

Conceptual Framework for Incorporating Social Sustainability Principles into Housing Public Private Partnerships Projects in Nigeria.

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Abstract: - There is a recognized need to incorporate sustainability considerations in infrastructure projects delivered through Public Private Partnerships (PPPs). However, in Nigeria, sustainability considerations currently play only a limited role and the social dimensions of sustainability are largely neglected in housing PPP projects. While this scenario has negatively impacted the acceptability of housing PPP contracts, there is, nevertheless, a paucity of research effort aimed at developing a sustainable framework. The purpose of this paper is to develop a conceptual framework for incorporating social sustainability principles into housing PPP projects in Nigeria thereby providing an understanding of the social processes and relationships with respect to undertaking PPP housing initiatives. Data were obtained through a questionnaire based survey administered to professionals in housing PPP-based contracts in Nigeria and follow up personal interviews. Governance practices like: project definition; output specification, selection criteria; competitive dialogue, performance-based rewards; and legislations were identified as best practices. Though the framework is intuitive, results of the survey indicates that these practices are not adequately followed in practice, implementation of this framework may lead to more sustainable and innovative use of PPPs in housing provision in Nigeria.

Keywords: - conceptual framework, housing, public-private partnerships, social sustainability

Date of Submission: 27-09-2017

Date of acceptance: 16-11-2017

I. INTRODUCTION

The last 30 years have seen the rise to prominence (PPP) as a means of harnessing investment and expertise from the private sector to the delivery of public goods and services. Widely utilized and appreciated because of their purported advantages in off-budget funding, PPPs are a mechanism that modern governments regularly results to in order to fulfill their responsibilities of providing public infrastructure and services. This trend is likely to continue following the 2007-2008 global financial crises that saw many jurisdictions strapped for cash and seeking alternative methods of meeting the increasing demands for investment in public sector development. (Colverson and Perera, 2012).

Following the definition of Grimsey and Lewis (2004, p. 2), PPPs are broadly defined as follows: "arrangements whereby private parties participate in, or provide support for, the provision of infrastructure, and a PPP project results in a contract for a private entity to deliver public infrastructure based services". Infrastructure in this definition is asset-based and refers to both economic infrastructure (e.g., motorways, railways and bridges) and social infrastructure (e.g., schools, social housing, hospitals and prisons) (Grimsey and Lewis, 2004, pp. 7, 21).

Some typical characteristics that distinguish PPPs from traditional public procurements include the use of long-term infrastructure contracts (LTICs) (Hodge and Greve, 2007), the transfer of certain risks to the private sector, a focus on the specification of project outputs rather than project inputs, and the integration or "bundling" of different functions into a single contract such as design, construction, financing, maintenance and/or operation (EPEC, 2011; Grimsey and Lewis, 2004).

PPPs are sometimes mentioned as a potential vehicle for achieving sustainability goals (Grimsey and Lewis, 2004; Hodge et al., 2010; Lenferink et al., 2013; Yescombe, 2007). For example, the bundling of various functions into one long-term contract could make it in the interest of private partners to take life-cycle costs into account, since it provides an incentive to think, "beyond the design stage and build in energy-reducing and waste-minimizing features that may cost more initially but result later in lower operating and running costs, and so deliver cost effectiveness over time" (Grimsey and Lewis, 2004, p. 1).

Consequently, since the Brundtland Report (WCED 1987), there has been an increasing awareness that the construction industry must support the sustainable development vision by including social considerations throughout the entire construction project life cycle [International Council for Building (CIB) 1999; Vanegas 2003; Boyle et al. 2010).

The concept of social sustainability that guides the research reported in this paper considers this concept as a series of processes for improving the health, safety, and well-being of current and future generations (Fewings 2008; Dillard et al. 2009). Previous research has provided some indicators related to these considerations (Kibert 1994; Surahyo and El-Diraby 2009). For instance, previous indicators include stakeholder satisfaction, traffic delays, noise levels, indoor air quality, and training of disadvantaged people (Valdes-Vasquez et al., 2013).

However, an empirical and comprehensive framework defining these social sustainability integration into the procurement processes of PPP housing projects has yet to be clearly delineated. To address this challenge, this paper introduces an empirical framework that was developed by engaging experts from various perspectives in PPP housing industry in Nigeria. Before introducing the framework, the next section provides an overview of social sustainability in the contexts of PPP housing projects.

II. RESEARCH BACKGROUND

2.1 Understanding PPPs

The global recognition accorded PPP as an alternative to government provider approach is based on the notion that it promotes multiple stakeholders' participation in the provision of critical infrastructure (Pessoa. 2006; World Bank, 2006), leads to a reduction in governments' expenditure (Jamali, 2004; Brown et al., 2006), and encourages efficient use of resources for improved service delivery at an affordable cost (Klijn and Koppenjan, 2000).

These apparent merits according to Jamali (2004) have prompted key international financial institutions, including the World Bank and International Monetary Fund to mount pressure on many developing countries to shift emphasis from state provision to liberalization and privatization of service provision. In addition to this, it has also heightened research activities on different aspects of PPP; leading to the emergence of different meanings, conceptions and variants of PPPs in the past few decades (Bovaird, 2004; Tomlinson, 2005; Mazouz et al., 2008).

PPPs are models that have been adopted for procuring hitherto traditionally owned public infrastructure. The concept of PPPs has been identified as a veritable tool in the procurement of public infrastructure (Amadi et al., 2014). PPP is a generic term for the different forms of relationships or partnerships that could possibly exist between the public sector (government) and the private sector to form a synergy with the sole aim of financing, developing, building/constructing and for the effective management of public infrastructures (Robinson et al. 2010; UNECE 2008).

The relationship between the public sector (government) and the private sector for the provision of public infrastructure comes in different forms: Build –Own- Operate- Transfer (BOOT); Build Operate Transfer (BOT); Design Build Operate Transfer (DBOT); etc. These relationships are usually long term and in a concession arrangement, could last up to 40 years (Smyth and Edkins 2007). The essence of the long term contract is to enable the private sector to repay loans sourced from banks and other financial institutions (NAO 2011) and make some profit in the process. The relationships are designed to be of mutual benefit as well as risk sharing to the parties (Grimsey and Lewis 2005). Under the relationship, the strength and expertise of both the public and private sectors are combined to improve the efficiency of resource allocation and the quality of public service (Robinson et al. 2010). PPP programs have developed rapidly and replicated in different forms across the world.

Several countries in both developed economies such as Australia, Canada, USA, and the UK and developing economies and middle- income countries from Africa, Asia, and Eastern Europe have procured many infrastructures through the PPP scheme (Robinson et al 2010). According to Public Works Financing (PWF); International Major Project database (2013), a total of \$876 billion (or £524 billion as at current rate) has been invested in PPPs across the world. With an estimated £54.7 billion invested in 717 projects (HM Treasury 2012), the United Kingdom is one of the leading countries with huge private sector investment in infrastructure. Canada is another example of a country that has made progress in PPPs. About £38.3 billion have been invested in 198 infrastructure projects in Canada through the PPP scheme (Media Planet 2013).

In Sub- Sahara Africa, through private sector investment, an estimated £39.1 billion has been invested in 249 infrastructure projects (World Bank PPI Database 2012). Nigeria is a Sub – Saharan Africa Country that has embraced the PPP concept and has initiated policies and frameworks geared towards improving private sector participation in the financing and development of infrastructure.

The history of private sector participation in financing, developing and managing public infrastructure in Nigeria is recent but has grown considerably with some PPP projects completed and operational and several

transactions reaching financial close. Notably, in 2003 the Federal Airports Authority of Nigeria (FAAN) and Bi-Courtney Limited (BCL) entered into a concession agreement for the financing, development and operation of the Murtala Mohammed International Airport (MMA2). The project has since been delivered and is operational (Amadi et al., 2014).

Following the successful delivery of the MMA2 project, the Federal Government took a decisive step in revamping major seaports in the country. The government in 2004 engaged competent private ports operators to rehabilitate, operate and manage 26 seaports through a concession arrangement (Ekanem 2010). Also, the first phase of the 49.5km Epe – Lekki toll road in Lagos state which was started in 2006 has been completed and operational. The project with an estimated cost of £222 million is a Design – Build- Operate – Transfer (DBOT) road concession arrangement between the Lagos state government and the Lekki Concession Company (LCC) (World Economic Forum 2010). However, the tolled road since its opening has come under public scrutiny with stiff opposition from human right activists, local residents and road users which have led to protests and litigation (Falayi and Ajaja 2014). Such opposition by the public and other stakeholders is now a source of worry for PPP projects around the world (El-Gohary et al. 2006).

Several cases of public opposition against PPP projects have been reported across different countries of the world. For example, the 2.1km Cross City Tunnel (CCT) in Sydney, Australia went into receivership less than two years after its opening in August 2005 (Phibbs 2008) which was as a result of low traffic volume caused by public resistance and boycott of the tunnel. As noted by Chung et al. (2010), had the public sector authority taken on board the views of the community at the early stage of the project, public resistance would have been minimized. The Jin long toll road (JLTR) project, a 17Km road in the Zhejiang province of China is another example of a failed PPP tolled road project due to public opposition. Drivers used all available alternative routes to register their frustration and protest at the exorbitant fees charged. Alternative routes to register their frustration and protest at the exorbitant fees charged. Chen et al. (2012) note that the fundamental factor that led to the collapse of the concession JLTR project was the non-engagement of stakeholders and neglect of public interest in the concession project, particularly at the planning phase.

The foregoing suggest that besides the benefits of PPP, there are also obvious longstanding concerns on the possibility of PPP resulting in the loss of independence in decision making on the part of government and commercialization of social service provision. These may to a large extent have implications for affordability of services to low-income people in the society.

In Nigeria, evidence from the very few studies suggests that state-market partnership is the key variant of PPP and that greater percentage of housing units so far provided in PPP housing schemes were targeted mainly at high-income earners (Ibem, 2012). Prior studies have demonstrated the role of government agencies in PPP in housing (Ibem, 2010) and the contributions of PPP to addressing urban housing challenges in different parts of Nigeria (Ibem, 2011a; Adegun and Taiwo, 2011). Among these few studies, none has examine the key strategies for ensuring social sustainability considerations in PPP housing projects in Nigeria hence, the current study is considered as an attempted to fill this research gap. The following section provides an overview of social sustainability considerations in infrastructure projects.

2.2 Social Sustainability Considerations in Infrastructure Projects.

Generally, researchers describe social sustainability as the engagement among employees, local communities, clients, and the supply chain to ensure meeting the needs of current and future populations and communities (Herd-Smith and Fewings 2008), a definition that more fully reflects the different perspectives of the stakeholders of a project. As the following discussion shows, the concept of social sustainability has various interpretations in the industry depending on the stakeholder's perspective and the phase of the project life cycle.

One perspective involves the community by estimating the impact of construction projects in relation to where users live, work, play, and engage in cultural activities (Burdge 2004). These estimates are normally embedded in the environmental impact assessments required by government agencies. It is during the planning and design phase that community involvement approaches such as public hearings are used by external stakeholders and governmental agencies to influence design decisions (Solitare 2005). Community experts indicate that although these social benefits maybe intangible to developers, they are as important as financial and environmental ones (Hammer 2009).

Another perspective of social sustainability, this one from construction or real-estate firms, relates to the application of corporate social responsibility practices (Lamprinidi and Ringland 2008) that consider how the organization can meet the needs of stakeholders affected by its operations (Mathur et al. 2008). Other elements that should be considered include the impact of temporary users such as the workforce and vendors based on the analysis of the social life cycle of products and materials (Benoit and Mazijn 2009). This analysis could predict the performance of the project in terms of time, cost, and the perception of the community (Valdes-Vasquez et al., 2013).

In addition, social sustainability also relates to such design perspectives required to ensure inclusion by considering underrepresented groups (e.g., accessibility for the elderly and the disabled). For instance, evidence-based design is currently being used to provide a better understanding of human behavior through scientific explanation (Hamilton 2003). This design perspective also includes understanding the social interrelations embedded in the process of designing, constructing, and operating construction projects (Rohracher 2001) and improving the decisions-making process by using approaches such as transparency (Klotz et al. 2009). A related perspective involves the designers, government agencies, and construction companies that advocate for worker safety by eliminating potential safety hazards from the work site during the design phase (Hinze and Wilson 2000).

On the basis of the literature, this research focuses on social sustainability with regards to four conceptual areas: community involvement emphasizes public constituencies in governmental and private decisions, corporate social responsibility considers the accountability of an organization in caring for all of the stakeholders affected by its operations, safety through design ensures worker safety by eliminating potential construction/operation safety hazards during the design phase, and social design focuses on improving the decision-making process of the design team and the intended use of the project by the final users (Valdes-Vasquez and Klotz 2010). These four conceptual areas helped guide the development of the empirical framework of social sustainability processes in housing PPP projects reported in this paper.

Because the concept of social sustainability is still evolving, this is an important time to begin defining the social sustainability processes that should be integrated during the planning and design phases of PPP housing projects. However, attempting to create a model based solely on the previous literature will be limited by the individual bias of the researchers. The understanding of social sustainability processes could be enhanced by engaging experts in developing a general framework, a critical first step in creating awareness about this topic in PPP infrastructure projects. Specifically, the four conceptual areas served as a base line for inviting experts to be part of this study, and for the creation of the practical guide resulting from this research.

As previously discussed, these social processes are not currently well-incorporated within PPP processes in Nigeria. Therefore, data is collected and analyzed in order to provide recommendations for improved incorporation. The next sections present methodology and analysis aimed at closing this gap between best and actual practice.

III. METHODOLOGY

Recommendations for promotion of integrated and innovative processes are based on consultation with experts chosen from locations with the relative sophistication of PPP housing projects and amount of activity in Nigeria. These are Lagos state, Ogun state, and Abuja, the Federal Capital Territory (FCT).

Data regarding PPP development was collected through Mixed Method Research (MMR) method. By definition, MMR refers to the class of research where the research mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study (Johnson and Onwuegbuzie, 2004). Furthermore, the MMR is premised on the idea that the use of quantitative and qualitative approaches in combination, provides a better understanding of research problems than either approach alone (Creswell and Plano Clark, 2007). The quantitative data were obtained through a questionnaire based survey and follow up personal interviews for the qualitative data.

Category	sub-category	percentage of respondents
Housing sector		33.0% (25 of 66)
	>15 projects	72.0%(18 of 25)
	>25 projects	60.0%(15 of 25)
With housing experience		75.8% (50 of 66)
	>15 projects	78.4%(29 of 37)
	>25 projects	54.0 %(20 of 37)
>15 projects		56.0%(37 of 66)
	Housing sector	29.7%(11 of 37)
	With housing experience	59.5%(22 of 37)
>25 projects		39.4% (26 of 66)
	Housing sector	57.7%(15 of 26)
	With housing experience	96.1%(25 of26)

Table 1. Respondents Housing Project Experience

The criteria for selecting the survey interviewees were based on expertise related to PPP implementation in real housing projects. Interviews were conducted through direct visits and meetings at national conferences. The respondents have outstanding knowledge of and experience with housing PPPs. Of

the respondents, 33% (25 of 66) were working in the housing sector and 75.8% (50 of 66) claimed to have experience with housing PPP project; the remaining 39.4% (26 of 66) claimed no experience with housing PPP, but had other related PPP experience. Additionally, 39.4% (26 of 66) claim involvement with 25+ PPP projects and 56% (37 of 66) claim involvement with more than 15 projects. Of those claiming experiences with over 15 projects, nearly one-third (11 of 37) work in the housing sector, over two-thirds (22 of 37) claim housing PPP experience. Also, those claiming experiences with over 25 projects, 15 of 26 work in the housing sector, while 25 of 26 claim housing PPP experience. Conversely, 72 % (18 of 25) and 60 % (15 of 25) of those in the housing sector have experience with more than 15 projects and 25 projects respectively. Of those with experience with housing projects, 78.4 % (29 of 37) and 54 % (20 of 37) have experience with more than 15 projects and 25 projects respectively. This information is tabulated in Table 1.

No	Questions
1.	Have you experienced social issues related to the operation of existing or completed projects? If yes, please explain the challenges and solutions.
2.	Have you experienced any project delays caused by overlooking social issues? If yes, please explain the challenges and solutions.
3.	Have you experienced any other issues related to social? Please explain. How were these challenges overcome?
4.	What can public/private actors do to encourage social innovation in the PPP procurement process?
5.	What existing policies and regulations do you use/suggest when dealing with social issues?
6.	Briefly describe any lessons learned/ best practices (or suggestions) related to encouraging social innovations?

Table 2. Standard questionnaire

Out of the 66 questionnaire survey respondents, 29 in-depth face-to-face interviews were conducted with those with the significant housing related PPP experiences (either successful or unsuccessful). The questionnaire shown in Table 2 was provided to participants and used as a basis for personal interviews. Responses were compiled and coded with the assistance of a non-author survey experts.

IV. DISCUSSION OF RESULTS RECOMMENDATIONS

This section contains a summary of the views presented by the respondents, along with recommendations for integrating social outcomes into housing PPPs as obtained from discussions with the experts in Nigeria.

4.1. Selected Quotes from Respondents

Some comments from respondents include:

- *“There is a high sensibility to social issues that the private sector will not solve alone.”*
 - *“The interaction with local stakeholders is crucial... such experience will lead to social innovations and a higher quality housing delivery.”*
 - *“A mechanism is needed to provide compensation for unforeseen social expenses.”*
 - *“The public sector must ensure stakeholder involvement in the decision making process”.*
 - *“The procuring authority must have control over project delivery mechanisms, but should rely on the private sector for the expertise to deliver projects.”*
 - *“PPP procurement process must offer clarity, simplicity, and predictability, transparency, openness, and fairness in selecting partners in order to increase confidence and accountability.”*
 - *“Ensuring maximum sustainable development and respect for social concerns requires the public actors to ensure change by encouraging value for money related to social innovation through provision of financial incentives for the consideration of the people.”*
- “The private sector must be stringent with regard to social analysis.”*

4.2 Discussion of results

PPPs are often assumed to have the capacity to deliver on innovative outcomes (Hodge & Greve, 2008). In order to actively promote these outcomes, the appropriate governance approaches are required. Thus the following best governance practices, based on the information gathered from experts are recommended in order to embed social sustainability processes into PPP procurement. On the surface, many of these recommendations are intuitive, but the survey results and interviews clearly show that they are not embedded within standard practice; some are used in isolation, but not in a logical and unified manner. We hope that these recommendations will raise awareness for adopting a standard practice.

Best practices were distilled from questionnaire survey responses and personal interviews in order to make recommendations for embedding social sustainability into the PPP process. The number in parenthesis indicates the percentage of responses that mentioned the particular best practice. Note that there were 66 survey respondents, plus 19 personal interviews. Surveys were paired with interview thus, a total of 85 provides a summary of those in agreement with the recommended best practice data points were used for this analysis. The recommended best practice are discussed in the following sub sections.

4.2.1 Setting sustainability norms in output specification (75 of 85; 88.2%) – defining the subject matter (social sustainability), along with evaluation criteria.

The idea behind output specifications is that the requirements are defined on the basis of results and performance (outputs) rather than means (inputs). Social considerations have often been a secondary concern in PPPs leading to a “build first, clean-up later” paradigm. Further, social issues in procurement are admitted to be a more difficult task to incorporate, and is a current work –in-progress. Nevertheless, housing projects have relevant social impacts that need to be considered. Thus, in order to be aggressive in addressing social impacts, the public sector should work with all relevant stakeholders to provide social sustainability objectives that are clearly articulated with performance measures defined for easy evaluation and monitoring.

4.2.2 Use of Sustainability Instruments (56 of 85; 65.9%) - introduce legislation on social considerations.

There are many different ways to govern PPPs. Public procurers can use both formal and informal governance instruments. Formal governance instruments involve top-down command and control mechanisms and instruments regarding social impact assessment and its enforcement. Examples of possible formal governance instruments deployed in PPPs include a procuring government that unilaterally prescribes very detailed rules and procedures; a detailed reference design or rigid tender specifications; and a procurer that incentivizes private consortia via risk transfer, functional output specifications, performance monitoring and performance-based rewards and sanctions (Verhoest et al., 2013).

4.2.3 Stakeholder Participation (63 of 85; 74.1%) - involve social sustainability actors.

Stakeholder involvement or participation in itself is a dimension of sustainability that can be addressed by involving citizens and users in the development of the infrastructural project. Lack of stakeholder’s involvement has led to conflicts involving inefficient project planning and management; ultimately leading to project failure. In particular, consultation with social actors often occur late in the procurement process leading to public opposition, delays and ultimately project failure. Stakeholders are critical to ensuring social outcomes in PPP housing projects through the tackling of key issues related to the best practices of specifying social issues, lobbying for appropriate social legislation and policies and assisting with competitive dialogue and negotiations.

4.2.4 Weighting of Social Sustainability in Award Criteria (75 of 85; 88.2%) - bid evaluation criteria.

In the procurement stages, selected bidders should submit a tender to be evaluated based on predetermined award criteria (social sustainability). Whereas the output specifications should set the minimum sustainability requirements, the award criteria can express preferences with regard to social sustainability. Another important aspect in the award criteria is the weighting given to social sustainability aspects, since this determines the influence social sustainability has in the final evaluation of tenders. We believe that for procurers with high social sustainability ambitions it is a missed opportunity when these considerations are not included in the award criteria and attributed a substantial weighting. Hence, without sufficient “points” to gain in the award criteria, the bidders would not be motivated to take social sustainability measures.

4.2.5. Competitive Interaction with Bidders (72 of 85; 85%)-engage in a dialogue among bidders.

Ensuring competitive dialogue between procuring agency and private bidders during the procurement stages may lead to bids with a high chance of meeting specified social outcomes. On the contrary, Entering into a sole-source process can save government time and money and may alert government to an unrealized opportunity for PPP. However, sole sourcing can encourage corruption through lack of transparency, and the cost benefits to competitive bidding are lost ... there is also an elevated risk that the fairness of the contract award will be challenged at a later stage, e.g., by disappointed potential bidders or by the political opposition. (Asian Development Bank, 2008, 72). Also, complete interaction can be supervised by engaging relevant stakeholders.

4.2.6. Selection criteria (69 of 85; 81.2%) - selecting contractors, suppliers or service providers.

Selection criteria focus on a company’s ability to perform the contract they are tendering for. Under the PPP procurement, there are several ways to apply social criteria at the selection stage. It is possible to exclude

companies that have acted against social legislation or regulations if this is affecting their professional conduct. In the capacity criteria, the past experience of a company and the professional qualifications of its personal offer good opportunities for including social sustainability. Also in order to check whether tenderers can perform the social management measures prescribed by the contract, contracting authorities may ask them to provide showcases.

4.2.7. Rewards (79 of 85; 93%)-provide incentives to private partners than can meet up with social innovations.

This is a specific reward measure that provides an incentive for bidders to ensure social innovation in PPP projects. In general, incentives in the contract might create interesting opportunities to stimulate sustainability. Examples of incentives suggested by respondents include:

- Subsidies to offset the resettling, rehabilitating cost and compensation to underprivileged groups
- Loan guarantees to cover the financial risk associated with cost incurred to users (maintenance and use)
- Tax waivers for social inclusion -accessibility for disabled people
- Pre-financing to provide start-up funds for housing provision and basic facilities that deal with the welfare of construction workers (both men and women)

V. CONCLUSIONS

PPPs are generally seen as a collaborative arrangement based on mutual trust between the public and private sectors and it entails sharing of responsibilities, benefits and risks among governments, markets and people in the delivery of vital public services. In addition PPPs are potential vehicle for achieving sustainability goals. By working together with companies, governments hope to find ‘innovative’ and ‘sustainable’ solutions to deal with pressing economic, social, ecological and spatial challenges.

This paper establishes a framework for incorporating social sustainability practices in housing PPP projects. While the challenges of implementing any set of social sustainability considerations in PPP infrastructure projects are recognized (Ryan, 2004), the recommendations provide a strong base for achieving social outcomes. The suggestions are aimed at those interest at achieving sustainability goals in PPP infrastructure projects. While the focus was on housing PPP projects, sound social practices should be a standard in all PPP infrastructure projects; thus the lessons learned and best practices may be applicable to PPP infrastructure sectors. Figure 1 provides a general framework for implementation of the recommended best practices. While the process is considered general, the specific implementation should be based on project specifics.

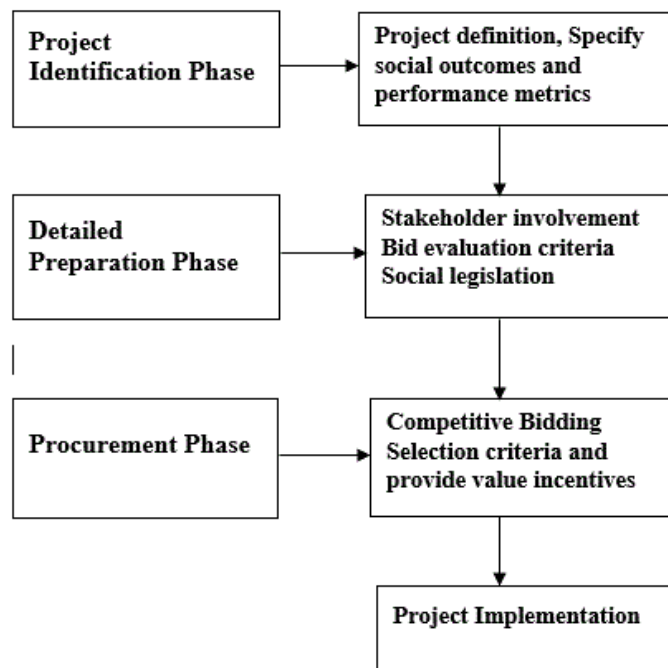


Figure 1. Implementation framework of recommended best practices

The process begins with a project definition and extensive preparation in getting sustainable initiatives off the ground within PPP projects. Preparation is a broad notion, but it is essentially about whether the public procurer knows what he or she wants and can ask for regarding social sustainability. In the preparatory stage the

procurer must state his own wishes and priorities with regard to sustainability (ambitions and goals), determine what other stakeholders demand (coordination and coproduction), identify which sustainability solutions are currently available against what price (market knowledge) and decide how to best ask for sustainability in the procurement (incentives in the output specifications, award criteria and bidding procedures).

Though, under certain circumstances, it is possible to set requirements regarding past experience with sustainability in the selection criteria, it is important to act carefully, because selection criteria that are too high can undermine competition and threaten small- and medium-sized enterprises. Also we discovered from respondents that many sustainability criteria are not measurable or enforceable. Measurability issues might be addressed by referring to sustainability standards and instruments set by external organizations, but this method may still exclude social criteria that are not so easy to measure. An important governance option is to include sustainability considerations in the award criteria and to evaluate them with a substantial weighting. Setting a minimum score for individual social sustainability award criteria might help to reduce strategic bidding behaviour.

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ADEBAYO Adedayo Abimbola Conceptual Framework for Incorporating Social Sustainability Principles into Housing Public Private Partnerships Projects in Nigeria.” *IOSR Journal of Engineering (IOSRJEN)* , vol. 7, no. 10, 2017, pp. 54-63.