

## **BARRIERS TO THE SUSTAINABLE PROCUREMENT OF BUILT UNIVERSITY ASSETS IN SUB-SAHARAN AFRICA**

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The commitment of Higher Education Institutions (HEIs) to Sustainable Development (SD) seems to be yielding limited positive results. This is evident in the procurement of infrastructure within HEIs situated in Sub-Saharan Africa (SSA). Besides being part of a wider study into Sustainable Procurement (SP) of infrastructure in SSA HEIs, this study reports on facilities directors' perceptions of sustainable procurement in HEIs within SSA. A phenomenological research design was 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 concerning the procurement of infrastructure were also reviewed. Emergent data from these sources were thematically analysed. Preliminary findings indicate that Business As Usual (BAU) mode of procurement has remained the norm in most of the HEIs in spite of their profess commitment to SD. Some barriers 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. Procurement, Sustainability

### **1 INTRODUCTION**

Higher Education Institutions (HEIs) are expected to assume a critical position in driving society's quest for Sustainable Development (SD) (Cortese, 2003). Such expectations emanate from the historical position of HEIs, not only as microcosms of the larger society, but also as platforms for creating and disseminating knowledge (Lozano, Lukman, Lozano, Huisingh & Lambrechts, 2013, Stephens, Hernandez, Román, Graham, & Scholz, 2008). Several HEIs across the globe seem to have made concerted efforts to provide support for the attainment of the SD agenda (Escrigas, Polak, & Jegede, 2011, Sammalisto & Lindhqvist, 2008). Evidence resulting from the review of literature indicates that a great degree of these efforts are concentrated on the facets of teaching and learning on one hand and research on the other (Sharp, 2009, Krizek, Newport, White & Townsend, 2012). Whereas noticeable attempts have been

made to document strides being taken by some HEIs in the United States, Europe, South America and even parts of Asia towards 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, Adachi, Banas, Davidson, Hoshikoshi, Mishra, Motodoa, Onga & Ostwald, 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 (Awuzie, Emuze & Ngowi, 2015). This is especially so when compared to research into the sustainability-oriented teaching, learning and research (Velazquez, Munguia, Platt & Taddei, 2006). Studies have also highlighted the need for these aspects of SD to be taken into consideration by HEIs intent on transforming into an SU (McMillin & Dyball, 2009, Lukman & Glavič, 2007, Lozano-García, Huisingh & Delgado-Fabián, 2009). These studies further reiterate the need for a systemic, whole-of-campus approach towards SU-oriented transformation. Through this approach, an HEI is expected to adopt sustainable practices in its comprehensive procurement strategy, carry out measures which are aligned to the ethos of SD during the delivery of infrastructure on their premises, focus on the development of skill sets that are required for the next generation of SD experts through teaching and learning, etc.

Whilst HEIs within SSA have expressed their belief and commitment towards the attainment of SD, a reporting of the steps being taken to ensure such transition has not really been noticed in related literature. In the seemingly scant cases where SD performance has been reported, such as the case of the Central University of Technology, Free State (CUT), an overt concentration on the research, community engagement as well as teaching and learning facets was observed (Awuzie & Emuze, 2015). Business As Usual (BAU) was allowed to reign in the procurement and delivery of infrastructure on this HEIs 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' unlike some of their contemporaries in developed regions. A HEI's bid to assume an SU status should be anchored on its ability to mainstream ethos of SD across every facet of its operations and to showcase this through effective reportage (Svanström, Gröndahl, Holmberg, Lundqvist, Svanström & Arehag, 2012, Ferrer-Balas, Huisingh, Buckland, Ysern & Zilahy, 2010). Such reportage would boost knowledge creation and sharing in this regard.

One aspect that seems to have been neglected in the quest to attain SD is the angle of SP. Various 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 & Bryde, 2011, Grandia, Groeneveld, Kuipers & Steijn, 2014, Walker & Brammer, 2012). SP advocates have clamoured for governmental and non-governmental organisations with considerable capital to execute SP. 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 & Preuss, 2008, Arrowsmith, 2010). HEIs are no different from the aforementioned organizations as

they also wield a large purse. Therefore, they are not exempt from procuring in a sustainable manner. For instance, the delivery of facilities and other infrastructure on their respective campuses is a salient avenue to utilize SP (Willems, Burdon, Glass & Frost, 2010, Ofori, 2006).

However, whereas the desire to achieve a whole-of-campus transformation toward SD requires the commitment of all stakeholders (Brinkhurst, Rose, Maurice & Ackerman, 2011), a previous study involving the authors confirms that the facilities management directorates of HEIs are often left out of the decision-making apparatus, especially as it concerns the procurement of new infrastructure or maintenance of an existing one (Awuzie et al., 2015). This has the potential to distort the attainment of the SU vision through the negation of SP. This observation makes this study an imperative one as it seeks to understand the impediments to the sustainable procurement of infrastructure within HEIs in SSA from the perspectives of the head of facilities. 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 three sections: the research methodology, findings and discussion, the conclusion and recommendations.

## **2 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 the Facilities Management directors of institutions located within the broader geographical context of the SSA. 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 technique. Also, cognizance was taken of the need to engender replication logic (Denzin & Lincoln, 2008). 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. This participation was expressed as their willingness to be interviewed at their earliest convenience and their ability to share project or facilities development plans with the researchers.

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 as appointments have only just been scheduled with a majority of the remaining population of prospective interviewees as at the time of writing up this report. 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.

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. The findings from this study should be treated with caution as it does not emanate from a truly representative sample. Efforts are being made presently to elicit responses from the entire sample. 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, 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.

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 availability of funds or otherwise. Interviews were conducted over a four month period, between December, 2015 and March, 2016. 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.

**Table 1 Interviewees' Demographics**

No	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 1	Nigeria	x		x	
4	MM2	Maintenance Manager 2	Nigeria	x			x
5	DPP2	Director, Physical Planning 2	Nigeria		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 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

The interviews lasted for an average of forty-five minutes. Whereas ten interviews were conducted on a face-to face basis, four were conducted through telephones. Transcripts were transcribed verbatim. The transcripts were analysed through Qualitative Content Analysis techniques (QCA) (Bernard & 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 & Renner, 2003). The responses contained in the transcripts were then coded according to the established themes. In the aftermath of this, the themes were reviewed to ensure the suitable nature of the categorization applied. 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.

### **3 DISCUSSIONS OF FINDINGS**

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

#### **3.1 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 (Mader, Dzulkipli Abdul Razak, Cebrián, Grace & Humphris, 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 12<sup>th</sup> 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 onto 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 a ‘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. It was also 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 them 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.

### **3.2 Lack of commitment from organizational leadership in support of SP**

Top management support is critical to the successful implementation of an 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. 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 interviewees 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 as a hindrance to increased uptake of this phenomenon amongst various organizations situated with the region.

### **3.3 Lack of expertise required to carry out Sustainable Procurement**

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 & 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.

### **3.4 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 & McDermott, 2016). 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 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. CONCLUSION**



This study set out to investigate the barriers 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 five barriers to 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; funding-related issues; and finally, the type of contracting strategy used in the procurement of the infrastructure. It is expected that more barriers will be identified from data from the pending interviews.

Excerpts from the preliminary data being reported in this particular paper 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.

This study forms an integral part of a wider study which seeks 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, this 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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