

SOCIAL SUSTAINABILITY IN PROCUREMENT OF CONSTRUCTION PROJECTS: A LITERATURE REVIEW FROM A NIGERIAN PERSPECTIVE

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Sustainability in procurement is gaining popularity and subsequent momentum globally. However, the aspect of social sustainability, particularly from a Nigerian perspective, is given little, if any focus. Based on this premise, this paper reviews the literature on the subject, which sets out the landscape in the context of social sustainability in procurement. From the review carried out, a gap in knowledge is identified that shows an imbalance in implementation of the triple bottom line on construction projects; namely environmental and financial factors are given more attention than social. In a Nigerian construction industry context, this is accredited to sustainability policies being skewed towards environmental and economic sustainability, with social sustainability lacking. To address this, an insight into social sustainability in procurement from an international context is provided, subsequently turning the lens on Nigeria. The absence of social sustainability factors within Nigeria's policies, amplified by poor implementation of existing policies, limit the implementation of sustainable procurement in construction in the country. This subsequently results in making the industry's output uncertifiable by globally accepted standard measures of sustainability. The imbalance in content of policy instruments and poor implementation, heightens the barriers to the integration of the social factors of sustainability by stakeholders. However, sustainability is shown to deploy procurement to support implementation of the wider social, economic, and environmental objectives. The paper concludes by recommending the development of model-based recommendations that culminates in theories which will enforce implementation strategies on stakeholders within a Nigerian context.

Keywords: procurement; social factors; stakeholders; sustainable development

INTRODUCTION

Sustainability, as a concept, began with focus on economic efficiency of output and growth. It also includes other hidden considerations which associate with environmental impact, societal and governmental requirements. These together form a triple bottom line that make up the founding elements of sustainability, namely environmental security, cost-effectiveness, and social sustainability (Romodina and Silin 2016). The construction industry is a crucial sector for economic development and has a significant impact on its environment and society. There is, however, a consensus among authors that the industry is under-performing in all three dimensions

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of environmental, economic, and social sustainability (Bratt *et al.*, 2013; Kahlenborn *et al.*, 2010; Myers, 2013). There is also agreement that the integration of sustainability initiatives into construction practices is driven by the role played by public procurement (Adetunji *et al.*, 2003; Brown *et al.*, 2012; Sierra *et al.*, 2018; Walker *et al.*, 2012). Thus, sustainability deploys procurement to support the wider social, economic, and environmental objectives in ways that offer long-term benefits (Sims, 2006).

Although the construction industry impacts on society, environment and economy, the existing sustainability studies in the industry are only largely related to the environmental and economic contents. The social aspect of sustainability appears to have been given less attention (Zuo, *et al.*, 2012). Since sustainable development consists of social and economic growth that protects and enhances the natural environment and social equity (Diesendorf, 2000), it therefore illustrates the importance to study the social components of sustainability in procurement in the construction industry. Andrecka (2017) Reports that environmental and social policies have been encouraged in many countries in tendering procedures to ensure sustainable performance. However, the correct implementation of sustainable construction procurement is hindered by barriers of lack of knowledge about how to consider sustainability criteria in procurement procedure (Carter and Fortune, 2007; Testa *et al.*, 2016). This is furthered by the lack of objective methods to assess and monitor these sustainability criteria (Ruparathna and Hewage, 2015b; Wright, 2015). These become aggravated if analysis is focused on social sustainability (Ruparathna and Hewage, 2015b; Sierra *et al.*, 2017). In a Nigerian context, such issues are amplified, and concerns raised; however, little by way of investigation is given to the subject of social sustainability in procurement; hence the development of this paper.

Sustainable Construction and Policies

Sustainable construction is the application of sustainable development principles to a building life cycle, from planning, through to construction; from mining raw materials to production and becoming construction products, usage, destruction of construction products, and management of wastes. It is a holistic process which aims to sustain harmony between nature and the constructed environment, by creating settlements which suit human and support economic equality. Sustainability policy is a statement of environmental actions or principles proposed or adopted by government, organisation or individual. Yin (2005) Views the subject of policy options from three perspectives: Policy priorities, policy instruments, and institutional arrangements. Policy priorities refer to clear statements of policy objectives to be accomplished. Policy instruments are the set of techniques by which government and organisation enforce policies for the society's greater good (Mickwitz, 2003). However, it has been established in the literature that the existence of a sustainability policy within an organisation does not necessarily imply that the content of sustainability activities within the policy is being implemented (Carpenter and Meehan, 2002; Price *et al.*, 2011).

Baker (2006) Explains that many international organisations and agencies like the European Union (EU), the United Nations Environmental Programme (UNEP) And the World Bank, have focused on the objectives of sustainable development. National governments, sub-national, regional, and local authorities, as well as groups within the civil society and economic actors, have gone further, by making declaratory and practical commitments, to the goals of achieving sustainable development. For

instance, the United Kingdom (UK) Has enacted laws and policies that requires the construction industry to adjust the way they operate, by being innovative to embrace the concept of sustainability in their operations (Opoku and Ahmed 2013). Similarly, Coulson (2014) Observe that in the UK, there is strong legal obligations, guiding the procurement of timber and wood-derived products. Correspondingly, Naoum and Egbu (2015) Report that in the UK, it is now mandatory that all newly built and refurbished buildings demonstrate compliance with “Target Carbon Emissions Rates” as well as with the Building Energy Model (Part L) Of the Building Regulations 2006. With the call for innovation in the industry, Berry and McCarthy (2011) Report that large construction companies in the UK are beginning to make the promotion of sustainability, a focal point in their operations. However, to provide context, a survey on Quantity Surveyors' awareness and preparedness in adopting renewable energy technology for buildings in Nigeria, found that the level of understanding of renewable energy technologies is still at its lowest ebb (Ewuga and Molwus 2015).

The construction sustainability certifications that are globally accepted are LEED (Leadership in Energy and Environmental Design) And BREEAM (Building Research Establishment Environmental Assessment Method), among others. BREEAM which was developed and put into practice in England in 1990, is the first example of systems which make assessment, based on environmental standards. With LEED, developed by United States Green Building Council (USGBC) In 1998, the focus is giving information about possible effects of construction on the environment, people, and organisations in construction and to minimise such impact. However, these standards of certification for sustainability are a true reflection of the imbalance of the triple bottom line, as they clearly demonstrate the dominance of the environmental and economic aspects over social sustainability; thus, demonstrating the need for further focus.

Social Sustainability

The term social sustainability continues to evolve (Valdes-Vasquez and Klotz, 2013). McKenzie (2004) Defines social sustainability as “a life-enhancing condition within communities, and a process within communities that can achieve that condition”. Andrecka (2017) Claims that the concepts of social sustainability and corporate social responsibility are connected in the context of public procurement, because they are based on the same topics which cover labour issues, human rights protection, and ethical issues. Popovic *et al.*, (2018) States that aspects related to health, safety, human rights, child labour, labour issues, community initiatives, and employment benefits, are generally accepted within social sustainability.

According to Gates and Lee (2005), social sustainability is made up of three components: Basic needs, individual or human capacity, and social or community capacity. The intangible subject of social value, which revolves around human issues, have been developed and approached from various perspectives. One of the perspectives reflects in the definition of social sustainability by Abdel-Raheem and Ramsbottom (2016), as fulfilling needs of the present, without compromising the ability of future generations to meet their own needs. Although these social benefits can be intangible to developers, community experts highlight that they are as important as the economic and environmental benefits (Valdes-Vasquez and Klotz, 2013).

Social issues in sustainable procurement practice have been noted to be addressed more in the manufacturing sector, when compared to that of the Architecture,

Engineering and Construction (AEC) Sector (Kalubanga 2012). The construction sector in industrialised countries like UK, USA, Germany, and Canada, employs approximately 6-10% of the workforce, but accounts for 20-40% of the occupational fatal accidents. This trend is amplified in developing nations, where it is estimated that a total of 60,000 construction fatalities occur per year around the world, equating to one construction fatality every nine minutes (Raheem *et al.*, 2014). This indicates that construction workers are three to four times more likely to die from accidents at work, than workers from other industries (López-Valcárcel 2001).

Social sustainability is about minimising the negative impact while maximising the positive effects that developmental activities have on people and society. The creation of social indicators in construction, which can interact with environmental and economic indicators, is therefore an important task that deserves attention; thus, making it imperative that the industry works towards the well-being of society. This is attainable through generating factors which contribute towards a 'quality of life'. The main benefits associated with the implementation of social sustainability in the construction industry, are based on improving the quality of human life, increasing transparency, implementing skill training, and seeking intergenerational equity, fair distribution of construction social costs, and capacity enhancement of the disadvantaged (Popovic *et al.*, 2018; UNEP 2009).

Every economic activity impact on society in three broad ways. First, there is the impact on those involved in the activity itself, notably the workforce. Secondly, there is the impact on the local community where the activity takes place. Third, there is the impact on the wider global community (Ndimele *et al.*, 2018). However, construction corporations, while working in a strict profit focused economic system, find it difficult to relate to targets of social sustainability, where social issues are drawing their due importance in businesses across various industries. It is evident that most of the resources used are public resources (Zhu *et al.*, 2013). The sector has a duty to be accountable to the society on how they use such resources (Ndimele *et al.*, 2018). The construction industry also needs to understand and address the social issues pertaining to its production processes and products from inception to completion of the procurement process.

Procurement of Construction Projects

Construction, being at the very heart of development, is inexorably linked to shaping our society. As a concept, social sustainability is increasingly gaining focus in the construction industry. This is partly because the criteria for procurement of construction projects are now moving from the traditional emphasis on quality and price of the product, to increasingly address the secondary issues of environmental and social objectives (Ruparathna and Hewage 2015a).

Applying sustainable initiatives is essential for the construction industry to achieve sustainable development through the procurement process. Walker and Brammer (2009) Define sustainable procurement as the process of applying the principle of sustainable development, which ensures a strong, healthy, and just society within ecological limits, while promoting effective management in procurement. Sustainable Public Procurement, according to Marrakech Task Force (2011), is a process where organisations meet their needs in a way that are evaluated in terms of money, based on the life cycle of a product or service, while minimising damage to the environment. This is beneficial not only to the organisation, but also to the society and the economy (Romodina and Silin 2016).

In the context of procurement of construction projects, sustainability involves various issues in the life cycle that impact the applicability of the sustainability philosophy in general or its social agenda (Chasey and Agrawal 2012). Barraket and Weissman (2009) Identifies “the use of purchasing power to create social value” as social procurement. This encompasses a range of issues and goals relating to various dimensions of social value, like health and safety, buying from local small and medium enterprises, buying from minority owned businesses, and employment creation for disadvantaged groups like, ethnic minorities, the disabled or the long-term unemployed (Walker and Brammer 2012; Zuo *et al.*, 2012; Loosemore 2016).

The Nigerian Perspective

In their study of social sustainability in delivery and procurement of public construction contracts, Montalbán-Domingo *et al.*, (2019) Found that country and contract size are the most influential variables for the inclusion of social criteria in tendering procedures. The construction industry in Nigeria consists of a small number of multinationals, with a larger proportion being small and medium construction firms. Most large multinationals have hundreds of employees, and are responsible for large-sized contracts, while the smaller firms have less than ten employees in their workforce, focusing on smaller contracts (Jimoh 2012). Okoye (2016) Describes the construction workers in Nigeria as being hardly literate, poorly paid, and having to work long hours under poor workplace conditions, which is often dangerous manual work. The Nigerian national industrial revolution plan report of 2014 reveals that the construction sector is a fast-growing sector of the economy, which between 2006 and 2007, recorded a growth rate of more than 20%. Using Nigerian data, Okoye (2016) Reveals that there is a very strong relationship between the Nigerian construction sector and the GDP, with about 50% of the proportion of variations in the real GDP attributed to the Nigerian construction sector. Although the relationship between the construction sector and the actual GDP was found to be significantly and strongly positive, the overall contribution of the Nigerian construction sector to the GDP has remained very low at 1.83% (Okoye 2016).

Despite the relationship between the construction sector and GDP, notable sustainability policies operating in Nigeria, focus mainly on the environment, and less on the economic and social aspects. Section 20 of the 1999 constitution of Nigeria mandated the Federal Government to “protect and improve the environment and safeguard the water, air, land, forest, and wildlife of Nigeria”. Other environmental protection provisions identified by Adewunmi *et al.*, (2012) Include the Harmful Waste (special Criminal Provisions) Act Cap 165, which is a response to the illegal dumping of toxic waste in Nigeria in 1988, the Environmental Impact Assessment (EIA) Decree 86 of 1992 which was a by-product of the provision of Principle 17 of Rio Declaration (Anago 2002). However, the National Energy Policy (NEP), enacted in 2003, remains the most direct national legal framework on sustainability by Nigeria. It is designed to articulate the sustainable exploitation and utilisation of all energy resources (Oyedepo 2012). An investigation on policy direction and drivers for sustainable facilities management practice in Nigeria by Ikediashi *et al.*, (2014) Identifies health and safety, waste management and flexible working environment, as the three main sustainability policy directions, in that order, while sustainability policy on biodiversity, urbanisation and forestation were the three least rated. All of these are policies on environmental sustainability. While Nigeria is making consistent improvements towards enacting and implementing policies on sustainability, much more needs to be done. Infrastructural and building projects must not just focus on

being environmentally sustainable, but also socially sustainable. Health and safety as an aspect of social sustainability, needs to be implemented from the procurement process, and not confined to facility management alone, as is often the case.

Furthermore, the Nigerian construction sector is still saddled with inherent challenges, despite the call for innovative practices through the promotion of sustainable construction (Mbamali and Okotie 2012). These challenges range from inadequate human, material, and equipment resources to weak regulatory framework which constitute barriers to innovative practices in the sector. Apart from these internal challenges facing the industry, other external factors that pose a challenge to the built environment in Nigeria are the deficit in housing supply (Dania *et al.*, 2013); climate challenge (Okereke and Yusuf 2013); and energy and power challenges (Ajayi and Ajayi 2013). All these challenges culminate to make outputs of the Nigerian construction industry uncertifiable by either of the BREEAM or LEED standard measures of sustainability, which in themselves have been shown to reflect an imbalance of the triple bottom line, due to failure to address social sustainability.

In a qualitative assessment of practitioners' experiences with the drivers and practices for implementing sustainable construction in Nigeria, Tunji-Olayeni *et al.*, (2020) Conclude that the most appropriate policies for implementing sustainable construction were government regulations, provision of tax relief and subsidies, and public awareness. This therefore implies that a combination of regulatory policies, market-based policies, and voluntary participation of stakeholders, will enhance the attainment of sustainability transformations in the construction industry. Their assessment identifies five major drivers of sustainable construction, with the clients' demand and international pressure being the most prominent drivers of sustainable construction in Nigeria. This means that the limited number of firms engaging in sustainable construction, are doing so, because of client demand. Since most of the interviewees worked in multi-national corporations, the assessment concludes that the demand for sustainable construction is mainly driven by pressure from international clients. Tunji-Olayeni *et al.*, (2020) Therefore, conclude that demand for sustainable construction is low in Nigeria, particularly amongst indigenous stakeholders.

A common problem in many project-based organisations is that central policies and initiatives fail to filter down to the project level and get transferred across projects (Loosemore 2014). To achieve social sustainability in construction projects, it is imperative to engage stakeholders in the decision-making process. This barrier to the integration of social issues by industry practitioners therefore impacts negatively on social sustainability of construction projects, which focuses on employee health and safety, impacts on societies, and goodness of life (Kamas *et al.*, 2019). In their review of construction management and economics research outputs in Nigeria, Ejohwomu and Oshodi (2014) Argue that there is a need to examine the extent to which current policies and activities pertaining to sustainability in the construction industry, is being integrated into built environment, planning, and development. Anecdotal evidence indicates that the contribution of public sector procurement to sustainability has not been adequately studied. Since sustainable construction is about realising that every procurement decision we make, or fail to make, impacts society; the industry needs to operate sustainably during the procurement process. One of the main challenges of sustainability, is to balance the triple bottom line in our decision-making process and implementation. Achieving environmental and economic sustainability without attaining a corresponding social sustainability is that imbalance. The constraint in getting procurement professionals and clients to focus on social issues requires

redress, specifically on how to handle the social aspect of sustainability in the procurement of construction projects. The Nigerian Government being the single largest client of the construction industry in Nigeria, is therefore best placed to drive the need to address sustainability issues through its procurement processes.

CONCLUSIONS

The construction industry is renowned for underachieving and as documented, there is a consensus among authors that the industry is under-performing in all three dimensions of environmental, economic, and social sustainability. However, from a social perspective, such failings are amplified, particularly in the context of Nigeria. The review of literature shows how Nigerian sustainability policies and procedures, do not align with international best practice. This results from imbalance in the triple bottom line; environmental, economic, and social sustainability. Emphasis is placed on the environment and economy, with less focus on social sustainability; thereby making the global standard of assessment of BREEAM and LEED, less applicable in Nigeria. To address this, the findings indicate that government-led projects provide the best approach in driving such initiatives, followed by better education and enforcement at lower-level projects. The development of model-based recommendation that culminates in theories which will enforce implementation strategies on stakeholders like designers, constructors, and clients in the construction industry, is recommended for future research. These strategies can be incorporated into the procurement process so that disputes, conflict of interests, claims, and counterclaims among the stakeholders, will be reduced; thus, achieving social sustainability and in consequence, lead to a balance in the triple bottom line, by providing equal focus on environmental, economic, and social sustainability. This overview is intended to be of value to construction management scholars who want an introduction to sustainable construction in Nigeria. It provides a potential research agenda to stimulate researchers towards addressing the inclusion and effective implementation of social sustainability in construction in Nigeria.

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