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Ensuring sustainability in public procurement in Ghana: A case study at cape coast technical university

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Abstract

Importance of the application of sustainability in public procurement in Government educational institutions globally, is well-documented. This study examined the application of sustainable procurement at Cape Coast Technical University. A sample size of thirty one respondents, made up of staff of the institution in departments concerned with procurement, selected using census sampling. The analysis was undertaken quantitatively using frequency and percentage tables. The study revealed that though sustainability standards are applied in procurement at the university, most of the staff in other departments apart from the Procurement Unit, need more education in sustainable procurement to appreciate the need for sustainability in the procurement system. The study also revealed that not only is sustainability ensured in the procurement system of the university by procuring most of the sustainable goods and services from small scale local suppliers, attempts are always made to procure sustainable goods to ensure their longevity. Among the recommendations made, are; the university should observe sustainability in the various steps of purchasing cycle for instance when identifying need, drawing of specification, selecting and awarding contract to suppliers or contractors and also practice sustainability in the consumption of the items procured. Management of the institution need to organize workshops on sustainable procurement for the staff and reduce the problems that hinder sustainable procurement at CCTU. It went on to explain what sustainable procurement is by describing what sustainability is and it's important for the growth and survival of public organisations and institutions. There was a discussion of the nature of procurement in Ghana before promulgation of Ghana's Public Procurement Act (PPA Act 663) of 2003 and the amended Act 914 of 2016 which ironed out some of the challenges in the Act 663.

Keywords: Sustainability, procurement, public, social environment, economic

1. Introduction

1.1 Background of the study

All organisations, whether public or private, depend on the purchase of resources for their operations and survival. Such purchases are undertaken using the procurement process. In its simplest terms, procurement has been defined by the Merriam Webster Online Dictionary as the process of obtaining military supplies by a government. However, the modern meaning of procurement goes beyond this simplistic meaning. Procurement is described as the acquisition of goods, services or works from external sources that has comparable importance with its appropriateness and favourable cost benefits to meet the demands of the buyer with respect to time, quality, location and quantity (Van Weele, 2010) ^[25].

Public procurement refers to as the acquisition of goods, services and works by a procuring entity using public funds (Arrowsmith *et al.*, 2011) ^[34]. In Ghana, public procurement forms an important aspect of public expenditure. This is because according to the Country Procurement Assessment Report (CPAR) of 2003 of Ghana (World-Bank, 2003) ^[30], public procurement accounted for 50-70% of the national budget, after personal emolument. As a result, the Government of Ghana passed the Public Procurement Act (Act 663) in 2003, following long standing reforms by several regimes dating as far back as 1960 and the Amendment Act (Act 194) of 2016 to cater for the few challenges of Act 663 of 2003. There has therefore been the growing need to ensure implementation of effective sustainable procurement in the country.

Over the past two decades, the term sustainable procurement has become an important issue, globally. Sustainable procurement is described as the acquisition process, whereby public and private organizations meet their needs of goods, services and works

in a way that achieves value for money on a whole life-basis in terms of generating benefits not only to the organization, but to society and the economy at large, whilst minimizing damage on the environment (Kalubanga, 2012)^[13].

Kalubanga (2012)^[13], in applying the concept of sustainable development by the World Commission on Environment and Development (WCED, 1987)^[28] to sustainable procurement, went on further to explain sustainable procurement as a process of acquiring goods, works and services from a supplier that provides the optimum combination of whole life costs and benefits to meet the customer's requirements. It is therefore a process whereby organisations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits not only to the organization, but also to society and the economy, while minimizing damage to the environment (Berry, 2011)^[5-6].

The World Summit of Sustainable Development (WSSD, 2002)^[32] also noted that the relevant local, national, and international authorities at the various levels should promote procurement policies to encourage the diffusion of environmentally sound goods and services to promote recycling of resources Zhang (Srour, Chong, & Zhang, 2012)^[22] sustainable construction (Son, Kim, Chong, & Chou, 2011)^[21], and sustainable consumption of the necessary goods and services (Wahlen, Heiskanen, & Aalto, 2012)^[26].

1.2 Statement of the Problem

Considering the many queries raised after various procurement audits of public institutions, the government of Ghana decided to institute procurement reforms. The purpose of these procurement reforms in Ghana was to smoothen the procurement process in public organizations (such as tertiary educational institutions) so as to ensure efficient use of government resources in public procurement. Such reforms have also been undertaken to facilitate the enforcement of fairness and transparency in public procurement in order to promote competition among local suppliers.

However, several allegations relating to irregularities in procurement processes have been levelled against Public Entities (PE). Problems associated with other stakeholders involved directly or indirectly in the procurement process were among the findings that necessitated these reforms. These allegations include inefficiencies in the procurement processes, delay in procurement due to long procurement processes and high cost of projects, as well as lack of sustainability in procurement of goods, works and services of public organisations. Other allegations include lack of fairness, lack of transparency in procurement, unnecessary use of sole sourcing and discrimination in the selection and award of government contracts, which most of the times, do not favour local, small scale suppliers or contractors, as well as inflated contract figures.

Also, some Public Entities are confronted with procurement issues such as lack of professionalism, limited career development opportunities for procurement staff in the public service, and weak contract management of the procurement units (World-Bank, 2003)^[30]. In addition to all the above, most public procurement entities refuse to comply with environmental and social legislation existing in the country (such as the need to ensure sufficient local content) as a result of excessive costs incurred in ensuring

sustainability in their procurement systems. Ghana's Public Procurement Act (Act 663), did not address much of the sustainability issues. For instance, local environmental conditions and market, remain devoid of the necessary sustainable procurement elements. However, the introduction of the Amended Act 2016 (914) now define how to possibly include economic, social or environmental considerations in the process, while ensuring that government's decisions, as far as procurement is concerned, are fair and transparent. Sustainable procurement is a global issue, therefore Ghana needs not to be an exception.

This study therefore seeks to examine gaps created as a result of using normal procurement processes as against the use of sustainability in the implementation of the procurement Act of 2003,(663) as Amended 2016, (914) using Cape Coast Technical University (CCTU) as a case study.

1.3 Objectives of the Study

The main objective of this study is to examine challenges inhibiting sustainable procurement at CCTU, while the specific objectives are to:

1. Examine sustainability standards applied in the procurement system of CCTU.
2. Assess professionalism of the staff of CCTU in ensuring compliance with environmental and social legislation in their procurement processes.
3. Examine the need for sustainability in the procurement of goods and services for CCTU, and
4. Identify challenges faced by staff of CCTU in ensuring sustainability in their procurement processes.

1.4 Research Questions

The study will provide answers to the following questions

1. How sustainability standards applied in the procurement system of CCTU?
2. What is the level of professionalism of the staff of CCTU in ensuring compliance with environmental and social legislation in their procurement processes?
3. How is sustainability ensured in the procurement of goods and services for CCTU and
4. What are the challenges faced by staff of CCTU in ensuring sustainability in their procurement processes?

1.5 Significance of the Study

This study would serve as a means of promoting discussion and reflection on the steps needed to promote sustainability in procurement practices at CCTU and other comparable institutions in the country. Moreover, the research work could also be used as a reference point as well as the basis for future research works by researchers interested in contributing to the subject under discussion.

Finally, the study would provide relevant contribution to existing literature on the subject of sustainability in Public Procurement in Ghana. It will also outline ways by which the procurement law could be used to improve both efficiency and effectiveness of sustainability procurement of goods, works and services in tertiary institutions in the country.

1.6 Scope of the Study

The study seeks to identify the challenges that tertiary institutions face in the smooth implementation of the sustainability in Public Procurement Act, using CCTU as a

case study. The study will therefore be limited to the key staff in the units who are key stakeholders of procurement in the institution, who play various roles in procurement activities as they outline challenges they encounter in ensuring sustainability when procuring and consuming goods and services for the institution. It will also extend further to discuss issues regarding sustainable procurement structures that exist in CCTU.

2. Literature Review

2.1 Public Procurement and Sustainability

Basically, public procurement is deep rooted in history. The act of procuring goods for public use dates back to the period between 2400 and 2800 B.C. (Thai, 2001) ^[23]. The first procurement order according to Coe (1989) ^[10], involved the purchase of fifty containers of fragrant smooth oil for 600 small weight in grain. Some recorded historical evidence of procurement activities included the development of the silk trade involving the Chinese and the Greeks in 800 B.C. (Thai, 2001) ^[23].

Sustainability is a broad concept that examines how societies live, interact and operate in trying to meet their needs (WCED, 1987) ^[28]. It also means trying to find ways for humankind to live, work and play that do not interfere with nature's inherent ability to sustain life both for the present and posterity (Berry, 2011) ^[5-6]. Sustainability considers people's economic, social and environmental needs and involves taking responsibility for the local, regional and global impacts of their way of life. As put across again by Berry (2011) ^[5-6], sustainability also requires that people take a longer-term view when making decisions to ensure meeting their own needs in ways that do not compromise the ability of others both today and future generations from meeting their own requirements expect the nature.

The implementation of proactive procurement processes with the aim of achieving sustainability, can result in meeting the needs of public institutions for efficient performance and high productivity. Sustainable procurement is a process whereby public institutions meet their needs for goods, services and works in a way that achieves value for money on a whole life cycle basis in terms of generating benefits not only to the organization, but to society and the economy, while minimizing destruction to the environment (AES, 2008; DEFRA, 2006) ^[2, 11].

Sustainable procurement (or Green Procurement) is an expenditure and investment process typically associated with public policy, although it is equally applicable to the private sector, it is linked to the wider agenda of Sustainable Development Goals. Traditional procurement has focused on value for money considerations only, whilst sustainable procurement does not only involve achieving value for money on a whole life basis, but also consider the economic, environmental and social issues having to do with the goods and services bought, with the aim of reducing possible extreme effects (Kalubanga, 2012) ^[13].

In the past, sustainable procurement has been concentrated on environmental protection. For example, Lamming and Hampson (1996) ^[35] had noted that; in supply chain management, the purchasing function is beginning to play a more important role in the future strategy of businesses and will need to have policies in place that can cope with a range of issues, many of which closely affect the environment. Similarly, in a study by Vachon and Klassen

(2006) ^[24] regarding green supply chain management, key themes developed included investigating the experiences of engagement with environmental issues in supply management.

Sustainable procurement also refers to the act of integrating a concern for broader social and environmental impacts within procurement undertaken by government or public sector bodies (Preuss, 2009; Walker & Brammer, 2009) ^[20, 27]. Several studies have contributed to the debate of attaining sustainable procurement, especially in the construction industry. There seems to be challenges in existing procurement processes and structure in the developing countries (Boomsma, 2008) ^[7], of which Ghana is no exception. These challenges create some form of deficiency in the capacity needed to ensure sustainability in public procurement. Such challenges are deeply seated in the Ghanaian procurement systems and this study seeks to spell out such challenges and suggest solutions.

2.2 Sustainable Procurement Frameworks:

In the formation of sustainable procurement policy for a country, one needs to be able to define what constitutes a sustainable procurement process. Again, there should be the means of determining how sustainable procurement will be, especially by the application of the Whole Life Cycle (WLC) approach. This can be applied at either an asset or multiple asset level (Berry & McCarthy, Guide to Sustainable Procurement in Construction, 2011) ^[5-6]. The WLC analysis is basically used at either the sourcing strategy stage to help decide between competing procurement options and/or at the tender evaluation stage, i.e. to ensure that, contract award decisions are made on cost assumptions over the life of the goods, works or service and not just on the upfront capital cost. Preuss (2009) ^[20] made a caution that, the cheapest whole-life cost does not necessarily equate to the most environmentally sustainability options. The practice of procurement in Ghana seems to have little sustainability considerations. We are of the view that, sustainability should be inculcated into procurement cycle at the identification and drawing of specification before the selection and award of contract.

Brammer and Walker (2011) ^[27] in an international comparative study of sustainable procurement in the public sector, identified that, policy makers need to be careful of the emphasis they place on the various aspects of sustainable procurement. This gives rise to the need to develop a sustainable procurement framework that suits public procurement in developing countries such as Ghana. A policy framework should include; planned development of targets for all environmental impacts and extension of the framework to cover social issues. Such a policy should also envelope economic and social implications of good sustainable procurement practices. These key features seem to be lacking in the existing procurement practices in Ghana.

2.3 Importance of Sustainable Procurement

There is increasing pressure from customers, in both private and public sectors, clients, government and the public to put sustainable procurement into practice. The 2002 World Summit on Sustainable Development stated that relevant authorities at all levels should: "promote public procurement policies that encourage development and diffusion of

environmentally sound goods and services" (Kalubanga, 2012)^[13].

2.4 Potential Benefits of Sustainable Procurement

According to the Chartered Institute of Procurement and Supply (CIPS, 2009)^[9], a broader list of potential benefits that sustainable procurement practices may have for an organisation adopting such practices in its operations could be many and include the following:

1. Minimising risks in procurement by businesses;
2. Providing cost savings, through focusing organisations on following a whole life costing methodology when sourcing goods and services. This would include motivating reducing consumption, reusing and recycling and ultimately reducing the amount of waste going to landfill;
3. Enhancing corporate image in the marketplace, by demonstrating sustainable purchasing and supply management's value to the organisation;
4. Creating markets for new products and services, by using technology to develop and market sustainable products that will initially attract consumers who are early adopters and command a premium price in the marketplace;
5. Securing the supply of goods and services in the light of increasingly environmental legislation; and
6. Reducing waste and improving resource efficiency

3. Research Methods

3.1 Introduction

This chapter covers the methods used for collection and analysis of the data for this study. The research methodology is the general approach used in carrying out the research work. The chapter therefore deals with key issues of the work such as the research design, the study area, the target population, sample and sampling procedure, the data collection instrument, the data collection procedures, ethical consideration as well as the data processes and analysis.

3.2 The research design

Zikmund (2003)^[33] had explained that research design is a blue print which specifies the exact data collection procedure or strategy that will be used to achieve the objectives of the study. This study utilized the descriptive survey design which sought to examine problems inhibiting application of sustainable procurement at CCTU. Descriptive survey design involves systematic gathering of data about individuals and collectives in order to answer research questions about the current status of the subject of study.

The survey design is considered appropriate when information is needed about conditions or relationships that exist. In the view of Ary, Jacobs and Razavich (1990)^[4], this type of design is appropriate because it permits one to collect data to assess current practices for improvement. Ary *et al.* (1990)^[4] further observed that this type of design gives a more meaningful and accurate picture of events and seeks to explain people's views and behaviour, based on data gathered at any particular time. An advantage of a descriptive survey is that it helps to collect data to enable one draw the relationship between variables and analyse the data. It helps scholars to observe, describe and document aspects of a situation as it naturally occurs.

This study uses mainly quantitative approach by using questionnaires as a main source of data collection for the research. The questionnaires were used as a way of reducing cost and completing the study within a short period. The respondents were also able to complete the questionnaires at their own convenience. It was also found that the findings from quantitative research could be predictive, explanatory, and confirming (Williams, 2007)^[29].

3.4 Population

According to Ahmed, Opoku, and Aziz (2016)^[3], the population of a research is the total number of the target of the research as defined by the aims and objectives of the study. In the context of this research, the target population consists of all staff concerned with procurement in the institution. These staff members are referred to in this study as procurement stakeholders of CCTU. These stakeholders are in the following departments or units: Procurement and stores Unit, the Accounts Department, the Directorate of Internal Audit, the Development and Estate Units. They are about thirty five (35) in number.

3.5 Sample Size and Sampling Procedure

Due to the limited number of staff who are procurement stakeholders of CCTU, it was decided to use the census method involving all the people in the population as the sample for the study. According to Israel (2016)^[12], the research approach in using the entire population as the sample, is accepted. Although cost considerations make this impossible for large populations, a census is attractive for small populations (e.g., 200 or less). A census eliminates sampling error and provides data on all the individuals in the population.

For this study, in using the census method, questionnaires were prepared and administered to all the procurement stakeholders in the University, who were thirty five (35) in number. At the end of the fieldwork, thirty one (31) questionnaires were retrieved, recording a response rate of 88.6%, which was found to be satisfactory.

3.6 Research Instrument

The research instrument used in the data collection was a set of questionnaire developed by the researchers based upon the reviewed literature. The choice of questionnaire as the research instrument was influenced by the opinion of Kerlinger (1973)^[14], who pointed out that questionnaires are widely used for collecting data in educational research because of their effectiveness in obtaining actual information about practices, conditions and for enquiries into opinions and attitudes or subjects. The questionnaire was made up of both closed and open ended questions. Both open and closed ended items were used to permit respondents to provide elaborate answers which would not have been possible using closed ended items or questions. Generally, McColl (2005)^[16] asserts that there are distinct advantages in using questionnaires rather than the interview method.

The questionnaire was divided into four (4) main sections. Sections A to D. Section 'A' covered the bio-data of the respondents. Section 'B' examined the level of knowledge of the respondents about procurement. While section 'C' examined the opinions of the respondents about sustainable procurement issues at CCTU, Section 'D' looked at

problems inhibiting sustainable procurement implementation at CCTU.

3.7 Data Collection Procedures

The questionnaires were administered personally by the researchers to the respondents to ensure that all the respondents were involved. In all 35 questionnaires were administered to the respondents of the various procurement stakeholders selected. This was done to obtain information from all the respondents in the study to enable the researcher to generalize the findings of the study.

3.8 Data Processes and Analysis

Analysis of data is a process of editing, cleaning, transforming, and modelling data with the goal of highlighting useful information, opinions, suggestions, conclusions, and supporting decision-making (Adler, 2008) [1]. The data collected from the respondents were studied, examined, classified, analysed and discussed to answer the research questions and objectives. Computation of the responses were scored and statistically analysed. The Statistical Package for Social Sciences (SPSS) version 21 was used for the processing of the data collected. This statistical software is recommended for use in studies in social sciences (Zikmund, 2003) [33].

Data from the questionnaire were analysed using tables, frequencies and percentages (descriptive statistics) to ensure easy and quick interpretation of data. The findings were illustrated and presented on tables, which made the interpretation and discussion of the findings easier.

3.9 Summary

This chapter looked at the research methodology used for the study. The study institution was CCTU and the research

approach adopted for the study was quantitative design method. The study used the census method as proposed by Israel (2016) [12] for studies with relatively smaller populations as the present one. A structured questionnaire was used to illicit response from a sample of 35 employees who are procurement stakeholders at CCTU. The Data were analysed using Statistical Package for Social Sciences (SPSS) versions 21.0.

4. Data Presentation and Analysis

4.1 Introduction

In this chapter the data collected, the analysis and interpretation of the results obtained are presented. The sample of respondents involved in the study was thirty one. The subtopics discussed in this chapter include; the socio-demographic characteristics of the respondents, examination of the sustainability standards applied in the procurement system of CCTU, Ensuring Sustainability in the Procurement processes at CCTU and finally the Challenges faced at CCTU in Applying Sustainable Procurement. The data collected was analysed to really find out what is pertained on the ground.

4.2 Socio-Demographic Characteristics of Respondents

This section covers the presentation and analysis of the socio-demographic characteristics of the respondents. These variables presented in Table 1, include the gender of respondents, their age groupings, educational attainment their departments and the number of years they have worked in the institution. Other variables discussed are and the rank or status of the respondents as well as whether they possess professional qualification in procurement. All these were necessary as they played important roles in the decisions they make regarding procurement.

Table 1: Background Characteristics of the Respondents

Background characteristics	Frequency	Percentage
Gender		
Male	18	58.1
Female	13	41.9
Age Group (in years)		
Below 25	16	51.6
26-35	12	38.7
36-45	2	6.5
45-60	1	3.2
Educational Qualification		
Diploma	1	3.2
HND	19	61.3
Ist degree	7	22.6
Master's degree	4	12.9
Professional qualification		
Yes	3	9.7
No	26	83.9
Other qualification	2	6.4
Rank/Status		
Assistant Registrar	1	3.2
Senior Admin Assistant	5	16.1
Administrative Assistant	8	25.8
Junior Assistant Registrar	10	32.5
Junior Staff	5	16.1
National Service person	2	6.4
Department		
Procurement	8	25.8
Accounts	14	45.2
Internal Audit	6	19.4

Stores	2	6.4
Finance Directorate	1	3.2
Number of years worked in the institution		
Below 1 year	17	54.8
1-3	6	19.4
4-7	4	12.9
8-10	1	3.2
11-14	3	9.7
Total	31	100.0

Source: Fieldwork, May 2019

The data on Table 1 display the socio-demographic data of the respondents. Out of 31 respondents, 18 corresponding to 58.1% were males, while 13 representing 41.9% were females. This indicates that there were more males than females in the study. The table also indicates that the age group of respondents dominating the study was those below 25 years, who were 51.6% of the sample. This shows that majority of the respondents were in their youthful stage. It could also be deduced from the table that 3.2% of the respondents possess Diploma qualification, 61.3% who were in the majority, had HND qualification, and while 22.6% were 1st degree holders and 12.9% were master degree holders.

Furthermore, 9.7% of the respondents possessed professional qualifications, 83.9% of the respondents possess no professional qualification while 6.5% of the respondents possess qualification relating to procurement management. This was not very good for the study as majority of the respondents may not have much knowledge in procurement issues. The data on Table 4.1 also show that 17 respondents representing 54.8% of the respondents had below 1 year of experience in the institution as an employee, 19.4% of them had 1-3 years of work experience, 12.9% of the respondents have 8-10 years of work experience and 9.7% of the respondents have 11-14 years of work experience.

The data in Table 4.1 further show the distribution of respondents by unit or departments. The data indicate that 2 out of 31 respondents are store keepers in the institution, 14 of the respondents, who are in the majority are from Accounts Department, 8 respondents are form the procurement section, 6 of the respondents are from internal

Audit unit and 1 respondents is from the directorate of finance.

Finally, the data on Table 1 show the distribution of the respondents by rank or status in the institution. The data indicate that the respondents were dominated by those whose ranks was Junior Assistant registrar who were 10 out of the sample of 31 making up 32.5%. this group was followed by 8 Administrative Assistants representing 25.8% the total sample followed by Senior Administrative Assistants and Junior Staffs, who were 5 or 16.1% each, while 2 National Service person and 1 Assistant Registrar made up 6.4% and 3.2%, respectively. These show that the study involved a broad sector of respondents, who were all procurement stakeholders at CCTU.

4.3 Respondents’ Knowledge about Procurement

Next, the respondents were asked to indicate whether they had some knowledge about procurement, whether they have been involved in procurement before and where they worked in procurement. They were also asked to provide some qualities of good procurement officers as well as indicate the attitude expected of a procurement officer. The results are presented in Table 2.

The data on Table 2 indicate the knowledge of the respondents about public procurements. Out of 31 respondents, 25 respondents representing 80.6 indicated that they had knowledge of procurement while 6 representing 17.4 state otherwise. Also 22 of the respondents indicated that they had involved in public procurement analysis while 11 respondents state that they had not involve in any public procurement activities.

Table 2: Respondents’ Knowledge about Procurement

Knowledge about Public Procurement.	Frequency	Percentage
Yes	25	80.6
No	6	19.4
Have you ever been involved in Procurement?		
Yes	22	71.0
No	9	29.0
Where were you involved in Procurement?		
Auditing	2	9.1
CCTU	10	45.5
E.C.G	1	4.5
G.N.F.S	1	4.5
G.W.C.L	2	9.1
Stores	4	18.2
The sourcing process	1	4.5
Attitude of a Procurement Official		
Accountability	9	30.0
Competency	7	23.3
Professionalism	4	13.3
Transparency	7	23.3
Disciplined	3	10.0

Qualities of Good Procurement Official		
Accountability	13	21.0
Efficiency	10	16.1
Transparency	9	14.5
Integrity	6	9.7
Ethical	4	6.5
Professionalism	7	11.3
Value for Money	5	8.1
Competency	8	12.9
Total	62	100.0

Note: Results were from Multiple Responses
 Source: Fieldwork, May 2019

Furthermore, majority of the respondents (45.5%) carried out their procurement activities in CCTU, others carried out at ECG, GWCL and at the Stores. This shows that most of the respondents had their procurement experience from CCTU. Also the data on Table 2 indicates that the respondents pointed the following as the main attitude of procurement officials; Accountability (30%), Competency (23.3%), Professionalism (13.3%), Transparency (23.3%) and Discipline (10%). The respondents therefore considered accountability as an important attitude that procurement officials should possess. Finally, when the respondents were asked to indicate qualities that procurement officials were to exhibit they also stated that a procurement officials must possess the following qualities; Accountability (21%), Efficiency

(16.1%), Transparency (14.5%), Integrity (9.7%), Ethical (6.5%), Professionalism (11.3%), Value for money (8.1%) and Competency (12.9%). Here also, it could be noted that they priced Accountability as the most important quality of a Procurement official followed by their Efficiency.

4.4 Sustainability Standards Applied in the Procurement System at CCTU

In order to answer the first objective which sought to examine sustainability standards applied in the procurement system of CCTU, the respondents were asked some questions. They were asked to provide the extent to which they agreed or disagreed with some sentences about sustainable standards in the procurement system of the institution. The results were used to construct Table 3.

Table 3: Application of Sustainability Standards in the Procurement System at CCTU

Sustainability standards applied in CCTU	SD (%)	D (%)	A (%)	SA (%)
Procurement issues at CCTU cover waste generation and disposal	2(6.5%)	7(22.6%)	18(58.1%)	4(12.9%)
Procured goods for the institution do not impact negatively on nearby communities	3(9.7%)	6(19.4%)	15(48.4%)	7(22.6%)
Procurement ensures that demand for resources are minimized	1(3.2%)	6(19.4%)	16(51.6%)	8(25.8%)

Note: SD=Strongly Disagree; D=Disagree; A=Agree; SA=Strongly Agree
 Source: Fieldwork, May 2019

Table 4.3 depicts the results obtained after examining the sustainability standards applied in the procurement system of CCTU. From Table 4.3, 58.1% of the respondents agreed that procurement issues at CCTU cover waste generation and disposal, while 12.9% of them strongly agreed to this assertion. Also, majority of the respondents (48.4%) agreed while 22.6% strongly agreed that Procured goods for the institution do not impact negatively on nearby communities. In addition, 51.6% of respondents agreed that procurement standards in CCTU ensures that demand for resources are minimized while 25.8% also agreed that Procurement standards in CCTU also ensures that demand for resources are minimized. All these results attest to the fact that

sustainability standards are applied in the procurement system at CCTU.

4.5 Professionalism of the staff of CCTU in ensuring compliance with Environmental and Social Legislation in their Procurement processes

In answering the second objective which sought to assess professionalism of the staff of CCTU in ensuring compliance with environmental and social legislation in their procurement processes, the respondents were asked some questions on the professionalism of the Procurement staff of CCTU. The results were used to construct Table 4.

Table 4: Professionalism of the staff of CCTU in ensuring compliance with environmental and social legislation in their procurement processes.

Professionalism of the staff of CCTU in ensuring compliance with environmental and social legislation in their procurement	SD (%)	D (%)	A (%)	SA (%)
Environmental issues are considered in the institution's purchases	2(6.5%)	10(32.3%)	14(45.2%)	5(16.1%)
Environmental legislations guide the institution's purchase	2(6.5%)	7(22.6%)	16(51.6%)	6(19.4%)
Energy efficient appliances are always procured for sustainability	1(3.2%)	12(38.7%)	14(45.2%)	4(12.9%)
Herbicides are never procured for environmental management	6(19.4%)	17(54.8%)	7(22.6%)	1(3.2%)
Procurement officials ensure fair contract prices and terms are applied and respected	2(6.5%)	2(6.5%)	17(54.8%)	10(32.3%)
Procurement officials ensure that services meet minimum ethical, human rights and employment standards	2(6.5%)	5(16.1%)	20(64.5%)	4(12.9%)

Note: SD=Strongly Disagree; D=Disagree; A=Agree; SA=Strongly Agree
 Source: Fieldwork, May 2019

The data on Table 4 shows the results obtained after assessing the professionalism of the staff of CCTU in ensuring compliance with environmental and social legislation in their procurement processes. According to Table 4.4, 45.2% of the respondents opined that environmental issues are considered professionally in the institution in addition to 16.1% who also agreed to the assertion. However, 32.3% of them disagreed with 6.5% strongly disagreeing to the professionalism of the CCTU Procurement staff. Also, from the Table 4.43, 51.6% of the respondents agreed that environmental legislations guide the institution's purchase of goods and services, with 19.4% strongly agreeing to the assertion. However, 22.5% disagreed while 6.5% of them also disagreeing to the assertion.

Moreover, the results also show that out of 31 respondents, 27 respondents representing 86.1% agreed that Procurement officials in CCTU ensure that fair contract prices and terms are applied to their procurement. Nevertheless, 4 respondents (13.9%) disagreed that Procurement officials in CCTU ensure fair contract prices and terms are applied and respected. This is however not significant. The table also indicates that 64.5% of the respondents agreed and 12.9% strongly agreed that procurement officials in CCTU ensure

that services meet minimum ethical, human rights and employment standards.

Furthermore, the data on Table 4 also indicate that majority of the respondents (45.2%) agreed that energy efficient appliances are always procured for sustainability in CCTU with 12.9% strongly agreeing to professionalism of procurement staff of CCTU, while 22.6% disagreed and 3.2% also strongly disagreed to the assertion.

Finally, it could be deduced from the table that herbicides are procured for environmental management. Majority of the respondents (54.8%) disagreed and 19.4% strongly disagreed to the research question that herbicides are never procured for environmental management and conclude that herbicides are procured in the Cape Coast Metropolis for environmental management.

4.6 Ensuring Sustainability in the Procurement processes at CCTU: In order to answer the third objective which sought to examine the need for ensuring sustainability in the procurement of goods and services for CCTU, the respondents were asked to show the extent to which they agreed or disagreed with some sentences about ensuring sustainability in the procurement of goods and services for CCTU. The results were used to construct Table 5.

Table 5: How Sustainability is ensured in the procurement system at CCTU

Ensuring Sustainability in Procurement at CCTU	SD (%)	D (%)	A (%)	SA (%)
Best quality goods are purchased from competent sources to ensure their longevity		2(6.5%)	13(41.9%)	16(51.6%)
Tender evaluations are always conducted by competent persons	1(3.2%)	3(9.7%)	16(51.6%)	11(35.5%)
There is constant training and skills development of all staff concerned with the institution's procurement of goods and services	4(12.9%)	8(25.8%)	13(41.9%)	6(19.4%)

Note: SD=Strongly Disagree; D=Disagree; A=Agree; SA=Strongly Agree

Source: Fieldwork, May 2019

In order to understand how sustainability is ensured in the procurement of goods and services in CCTU, the respondents were asked some few questions about sustainability in procurement of goods and services. Out of 31 respondents, 16 representing 51.6% and 14 representing 41.9% of the respondents indicated that sustainability is ensured through procurement of best quality of goods and services from competent sources, while 6.5% of the respondents disagreed.

Also 51.6% and 35.5% of the respondents strongly agreed or agreed respectively that tender evaluation are conducted by competent persons to ensure sustainability in the system. In addition, 41.9% and 19.4% of the respondents agreed or strongly agreed respectively that the institution carries out constant training and skills development of all staff concerned with institution's procurement of goods and services in order to maintain sustainability. In so doing, sustainability is ensured in the procurement of goods and services for CCTU.

4.7 Challenges faced at CCTU in Applying Sustainable Procurement

Finally, in answering the fourth objective which sought to identify challenges faced by staff of CCTU in ensuring sustainability in their procurement processes, the respondents were asked to identify major challenges faced by the Procurement staff of CCTU in ensuring sustainability in their procurement processes. The results were used to construct Table 6.

The data on Table 6 summarize the major challenges facing the CCTU Procurement staff in applying sustainability in their procurement processes. Using multiple responses, the data on Table 4.6 show that as high as 80.6% of the respondents stated that delay in payments affects application of sustainable procurement processes. This is because local small scale industries are not able to withstand long periods of payment for goods and services procured. Next, 64.5% of the respondents' stated that lack of reliable local suppliers was a hindrance to application of sustainability in the procurement processes of CCTU. As a result, most of the suppliers for the institution are large scale companies located far away in Accra.

Table 6: Challenges in applying Sustainable Procurement at CCTU

Challenges	Frequency	Percentage
Delay in payments for goods and services procured	25	80.6
Lack of avenues to recycle waste products	15	48.4
Lack of reliable local suppliers	20	64.5
Time frame for procuring is always very short	4	12.9
Lack of sufficiently trained staff	8	25.8
Pressure from other departments	10	32.3

Note: Results are from Multiple Responses

Source: Fieldwork, May 2019

In addition, 48.4% of the respondents stated that one of the main challenges faced by the Procurement Unit of CCTU in applying sustainability in their procurement processes is lack of avenues to recycle their waste products. While 32.3% of the respondents identified pressure from other departments in the Academic sector as a challenge to the application of sustainability, 12.9% of the respondents stated that the time frame for procuring was always very short. Finally, 25.8% of the respondents also stated that lack of sufficiently trained staff affects application of sustainability in the procurement at CCTU. These challenges made sustainable procurement a major problem facing the Procurement Unit of CCTU.

4.8 Summary

This chapter provided a presentation, analysis and discussion of the data collected from the field regarding ensuring sustainability in public procurement in Ghana, using Cape Coast Technical University as a case study. By so doing, the four research questions whose answers would result in the achievement of the objectives of the study were duly answered in the chapter. After a discussion of the socio-demographic characteristics of the respondents, their knowledge about procurement was examined. This was found to be satisfactory as most of them have had some procurement experience. Then, there was an examination of sustainability standards applied in the procurement system at CCTU. After this was an examination of the professionalism of the procurement staff of CCTU in ensuring compliance with environmental and social legislation in their procurement processes. Also the study examined how to ensure sustainability in the procurement processes at CCTU. Finally, the chapter ended on the identification of challenges faced by Procurement staff of CCTU in applying sustainable procurement in the system.

4.9 Summary

This chapter provided a presentation, analysis and discussion of the data collected from the field regarding ensuring sustainability in public procurement in Ghana, using Cape Coast Technical University as a case study.

5. Summary, conclusions and recommendations

5.1 Introduction

This study was undertaken mainly to investigate how to ensure sustainability in Public Procurement in Ghana, using Cape Coast Technical University as a case study. This final chapter of the work presents a summary of findings from the analysis of data performed in Chapter four and conclusions drawn from the study and recommendations made from the findings.

5.2 Summary of Findings

The study used a descriptive survey design to investigate public procurement at CCTU. The sample involved 35 staff, who were identified as procurement stakeholders of CCTU. At the end of the fieldwork, thirty one (31) questionnaires were found usable, registering a response rate of 88.6%. Results of the analysis of data revealed that majority of the respondents were males (80.6%), the modal age of respondents was those below 25 years, who were sixteen (51.6%), while a total of nineteen (61.3%) respondents had Higher National Diploma (HND).

In addition, the study revealed that while fourteen (14) or forty five point two (45.2%) of the respondents were from the Accounts Department, fifty four point eight (54.8%) of them had worked in the institution between one and three years. This means that most of the staff involved in the study had not worked for a long time in the institution. This however, did not affect the results of the study as the views of staff who had worked for a longer time in the university, were included in the study.

5.3 Conclusions

The main purpose of this study was to examine how to ensure sustainability in public procurement in Ghana, using Cape Coast Technical University as a case study. The following conclusions were arrived at: From the findings of this study realized that majority of the respondents had some knowledge about public procurement in general. Also the analysis of the data collected indicated that most of the staff were aware of sustainable procurement and knew that environmental friendly equipment as well as involving local, small scale suppliers in procurement was catalyst of sustainable procurement. Moreover, sustainability in procurement meant less demand for resources and aims at higher maximization of limited resources. Finally, it could be concluded that the procurement system at CCTU faces certain problems that need to be solved to ensure sustainability achieve the highest level.

5.4 Recommendations

Based on the findings of the study, the following recommendations are made.

1. First, all the criteria that applied to ensure sustainability standards must be explained to all stakeholders involved in procurement at CCTU.
2. Secondly, the study reported that most of the procurement stakeholders at CCTU have not received professional training in procurement. They could not therefore, exhibit much professionalism in the conduct of their jobs. There is the need for Management to organize workshops not only for the Procurement Unit, but for all the other units, so that they will all help to ensure sustainable procurement at CCTU.
3. Third, Management should put in place a policy at CCTU to ensure that sustainability is applied in all the processes of procurement. This will help to ensure proper environmental management and reduce the demand for goods and services to enhance less pressure on the environment.
4. Finally, effort should be made by management to reduce the challenges identified in the procurement processes that inhibit sustainability in the procurement process such as delays in the payment for goods and services procured.

If these recommendations are implemented, sustainability will be guaranteed in the procurement processes at CCTU for the benefit of the institution and all staff of CCTU.

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