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ENABLING SUSTAINABLE PROCUREMENT OF BUILT ASSETS IN AFRICAN UNIVERSITIES: PERSPECTIVES OF FACILITIES' DIRECTORS

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ABSTRACT

The commitment of Higher Education Institutions (HEIs) to Sustainable Development (SD) seems to be yielding limited results. This is evident in the procurement and delivery of built assets within HEIs in Sub-Saharan Africa (SSA). This study reports on facilities directors' perceptions of the challenges to sustainable procurement in HEIs within SSA. The identification of such challenges would contribute, significantly, to the extant discourse on how to stem the drift. A qualitative phenomenological research design is utilised. Forty-Three HEIs across two different countries in SSA- Nigeria and South Africa were selected based on purposive and convenience sampling. Facilities directors in these HEIs were interviewed through face-to-face and telephone interview sessions. Documents and webpages concerning the procurement of such buildings were also reviewed. Emergent data from these sources were thematically analysed. Findings indicate that Business As Usual (BAU) mode of procurement has remained the norm in most of the HEIs in spite of their professed commitment to SD. Challenges identified include: the seeming obsession of HEIs, acting as clients, with low front-end cost of project delivery; poor awareness of what SP entails; absence of skills required to champion the cause of SP within such HEIs, and non-specification of SD based requirements in the contracts documents. It is expected that this study would contribute to deepening existing knowledge concerning implementation of SD in HEIs in SSA.

Keywords: Higher Education Institutions, Infrastructure, Sub-Saharan Africa, Sustainable Procurement

1. INTRODUCTION

Higher Education Institutions (HEIs) are expected to assume a critical position in driving society's quest for Sustainable Development (SD) (Cortese, 2003). Accordingly, several HEIs across the globe seem to have made concerted efforts to provide support for the attainment of the SD agenda (Escrigas et al., 2011, Sammalisto and Lindhqvist, 2008). However, whereas noticeable attempts have been made to report the efforts of HEIs in the United States, Europe, South America and even parts of Asia in turning their institutions into Sustainable Universities (SU), there is a clear lack of studies within the Sub-Saharan Africa (SSA) community of

HEIs (Escrigas et al., 2011, Ferrer-Balas et al., 2008).

In addition, it has been observed that aspects concerning sustainable procurement (SP), delivery and management of facilities within HEIs have continued to enjoy insufficient reportage within SD literature when compared to teaching and learning aspects (Awuzie et al., 2015). Also, studies have highlighted the need for this aspect of SD to be considered by any HEI with SU aspirations (McMillin and Dyball, 2009, Lukman and Glavič, 2007, Lozano-García et al., 2009). A systemic, whole-of-campus approach towards SU-oriented transformation has been advocated in these studies. Through this approach, HEIs are expected to integrate sustainable practices into their procurement strategies, undertake measures considered central to SD during the delivery of infrastructure on their premises, focus on the development of skill sets which are required for the next generation of sustainability experts through teaching and learning, etc.

Although HEIs within SSA have expressed their commitment towards the attainment of SD, adequate reportage of steps taken to ensure such transition has not been observed; thus, leading to an assumption that they may have recorded dismal performance. In the rare cases where SD performance has been reported, such as the case of the Central University of Technology (CUT), Bloemfontein, an overt concentration on the research, community engagement as well as teaching and learning facets was observed (Awuzie and Emuze, 2015). Business as usual (BAU) has continued to reign in the procurement of built assets on this HEI's campus, its strategic commitment to the attainment of SD by 2020 notwithstanding. Obviously, this implies that HEIs in SSA may not be 'walking the talk' after all. An HEI's bid to assume SU status should be anchored on its ability to mainstream SD ethos across every facet of its operations and to effectively report this (Holmberg et al., 2012, Ferrer-Balas et al., 2010).

One aspect that seems to have been neglected in the quest to attain SD is SP. Studies have described SP as the process wherein the attainment of SD objectives through a balancing of environmental, social and economic objectives is prioritised during purchase and supply of goods and services (Meehan and Bryde, 2011, Grandia et al., 2014, Walker and Brammer, 2012). Evidence from literature indicates that several organizations, governmental and non-governmental alike appear to be picking up the gauntlet in this regard, particularly in the developed nations (Walker and Preuss, 2008, Arrowsmith, 2010). HEIs are no different from the aforementioned organizations as they also wield a large purse. For instance, the delivery of facilities and other infrastructure on their respective campuses is a salient avenue to utilize SP (Willetts et al., 2010, Ofori, 2006).

Whereas the desire to achieve a whole-of-campus transformation toward SD requires the commitment of all stakeholders (Brinkhurst et al., 2011), a previous study confirmed that the facilities management directorates of HEIs are often left out of the decision-making process, in these HEIs (Awuzie et al., 2015). This observation makes this study an imperative one as it seeks to gain an understanding of the perceptions of facilities directors' for HEIs within SSA concerning the impediments to sustainable procurement of infrastructure in their respective institutions. It is expected that such an understanding would be a first step towards the development of a robust mechanism for engendering the SP of infrastructure within HEIs in SSA.

This expectation is premised on the purported importance of facilities directors in the delivery and maintenance of infrastructure on their respective campuses (Lozano-García et al., 2009).
To report the emergent findings from the research, this paper is divided into four sections: the review of extant relevant literature, the research methodology, presentation of findings and discussion, the conclusion and recommendations.

2. THEORETICAL PERSPECTIVE

2.1 Sustainable Procurement of Built Assets

Originally, the procurement process within organizations was primarily centred upon the attainment of efficiency and effectiveness in the purchase of goods and services (Hong and Kwon, 2012). However, a recent shift in the orientation of organizational and national procurement strategies from effectiveness and efficiency of purchasing activities to the use of procurement to champion the attainment of organizational goals has been noticed (Arrowsmith, 2010). This paradigmatic shift is prevalent in the public sector as scholars like Bratt et al. (2013), and Brammer and Walker (2011), have observed the potential of public procurement to serve as a medium for propelling state agenda. The SD discourse has assumed centre stage in global, national and regional contexts, with nations and organizations alike striving to contribute positively towards its attainment. A plethora of legislations have been enacted to this effect. Accordingly, SP has become a veritable tool for achieving SD objectives within national and organizational contexts. Whereas initial variants such as green procurement/green public procurement (GP/GPP) and green supply chains continue to be highlighted in relevant literature (Hensher and King, 2002, Bala et al., 2008, Ho et al., 2010, Wong et al., 2016, Pacheco-Blanco and Bastante-Ceca, 2016), the quest for SP remains predominant among potential procurers. This is occasioned by the limitations of GP/GPP which focus on environmental aspects of SD unlike SP which is primarily concerned with the triple bottom line (TBL) of SD (Elkington, 1999). SP has been described as the application of procurement activities in such a manner that the attainment of SD ethos as well as value for money on a whole life basis becomes realizable (Walker et al., 2012, Berry and McCarthy, 2011).
Furthermore, scholars have admitted to SP's potential in bringing about sustainable construction practices within the construction industry (Ruparathna and Hewage, 2015a, Ruparathna and Hewage, 2015b, Sourani and Sohail, 2011). The integration of SP into construction procurement has been heralded as a step in the right direction especially as it concerns the attainment of more sustainable construction practices (Sourani and Sohail, 2011; Ruparathna and Hewage, 2015b). These practices would inadvertently lead to a reduction in the adverse effects which the industry's activities has on the ecosystem. Yet, low levels of SP implementation have continued to prevail within the construction industry. Issues such as lack of awareness, lack of knowledge, lack of strategic support from organizational leadership/or owner commitment, funding constraints, have been adduced for the low uptake of SP across the global construction industry (Ruparathna and Hewage, 2015a; Sourani and Sohail, 2011). Also, SP in construction engenders the successful implementation of SD through various ways like the reduction in the quantity of natural resources utilized, reduction in the rate of harmful gas emissions, meeting the demands of extant and future

climate change oriented legislations, providing equal access to hitherto disadvantaged groups within the society, provision of a safe and conducive working environment for stakeholders within the construction industry, as well as upskilling of the workforce with futuristic competencies (Ruparathna and Hewage, 2015b).

Given the immense benefits accruable from effective implementation of SP in the construction industry, one cannot but be befuddled that it has not recorded significant uptake among construction industry clients, globally. The procurement of construction projects by public sector clients has mostly proceeded in a manner that is akin to business as usual (BAU) with less consideration being accorded to the attainment of SD through SP. In cases where attempts have been recorded to this effect, they have mostly centred on just the environmental aspects of SD, otherwise referred to as 'green'. Whilst this apathy towards SP may be attributed to the barriers mentioned previously, there is no gainsaying that HEIs should champion society's adoption of SP, given their time honoured roles in knowledge development and dissemination. One way of accomplishing this is through the adoption and effective implementation of SP during the procurement of built assets on their respective campuses.

Judging from a plethora of studies reporting on the greening of campuses (Sharp, 2009; Svanström et al., 2012; Pacheco-Blanco and Bastante-Ceca, 2016), it would appear that HEIs in the SSA region are either not doing enough in this regard or their efforts are underreported. This observation corroborated the findings of the study by Lozano et al. (2015) where they maintained that there was a stronger interest concerning SD integration in Europe when compared to other regions of the world. This study was borne out of these issues as there is need for the HEIs in the SSA region to commit to showing leadership in terms of SD through effective implementation of SP. It is expected that the elucidation of the barriers to SP of built university assets in these climes would further stimulate the discourse on SP, especially in construction and asset management, within and beyond the HEI environment.

2.2 Engendering Sustainable Development in HEIs through Sustainable Procurement

Over the past three decades, HEIs have signed onto various declarations, charters and initiatives (DCIs) adopting SD as a salient aspect of their institutional strategy (Lozano et al, 2015; Lozano et al., 2013). As such, HEIs are expected to integrate SD tenets into their core and non-core activities. In a nutshell, signing onto these DCIs implies their readiness to provide leadership for societal transformation towards SD (Pacheco-Blanco and Bastante-Ceca, 2016). Some studies have pointed out the compartmentalized nature of SD implementation in most HEIs (Lozano et al., 2015; Lozano-García et al., 2009; McMillin and Dyball, 2009). However, an aspect like the delivery and management of built assets within the HEI has not enjoyed adequate reportage. This is particularly the case in developing countries. Yet, this remains one of the critical aspects through which HEIs can showcase their SD aspirations.

It is a fact that HEIs play significant roles as public institutions and possess the capability to affect the manner in which society pursues its SD aspirations (Cortese, 2003). Also, HEIs are known to spend considerably in their efforts to upgrade their

built assets to cater for the every teeming population of prospective undergraduates. Accordingly, they can apply their expenditure through SP and subsequently engender SD, ultimately. As procurers of built assets, HEIs have to imbue the principles of SP behaviour to engender effective SP of built assets on their campuses. However, Grandia (2016) admitted that possessing such behaviour poses a major challenge for procuring entities like HEIs. She attributed this to the existence of two significant characteristics of procurers, namely; their willingness to adopt SP and their ability to show SP behaviour. According to her, the behaviour and characteristics of a procuring entity are essential for the application of SP in projects.

This observation makes this study, imperative. HEIs serving as procuring entities should overcome these challenges for them to actively implement SP during the procurement of built assets, especially in SSA where the rising population has necessitated the upgrade of campus infrastructure. This study shall proceed to identify the various factors inhibiting SP of such assets in SSA HEIs.

3. RESEARCH METHODOLOGY

This qualitative phenomenological study situates within the context of the Sub-Saharan Africa (SSA) region of Africa. It focuses only on HEIs domiciled within this area and is particularly interested in obtaining the views of FM directors of such institutions. An initial sample of Forty-three (43) HEIs within the SSA region were selected through a mix of purposive and convenience sampling (Flick, 2009). These HEIs were situated in Nigeria and South Africa. The email addresses and phone numbers of the facilities management departments/ facilities directorate/ physical planning units/works departments in these HEIs were obtained through the internet and snowballing. The initial sample selected consisted of a mix of publicly-owned and privately-owned HEIs and, conventional HEIs and Technology-centred HEIs. Emails were sent out to the addresses so obtained, intimating them of the research study and its importance to the achievement of the SD agenda. The recipients of these emails were asked to indicate their willingness to participate in the study. Recipients were assured of utmost confidentiality and anonymity in the reportage of their views on the phenomenon.

Out of this number, a total of thirty-seven responses were obtained over a three month period. Yet, only fourteen actually participated in the semi-structured interview sessions. Semi-structured interviews were used in the collection of data from this sample given its provenance as a great elicitation technique (Bryman, 2012). It enabled the researchers to obtain an insight into the phenomenon being understudied from the worldview of the respective facilities directors interviewed. The demographics of the interviewees are presented in Table 1.

Table 1. Interviewees demographics

Number	Code	Position	Country	Conventional HEI	Technology-centred HEI	Publicly-owned HEI	Privately-owned HEI
1	MM	Maintenance Manager	South Africa		X	X	
2	IDP	Infrastructure Delivery Partner	South Africa		X	X	
3	DPP1	Director, Physical Planning	Nigeria	X		X	
4	MM2	Maintenance Manager 2	Nigeria	X			X
5	DoF	Director, Facilities	South Africa		X	X	
6	DPP3	Director, Physical Planning 3	Nigeria	X		X	
7	CoW	Clerk of Works	South Africa		X	X	
8	ADW	Assistant Director Works	Nigeria	X			X
9	DPP4	Director, Physical Planning 4	Nigeria	X		X	
10	HoDW	Head of Department, Works	Nigeria	X		X	
11	DDPP	Deputy Director, Physical Planning	Nigeria		X	X	
12	DF	Director, Facilities	Nigeria		X	X	
13	TAF	Technical Assistant, Facilities	South Africa		X	X	
14	FM	Facilities Manager	Nigeria	X			X

Source: Authors' Fieldwork (2016).

From the demographics shown in Table 1, it can be seen that the representation of the

target audience is skewed towards Nigeria. This was not deliberate but rather occasioned by the inability of the researchers to secure interview slots with the individuals at the time of reporting this study. Accordingly, the findings from this study should be treated with caution as it does not emanate from a truly representative sample. Further efforts were made to elicit responses from the entire sample, albeit unsuccessful as emails sent to them on various occasions were not replied. However, this caveat does not nullify the veracity of the findings reported herein as high ethical standards were applied in the preparation of the data collection instrument as well as the data collection and analysis processes respectively. Also, data saturation was observed after the 10^{th} interview(O'Reilly and Parker, 2012, Guest et al., 2006). Also, certain documents relating to the delivery of recent buildings within the premises of these universities which were made available by some of the interviewees were analysed in the aftermath of the interviews. Furthermore, the authors relied on a host of tendering websites in Nigeria such as etenders.com.ng; tenders.nigeriang.com, and; naijacontracts.com.ng. These websites host various construction tender invitations. The authors selected a total of 69 calls for tenders by HEIs within the Nigerian context dating between January, 2008 and October, 2016. From this sample of 69 calls, 13 calls were screened out as they were silent on the pre-qualification criteria on the call, hence making it difficult for the authors to ascertain whether SP was adopted.

Prior to the conduct of the interviews, interviewees were sent copies of information which consisted of the interview guidelines, the aim of the study, definitions of basic terms as used in the context of the study, and the timeline required to complete the study. These interviews were carried out on a face-to-face basis as well as through telephone conversations. This was as a result of the distance between the interviewer and the interviewee in some instances and issues pertaining to the paucity of funds. Interviews were conducted over a four month period, between December, 2015 and March, 2016. The interviews were tape recorded, having obtained the permission of the interviewees to do so. The interviews were tape recorded with the permission of the interviewees. Significant questions asked during the interviews were structured according to pre-set themes which had evolved from the researchers' review of the relevant literature on the barriers to the successful implementation of SP. These themes consist of barriers relating to:

- Low level of awareness and understanding what constitutes SP;
- Lack of commitment from organizational leadership in support of SP, and
- Lack of expertise required to carry out Sustainable Procurement.
- Lack of Funding/Funding related issues.

These themes emanated from a review of the scholarly works of Sourani and Sohail (2011), Ruparathna and Hewage (2015a) and Grandia (2016) pertaining to obstacles to SP implementation. The interviews lasted for an average of forty-five minutes, each. Whereas ten interviews were conducted on a face-to face basis, four were

conducted through telephones. Transcripts were transcribed, verbatim. The transcripts were then analysed through Qualitative Content Analysis techniques (QCA), thematically (Bernard and Ryan, 2010). Steps taken in the analysis included the reading and re-reading of the transcripts, the development of preliminary categories using the aforementioned pre-set themes (Taylor-Powell and Renner, 2003). The responses contained in the transcripts were then coded according to the established themes. In the aftermath of this, the themes were then reviewed to ensure the suitable nature of the categorization applied. Also, the manner in which the analysis was conducted left room for the recognition of other themes which could not easily be categorised according to the pre-set themes. Themes of such nature are referred to as emergent themes.

4. FINDINGS AND DISCUSSION

In this section, the findings observed from the data are discussed in accordance with the pre-set themes.

4.1 Low level of awareness and understanding of what constitutes SP

An optimal level of awareness and understanding about transformational concepts such as SP, and SD is required to effectively embed them into an organizational fabric. This analogy remains the same for HEIs (Gisela et al., 2013). So it was indeed surprising to observe the low levels of awareness and understanding among the facilities staff at SSA HEIs, concerning these concepts, especially SP. As members of staff responsible for the delivery and maintenance of infrastructure in HEIs, they occupy a pivotal position in the advocacy for the adoption of SP principles. When asked if they were aware of any policy, declaration or agreement at regional, national or organizational level to which their respective institutions were signed onto with respect to the SD and SP, 9 interviewees answered in the affirmative. However, when asked to disclose the contents of any of these declarations, particularly as it impacted on the discharge of their duties, all but one of the interviewees feigned ignorance. It is pertinent to note that a survey report carried out in 2010 indicated that HEIs within this region unanimously signed up to a declaration titled 'Sustainable Development in Africa-The Role of Higher Education' at the 12th General Conference of the Association of African Universities (AAU). This conference took place in Abuja, Nigeria in May 2009 (Escrigas et al., 2011). By signing unto this declaration, HEIs in SSA undertook to integrate SD and sustainability ethos into their institutions' curricula and daily campus operations. One can argue that the facet of infrastructure procurement, delivery and management features prominently under campus operations.

Even in an instance where a certain HEI had espoused a vision to attain an 'SU' status and provided a seemingly appropriate implementation mechanism for that vision to be implemented (CUT, 2012), four interviewees (MM, IDP, CoW, and TAF) from that HEI stated that whilst they were aware of the HEI's sustainability agenda, they were not aware of the existence of the framework for implementation. This implies the lack of effective communication among stakeholders to the implementation exercise. Also, it was surprising to discern that there was higher level of awareness among the interviewees about what SD and sustainability were all

about but none as to what SP was. The researchers had to refer them to the 'definition of terms' document sent to the interviewees before the interviews to enable that understanding. Though, most interviewees were of the opinion that achieving financial sustainability within the HEI was of paramount importance.

Also, the review of 56 calls for tender from HEI for the provision of tender websites within the Nigerian HEI context further confirmed the low level of SP awareness and knowledge. Only one call from a sample of 56 calls made reference to the tenets of SP; more or less, green procurement in their pre-qualification criteria. This lack of or low level of awareness or knowledge will surely inhibit the successful implementation of SP within these institutions, going by the assertions of Grandia (2016) concerning the SP behaviour of procurers and the criticality of knowledge in enabling effective SP behaviour.

4.2 Lack of commitment from organizational leadership in support of SP

Top management support is critical to the successful implementation of any organizational agenda (Grandia et al., 2014). The adoption of SP in any organization does not fare any different, either. However, the interviewees from publicly-owned HEIs unanimously maintained that they had not received any support from the top management of their respective organizations concerning the adoption of SP as a strategic objective in the conduct of their daily activities, particularly regarding infrastructure delivery and management. But interviewees from the privately-owned institutions (MM2, ADW, and FM) mentioned that they had received support from their top management to explore ways through which SP in infrastructure delivery and management can be utilized for the benefit of the institution and its immediate environs, respectively. Yet, they reiterated that this support was only on face value. In one instance, an interviewee, (ADW) explained how his attempts to engage local suppliers, was rebuffed by the management as a result of cost implications. He proceeded to state that there was a commonly held notion in his institution that SP was associated with increased capital cost. When other respondents were asked if they thought that this was the case; they all acquiesced. This emphasis on cost by the management was also observed during a review of the project documents for recent projects carried out some of the HEIs under focus. The tender specifications did not detail the use of the sustainable materials in the delivery of the assets, neither did it state that suppliers should be sourced from local environs; two aspects of SP. Furthermore, there was no incentive for bringing in sustainability related innovation into the delivery process but rather there was an incentive for reduced delivery cost. In one instance, the case of a Lecture Theatre in one of the publicly-owned HEIs in Nigeria, the contractors won tenders on the basis of lowest cost. No consideration was given to innovations which may bring about overall lifecycle savings on such projects. And this appears to be the norm in several HEIs within SSA. Surely, this negates the principles of SP. Considering the dire financial status of several countries in the SSA, the perception that the adoption of SP will lead to increased production costs stands to act as a hindrance to the increased uptake of this phenomenon amongst various organizations situated with the region.

4.3 Lack of expert required to carry out SP

Another daunting challenge confronting these interviewees in the adoption of SP was the lack of expertise required to carry out SP on their campuses (Grandia et al., 2014).

Extant literature has sought to highlight the significance of a SP advisor in organizations willing to adopt it as a strategic objective (Scanlon and Davis, 2011). This sustainability advisor, they insist, should be absorbed into procurement teams to generate the desired level of awareness and understanding among the members of such teams. When asked if they had any persons currently advising them on SP or other aspects of sustainability/SD, all but three of the interviewees stated that they did not. The three interviewees who laid claim to having a sustainability advisor in their HEI all came from one of the HEIs. But, interviewee (IDP) who played the role of an infrastructure delivery partner to the HEI observed that the job scope of the sustainability advisor in this regard was not properly defined as she did not have any role to play in the strategic procurement of infrastructure on the HEI's campus. Continuing, he maintained that she was rather saddled with the responsibility of monitoring energy usage trends in the HEI's premises among other ancillary duties. This indicates the lack of sustainability advisors for infrastructure projects in the HEIs. The importance of such a sustainability champion in the HEI engenders a shift towards SP of not only infrastructure assets but other items being used in the day to day operations of the HEI.

4.4 Lack of funding/funding related issues

Another critical issue which was raised during the interview sessions concerned funding arrangements and availability. Interviewees from the publicly–owned HEIs in Nigeria maintained that an agency of the Federal government bore responsibility for financing most of the infrastructure projects being delivered on their respective campuses. This responsibility is merely interventionist as the HEIs are expected to use their Internally Generated Revenue (IGR) and government grants to deliver essential infrastructure on their campuses. However, with the dwindling allocation from government in recent times, the interviewees acknowledged that the agency had almost taken up the provision of such infrastructure as its sole mandate. In line with this new development, the ability of the Physical Planning Directorates in these HEIs to influence the procurement of these projects in such a manner that is akin to the attainment of SP principles is steadily diminishing. Similarly, some interviewees stated that the patterns through which funds were released to them for the maintenance of the HEI's infrastructure stock made planning for SP purposes, difficult if not impossible. They maintained that they have to draw up a budget at the commencement of the fiscal year and then only get allocated the approved sums towards the middle of the fiscal year. As such, they are always in a haste to exhaust this budget within the stipulated time so as not to get it withdrawn at the end of the year. Such haste, they admit, has always placed them in a tight position especially in the area of local supplier development. They use readily available suppliers to deliver on the approved projects. Agreeably, this type of funding arrangement is not favourable to SP. For other interviewees, the idea of engendering lower costs still resonates within their respective HEIs. They argue that lowering costs was a way of engendering financial sustainability for the HEI. However, when asked if they consider overall lifecycle savings as being integral aspects of the much sought after 'financial sustainability of the HEI', they replied in the negative. For them the future savings are not a major consideration for increasing the initial capital outlay for their infrastructure projects.

4.5 Type of contracting strategy adopted for project delivery

The ability to procure infrastructure projects in a sustainable manner (SP) is often affected by the type of contract strategy used by clients (Awuzie and McDermott, 2016). This view was corroborated by Ruparathna and Hewage (2015b) as they maintained that key elements of the competitive dialogue procedure (CDP) and procurement, engineering, procurement and construction (PEpC) were capable of promoting SP if adopted by the client. This was discovered in the data emerging from the interview sessions. There was a consensus among the interviewees on the salient effect, which the contracting strategy adopted had on their ability to influence project outcomes through SP. Of particular interest was the prevalence of the traditional procurement route in the delivery of infrastructure projects in most of the HEIs. In the Nigerian context, the clients appoint consultants to develop a design for the proposed infrastructure project. Often times, there is no input from the physical planning directorate, and even where there is, it is limited to identification of areas of need. As such, representation from the physical planning directorate where available is confined to the identification of priority projects but does not pertain to the mode of delivery. Interviewees from the affected HEIs opined that the adoption of more innovative strategies to the delivery of infrastructure would allow for the engendering of SP ethos into the procurement process. When asked to recommend any innovative strategy, they could only suggest the Design and Build (D&B) strategy. It remains to be seen how the concession of D&B rights to a contractor would engender SP on HEIs. Further inquiry into the facet was not carried out as it was the beyond the study's scope. It was easy to discern from the responses obtained that the interviewees were not happy with their limited involvement in the processes preceding the actual delivery of the projects on their campuses.

4.5 Absence of institutional commitment to SP/SD within these HEIs

An HEI's inability to sign onto a DCI poses another barrier to SP of built assets. Being a signatory to the variety of DCIs signals an HEI's aspiration towards SP and SD. Buttressing this assertion further, results emanating from the study conducted by Lozano et al., (2015) highlight the existence of a strong relationship between SD commitment, adoption, implementation and signing of DCIs. All interviewees were not certain on whether the HEIs they were representing had signed any DCI. Arguably, this posed a significant barrier to the implementation of SP for built assets within these institutions. Wong et al (2016) concurred with this as they observed that the presence of requirements, legislation and standards (DCIs) were essential for the adoption of green procurement (SP) in construction projects. Conversely, their absence would bring about abysmal SP implementation performance in construction projects.

5. CONCLUSION AND RECOMMENDATION

This study set out to identify challenges hindering the adoption of SP practices among HEIs in SSA. From the analysis of the data, the authors are able to discern the existence of six challenges confronting the adoption of SP practices in the procurement of infrastructure in SSA HEIs. These barriers consist of: low level of awareness and understanding of what constitutes SP; lack of commitment from organizational leadership in support of SP; lack of expertise required to carry out

Sustainable Procurement; lack of funds/funding-related issues; type of contracting strategy, and finally; the absence of an enabling legislation/DCI stipulating an institutional commitment of the HEIs to SD. It is expected that more barriers will be identified from data from the pending interviews.

Excerpts from the data being reported in this study affirm an existing commitment to embed ethos of the SD by HEIs in SSA into various facets of their activities such as curricula and daily operations. However, there is notable neglect of the need to embed these principles into areas concerning the purchase and supply of goods and services. This is especially so in the case of purchases requiring large capital outlays such as infrastructure delivery and management. The quest to attain SU by integrating SD practices into their activities cannot be successful if this salient aspect of SP is left out.

For SP to be engendered in the procurement of built assets in these HEIs efforts should be made to create more awareness about the immense benefits of SP and SD. Attempts should also be made to adopt Life Cycle Costing models for building projects as they make a stronger case for the adoption of SP in such contexts. HEIs as procurers should also sign onto DCIs as this would enable them benefit from benchmarking among peer institutions in areas such as appropriate procurement/contracting strategies, etc.

This study sought to explore ways through which HEIs in SSA can achieve SD through effective utilization of SP principles in the delivery and management of infrastructure on their respective campuses. No doubt, the study will contribute immensely to the attainment of this stated objective by providing decision-makers and other influential stakeholders in these HEIs with an insight into some of the barriers which may negate their intentions to attain SU status.

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