). Procurement and effective delivery of infrastructure has been used to achieve similar objectives in the UK, the USA, South Africa and Malaysia. However, Thiry and Deguire (2007) cite extant literature as positing that policy implementation, in most cases, never went past the planning stage of such projects. Furthermore, they highlight the inability of the balanced scorecard model and the business excellence model to remedy this disconnect between planning and policy implementation. So the question really is – is there really a disconnection and if yes, where does it occur?

Several studies observe that recent investments in upgrading the oil and gas infrastructure by the government and its joint venture (JV) partners have made insignificant impact on the development of local supply chains in Nigeria (Adebola *et al.*, 2006; Aigboduwa and Oisamoje, 2013; Ihua, 2010). However, these studies have failed to adopt a systemic approach in investigating the causes of poor implementation at the project-level. This deficiency makes this study imperative as it seeks to use the Viable Infrastructure Delivery System (VIDM) and its associated methodology (Awuzie and McDermott, 2015) to carry out this diagnosis. It is expected that the study would further strengthen the VIDM methodology as a veritable mechanism for diagnosing PBOs for viability. Furthermore, it would provide an insight into the causes of poor implementation.

As its central proposition, this study holds that PBOs must attain and maintain viability if they are to deliver the client's objectives; and that for PBOs to do that, they must be effectively designed, subsequently organised and governed in line with the

principles of viability. Organisational Viability is used here to refer to the ability of a PBO to attain and sustain a state of homeostasis through achieving internal cohesiveness, self-regulating and self-governing status without interference from exogenous and endogenous factors. Towards assessing an existing PBO for viability, the authors intend to, in subsequent sections, discuss: the concept of PBOs, the concept of organisational viability, the Viable Systems Model (VSM), VIDM, and the methodology. This is followed by the presentation of the study's findings, the discussion of these findings and the conclusion.

The concept of PBOs

According to Sydow *et al.* (2004), PBOs can be described as particular sets of organisational forms consisting of temporary systems developed solely for executing defined projects. They posit that PBOs possess innate abilities to overcome conventional barriers to change and innovation within organisations due to their temporary and short-lived characteristics. PBOs vary according to the context within which the project is actually being delivered. Sydow *et al.* (2004) maintain that these contexts might include: organisational units, whole organisations, inter-personal and inter-organisational networks, and organisational fields comprising of several parties. Hoverstadt and Bowling (2005) maintain that a manager's capability to engage in effective management of situations which might arise within his organisation is directly proportional to the accuracy and relevance of the organisational models which he/she is using to understand his/her organisation. Turner and Keegan (1999) argue that the process-based management model, which is central to PBOs allows for better focus to be accorded the client or customer – a duty in which the project management model falls behind in achieving.

On his part, Hobday (2000) maintains that the PBO is differs from the matrix and other forms of organisation as it is the only form of organisation in which the project is primary unit for production organisation, innovation, and competition. PBOs, he adds, organise their structures, strategies and capabilities around the needs of projects, which often cut across conventional industrial and firm boundaries. They are confronted by severe dilemmas which affect their governance, constitution and overall performance (Sydow *et al.*, 2004). The PBO has been used, in the context of this paper, to describe the entirety of participating parties within the procurement system for the delivery of an infrastructure asset.

Organisational viability – a review

Schwanger (2012) observes that for a system to remain viable and deliver its purposes whilst maintaining its identity within the ever changing world, it would need to consist of several integral layers all which must be present to make for a viable whole. This led to the development of the VSM by Beer in the 1960s (Leonard and Beer, 1994). According to Beer (1979), viability remains a common goal-either long term or, in the case of temporary organisations, considerably long enough to accomplish its intended purposes. Also, Hoverstadt and Bowling (2005) describe viability as an essential organisational attribute.

The VSM has been applied severally by researchers to diagnose and/or design organisations for viability. However, the attention of this study is drawn to the following applications of the VSM to peculiar contexts; as a framework for understanding the systemic roles and functions of governance in the determination of

organisational viability (Davies, 2007), as a systemic conceptual framework, consisting of functions ranging from policy-making to implementation allowing for structuralising the linkage of these functions to one another and to the system's external environment (Adham *et al.*, 2012), as possessing the ability to provide a simple and clear structure to cater for proliferating complexity (Pfiffner, 2010), and mainly as being able to integrate outside and inside, present and future, structure and process, operation and management in one systemic, holistic model (Pfiffner, 2010).

Also, the age-long advocacy for the application of systems thinking principles to construction and construction-related research as championed by Morris (1983) and Winch (1989) alongside the views espoused by Pfiffner (2010) and Hoverstadt (2008) on the essential nature of models for improved management furthermore buoyed the decision of the authors to rely on the tenets of the VSM for diagnosing and/or (re) designing PBOs for viability. This occasioned the use of the VIDM; a model premised upon the tenets of the VSM (Figure 1).

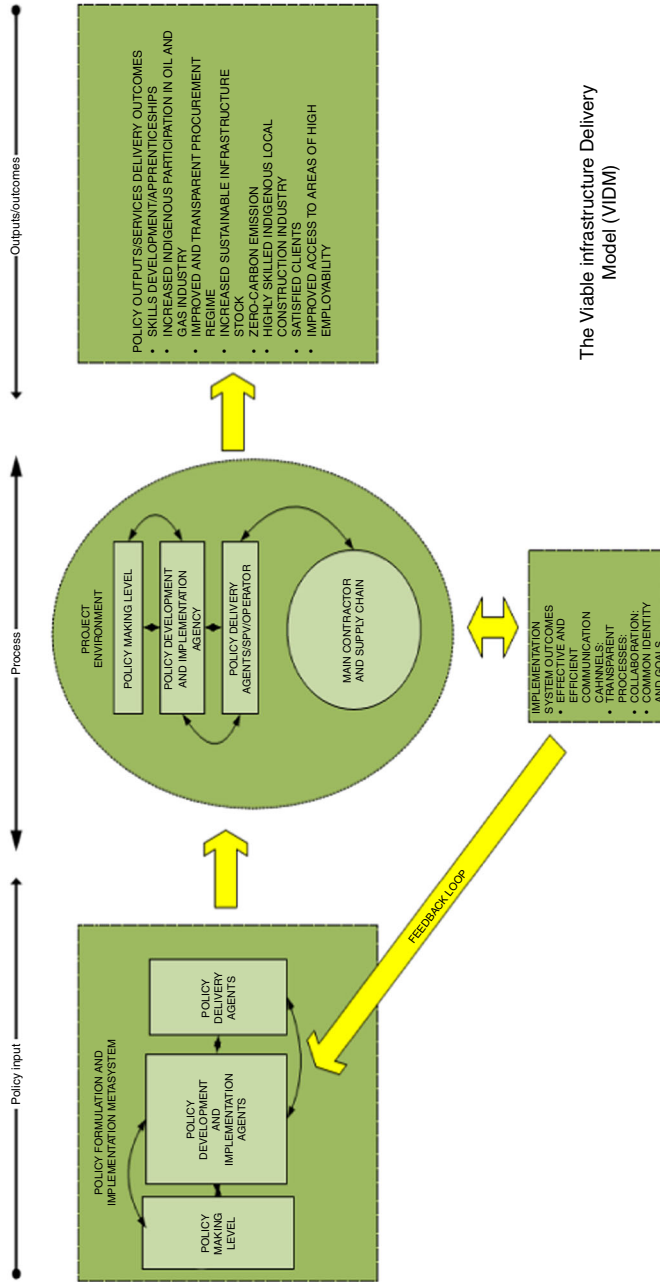
The VIDM serves as an appropriate model for such task given the proclivity of PBOs to appear as a variety of loosely coupled organisational and trans-organisational contexts which necessitate the use of only multidimensional and multi-level conceptualisations to capture their inherent complexities (Sydow *et al.*, 2004).

Methodology

This study was carried out as part of a wider study which was premised on the use of an abductive, qualitative and multi-case study research strategy, however only one of the cases is being reported in this paper. Abductive reasoning was selected for the study because it allows the researcher to use extant theoretical foundations in making sense of the emergent data (Dubois and Gadde, 2002; Leiringer *et al.*, 2009). In this case, the concept of organisational viability was used to gain a better understanding of the relationships existing between various parties to the PBO and how these relationships affect implementation of socio-economic benefits during procurement and delivery.

The case study approach is deemed appropriate for the study given its ability to allow investigators study a phenomenon in its natural context, allowing for, as it is, the use of multiple data sources (Yin, 2009). Dickinson *et al.* (2007) in a longitudinal study into the implementation of policy through procurement, profess the capability of the case study approach in enabling for in-depth understanding of process-based activities such as policy implementation. This can be likened to the scenario in this study, although this study adopts a cross-sectional perspective. Dubois and Gadde (2002) in their work, observe that when applied in certain contexts, case studies are faced with the daunting challenge of handling the interrelatedness of the several elements and factors evident in the research activity. This hindrance has been effectively countered in this study through the introduction of the VIDM. The multi-layer and recursive nature of the VIDM allows for the researchers to use it to identify these interrelationships within case studies with ease (Awuzie and McDermott, 2015).

The usage of multiple sources of evidence to ensure construct validity has also been highlighted as one of the merits of the case study approach (Yin, 2009). In view of this and to provide an all-embracing platform for the parties to the PBO to bare their minds, appropriate data collection techniques were utilised: semi-structured interviews; observation; and documents. These techniques have been known to provide appropriate platforms for the unrestricted expression of personal perspectives (Awuzie and McDermott, 2015) and do come highly recommended by several



Source: Awuzie and McDermott (2015)

Figure 1.
The VIDM

researchers (Denscombe, 2007; Hartley, 2004; Kvale, 2006; Miles and Huberman, 1994). In total, 13 face-to-face interviews, each averagely lasting for an hour, were conducted with representatives of the organisations within the PBO. In selecting the case the following criteria was applied, namely: that the PBO satisfies the definition of a PBO as proffered in the literature; that the case consists of the PBO responsible for the holistic delivery of infrastructure, from policy to project implementation level; that the PBO possesses as one of its critical mandates, the delivery of socio-economic benefits; and the project which is central to the PBO must be an on-going one or recently completed.

Figure 2 shows a diagrammatic illustration of the relationships between the parties to the PBO for project X's delivery.

This study is concerned with the relationship between the PBO members shown within the area labelled as "the Infrastructure Delivery System" and not the relationship between the PBO and its external environment as shown by the area labelled the project's host environment. The PBO is divided into two sections to highlight the parties involved in either policy (Subsystems 5, 4 and 3), policy implementation (Subsystems 3, 2 and 1), or a combination of both (Subsystems 4, 3, 2 and 1, respectively).

The MDAs at Subsystems 4 represent Ministries, Departments and Agencies responsible for regulating and monitoring policy implementation within the oil and gas industry. MDA 2 is particularly involved with the monitoring of local content development in the sector. The case revolved around a PBO set up to deliver an oil and gas project (Project X) in Nigeria. Project X is a pipeline project situated within Nigeria's Niger Delta region. The project which spans across three states and 114 communities was procured in 2010. Construction work commenced in 2011 and was commissioned in February 2013. The oil and gas project was part of a programme of infrastructure assets through which the government sought to deliver its local content development objectives. Purposive sampling technique (Denscombe, 2007) was adopted as only participants to this PBO were selected and subsequently interviewed. The table below shows the profile of the interviewees (Table I).

During the interviews, the authors sort to establish the current practices obtained within the PBO. Questions were fashioned in such a manner that it provided interviewees with the opportunity to share their viewpoints, narrating their experiences as members of the PBO. Their relationship with other parties and their perceptions of the workability of the various government public procurement policies in line with the delivery of socio-economic benefits also formed part of the questions. Documents were also reviewed intermittently on the scope of these projects, what the client's success factors were, and how it was being communicated to the entire parties to the PBO. One of the authors (BA) participated in meetings at the implementation level of the PBO. Issues were also raised especially as it concerns the impact of the partnership between the public sector and the private sector (JV) on the deliverability of socio-economic benefits and effective governance. The JV was recognised as a PPP scheme as it satisfies the definition rendered by Hodge and Greve (2010). From the findings and through a systems viability prism, the authors attempt to create a construct of the VSM based on the findings and then identify the failings of the PBO and then make recommendations for correcting these observed anomalies (Hoverstadt, 2008; Hoverstadt and Bowling, 2005; Ríos, 2010).

These interviews were recorded and transcribed verbatim. Policy documents and project documents were reviewed to establish the stipulated roles of these parties in the delivery of infrastructure from a local content development perspective. Contradictions

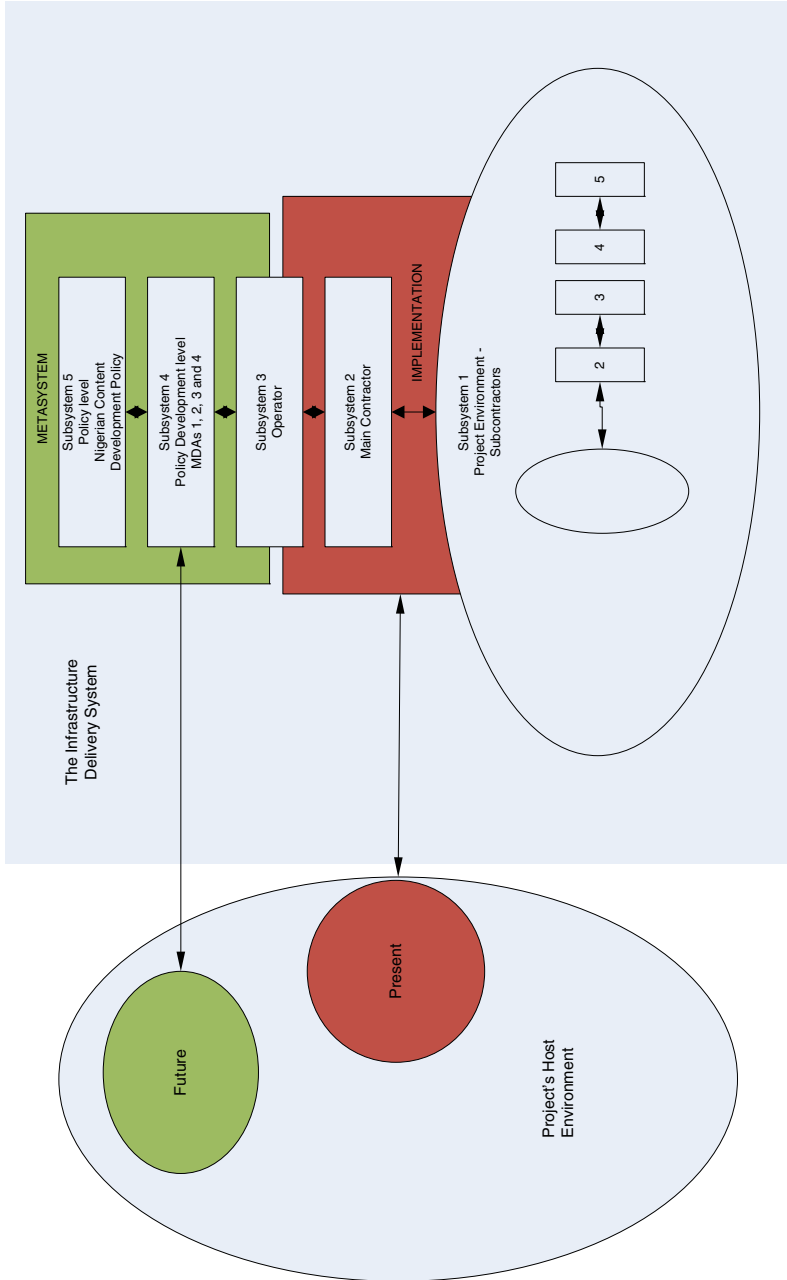


Figure 2.
The Viable
Systems Model for
Project X's PBO

System	Organisation	Position	Code
4	MDA 1	Programme officer, projects	A1
4	MDA 2	Project evaluation and monitoring officer	A2
		Senior planning officer	A3
4	MDA 3	Project monitoring officer	A4
3	JV operator	Programme manager	B1
		Project manager	B2
		Project officer (Nigerian content)	B3
2	Main contractor	Project manager	C1
		Project procurement lead	C2
		Community relations officer	C3
1	Subcontractors	Managing director (1)	D1
		Managing director (2)	D2
		Procurement engineer	D3

Table I.
Profile of
interviewees

noticed in the data between the declared roles and the stipulated roles were singled out and categorised according to pre-set themes, namely: structural, functional; and communication-related pathologies. The concept of using pathologies to categorise results emanating from organisational viability assessments has been applied by Schwaninger and Rios (2008) and Rios (2010). After using the VSM to diagnose an organisation, they classified the findings of their diagnosis into three pathologies: structural; functional; and communication-oriented pathologies. These pathologies posed as barriers to the attainment of organisational viability. According to Rios (2010), structural pathologies refer to those pathologies which affect the ability of the organisation to combat the complexity confronting it due to the design of its management and governance structure whereas functional pathologies refer to pathologies resulting from the failure of certain Subsystems to perform assigned roles, necessary for the attainment of viability, within the system. The pathologies associated with communication channels were described as those which hinder the flow of information within the organisation or system Rios (2010). Data were collected from different sources within the multi-layered PBO hence resulting in data source triangulation (Kohlbacher, 2005; Patton, 1999). Interviews continued until data saturation was achieved (Guest *et al.*, 2006). It is not the intent of this paper to achieve generalisation of any sort, statistical or analytical, but to highlight the proficiency of the tenets of organisational viability as imbued in the VIDM to successfully assess PBOs for viability.

Findings and discussion

Following on from the analysed interviews and documents, certain gaps capable of causing a series of disconnections within the delivery PBO were discovered. These gaps are discussed subsequently, under the three pathologies discussed previously and are shown in Table II. Only the critical ones identified are highlighted and discussed below.

Structural pathologies

The researchers discovered certain factors capable of causing the disconnection between the entire PBO particularly as it affects the development of local content during project delivery. Most prominent among these factors is the presence of several MDAs performing similar/same tasks at the within the same subsystem otherwise referred to as entangled vertical unfolding with various inter-related memberships.

Table II.
Summary of
the findings

Categories	Summary of findings from the PBO
<i>Pathologies</i> Structural pathologies	Duplication of roles at System 4 by government agencies resulted in unnecessary complexity of the various entry processes hence contributing immensely towards making the entry of local suppliers into the construction supply chain difficult The absence of a direct inter-organisational interface between the construction client and the suppliers within the PBO deprived the client of the ability to monitor the lead contractor's approach to supporting local content development during the project delivery phase
Functional pathologies	Lack of government support Absence of industrial base in-country Il-defined organisational identity for PBO Lack of transparency during procurement especially Non prioritisation of Nigerian content development in the award of contracts by the EPC contractor as more emphasis was laid on price and capability Delayed payments were experienced on the part of the suppliers and this affected their liquidity Absence of skilled manpower Poorly structured and managed supplier organisations Lack of access to affordable finance and requirement of performance bonds from contractors Lack of effective monitoring apparatus for monitoring progress of local content development
Communication-related pathologies	Lack of consensus between parties about the appropriate criteria for measuring content development progress and absence of a proper communication channel between the Metasystem and the project environment Misinterpretations of the sections of the Act, particularly as it pertain to definitions

Duplication of roles at System 4

According to Ríos (2010), the presence of many departments within particular level of an organisation could lead to the defeat of the organisational purpose due to the ensuing confusion. Within this PBO, the presence of several government agencies carrying out similar tasks was discovered at Subsystem 4. All interviewees situated within Subsystems 3, 2 and 1 agreed that this proved a major hindrance to the effective organisation of the project delivery exercise in line with the expected outcomes.

According to B1:

We were taken aback when we were asked to submit our plans for the development of Nigerian and Niger Delta content respectively within Project X in accordance with the dictates of the law to MDA 3 as we had done so two years before the coming on stream of the MDA to MDA 1 [...]. This was a major setback especially in financial terms.

This apparent confusion was also observed in the area of application for expatriate quotas. The Nigerian Content Development Act (2010) had stated that the minister's consent must be obtained before the increment of expatriate quota by companies involved in the sector.

CI acknowledged this problem when he stated that:

For project X, We stated at the commencement of the project that we did not possess enough in-country capabilities to deliver certain work packages within the project and would have to

hire more expatriates. Although the procedure for this was spelt out in the Act, we ended up spending three months in trying to ascertain which MDA, out of the several, was responsible for this as they were all under the Minister.

Functional pathologies

Some of the salient functional pathologies observed from the interviews and the documents are as follows.

Ill-defined organisational identity

To attain and maintain viability, organisations such as the PBO being understudied should share a common identity (Ríos, 2010). Hence for project X's PBO to be viable, all parties to the PBO in project X should share a common objective as regards what the project deliverables are and accord them similar or equal weightings. Unfortunately, it was discovered that this was not the case from the data. The MDAs, particularly the MDA responsible for the monitoring of content development signified their desire to ensure that appreciable progress was made in the retention of capital expenditure arising from the O and G projects in-country. The statement made by A3 below reveals this determination:

Here, we place so much emphasis on the content development plans of industrial players before allowing them to carry on with any development of infrastructure as that is the core of our mandate as an organisation [...] a project can be described as having failed if it does not add value to the lives of the host community or national economy and we tend to view proposed projects from that perspective.

But on the other hand, B1 pointed to other deliverables from project X as being of paramount importance to his organisation:

[...] project X is a very strategic one for us here at "operator's company" as it is central to boosting our productivity level. Having this project delivered on time and to budget would enable us meet our production targets for the next five years.

From B1's statement, it can be discerned that the achievement of the Nigerian content policy objectives during the delivery phase was a secondary objective as timely completion and functionality of the completed asset remained crucial to the client/project sponsors. According to Tordo *et al.* (2013), this disparity is to be expected as several production companies do yet not see the attainment of local content objectives as a fundamental part of their respective business cases. These signposts point to prevalence of divergent views about what the central objective (identity) of the PBO should be. This is not an isolated case as scholars seeking to highlight the multi-organisational nature of project delivery and policy implementation (de Blois and Lizarralde, 2010; Stringer, 1967) seem to agree that within the multi-organisational structures, getting all parties to align to the goals of the overall organisation always poses a lot of challenges. Implementing policy through project delivery, such as is the case in this study appears to be one of such forms of multi-organisational activity (Hill and Hupe, 2009).

Poorly resourced MDAs

There was an evidence of a poorly resourced implementation monitoring MDA. Both main contractors and the operator's PM (B2) complained about the lack of appropriate measurement reporting standards for their Nigerian content development

strides within the project. They insisted that the MDA's officials lacked the skills to comprehend properly, the measurement indices contained in the Act:

[...] there were instances where officials from the government agency (MDA 2) had disapproved of our style of reporting Nigerian content within the project which was according to the index provided in the Act [...] it was apparent that the MDA needs to do a lot of work in training their staff to understand how to measure the deliverables associated with the Act within projects (B2).

On the other hand, the interviewee representing the MDA (A2) argued that although they did not possess adequate manpower and resources to monitor all the projects for Nigerian content development, their major concern lay in the absence of a standard framework for measuring the deliverables on projects such as project X:

[...] whilst the law is clear on the deliverables expected of projects being carried out in the oil and gas industry, via-a-vis the development of Nigerian Content, we have often been confronted with the problems of deciding how to measure these deliverables being reported to us by the Operators as they are the ones whom we hold responsible for any breaches and project X is not an exception [...] whereas the Operator has reported huge increment in the number of local man-hours used, the massive disparity between the expenses made to cover the wages of the local resource and the one made to hire expatriates and machinery for tasks on the project calls for serious concern.

This observation corresponded to findings arising from recent research on the implementation of the local content within the O and G industry wherein Tordo *et al.* (2013) observed that there was a need for proper alignment of the policy objectives with the instruments.

Poor operator/main contractor/subcontractor interface management

The subcontractors; D1, D2 and D3, respectively accused the main contractor of being unfair in the allocation of certain work packages to them, insisting that the MDA responsible for the monitoring content development was in cahoots with the main contractor and the operator in undermining their capabilities.

D3 maintained that they were neglected in the award of lucrative work packages within the project:

[...] the more lucrative jobs which would have afforded us the opportunity to provide our local employees with first hand experience of on very sensitive tasks such as underwater welding and fabrication were outsourced to foreign firms or local firms who have expatriate staff under their employ and surprisingly, you know [...] the Nigerian factor, the MDA officials remained silent when we complained to them.

But B2 and C1 agreed that this was not the case but rather identified the shortage of local skills for the execution of certain tasks as the driving factor such decisions:

[...] most of these subcontractors don't possess actually the required skilled manpower to do some tasks within the project and don't forget that this is a very critical project where we cannot afford to compromise on standards hence the need to contract tested and trusted subcontractors [...] in the past, some of these subcontractors have collected contracts for work packages only for them to turn around and sell them to overseas based companies, increasing the delivery costs as it were [...] we ensured that such lapses were not allowed for in project X (C1).

This exchange highlighted the nature of a poorly managed interface between the main contractor and the subcontractor as they all accused each other of engaging in shoddy acts capable of undermining the achievement of PBOs identity. There is need for an effective management of the interface between parties to a project delivery exercise so as to attain organisational viability especially in areas relating to trust, transparency, and accurate communication (White and Marasini, 2014).

Communication-related pathologies

Effective communication has been described as a very important part of any successful organisation-PBO. As if to buttress the salient nature of communication to organisational viability, Gallagher *et al.* (1997) described organisations comprising of information processing and disseminating units which rely on effective communication channels. Furthermore, whereas Pinto and Slevin (1987) list effective communication as one of the CSFs for achieving successful project implementation outcomes, Ochieng and Price (2010) observed the importance of effective management of communication within teams as being pivotal to the attainment of success.

In project X, the lack of an effective communication channel within the PBO was observed, based on the accusations and counter accusations being levelled by various parties to the PBO.

According to D1:

[...] everything about this industry is always covered in secrecy [...] we did not know about the Nigerian content development targets set by the MDA 2 for the OPERATOR upon the approval of the OPERATOR'S Nigerian content plan [...] if we had prior knowledge of that and the areas where they were to take place within the project, we would have gone into partnerships with other local firms with such capabilities to fill up those spaces but [...] no [...] they kept same away from us all through the project.

This absence of a properly defined communication channel for sharing project information between the parties to the PBO was capable of enhancing the gulf between the parties thereby undermining its viability.

Conclusion

This study set out to achieve two distinct purposes, namely: further validation of the VIDM through an oil and gas infrastructure project delivery PBO case study; and an assessment of the PBO's degree of viability as it pertains to implementation of the socio-economic benefits. The local content legislation was used as an exemplar in this regard. Accordingly, project participants from the policy level to the project implementation level were interviewed and the policy document on Nigerian Oil and Gas Industry Content Development Act, 2010 reviewed. Findings accentuated the useful nature of the VIDM methodology for diagnosing PBOs. Furthermore, it was observed that the PBO investigated lacked the requisite viability to deliver on socio-economic benefits. This was occasioned by the misalignment of objectives of the various parties to the PBO. Other instances of disconnect were identified and categorised as structural, functional, and communication-related pathologies, respectively. The PBOs inability to attain viability was traced to these pathologies.

Furthermore, by carrying out this assessment and identifying these pathologies, it can argued that the theory on the VSM's ability to assess organisations alike for

viability (Schwaninger, 2006) can be extended to temporary multi-organisational settings as was the case in this study, wherein the VIDM relied on the same tenets as the VSM. However, this particular study does not make any attempt at achieving any generalisations of its findings as the evidence presented herein falls short of the requirements for attaining analytic generalisation through replication logic (Yin, 2009).

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