Measures of Ensuring Value for Money in Public Procurement: A Case of Selected Polytechnics in Ghana

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Abstract :
Value for money (VFM) is derived from the optimal balance of benefits and costs on the basis of total cost of ownership. The nature of public procurement is such that it involves discretionary decision-taking on behalf of government at all levels. Value for money is therefore not a choice of goods or services which is based on the lowest bid price but a choice based on the whole life costs of the project or service. The aim of the study is to find out ways of ensuring value for money in public procurement. The objectives of the study among others include; identify the challenges in ensuring value for money and measures to ensure value for money in the procurement of goods and services. The main data collection instrument employed in this study is the structured questionnaire. The study employed the purposive and stratified sampling technique. The finding revealed that inadequate skilled personnel in the procurement sector and inadequate measures for monitoring and evaluation of the procurement policy to ensure VFM are major challenges in the public procurement. It was recommended that to ensure value for money, Management supports for VFM programme at all levels of administration should be encouraged and procurement regulatory authorities in collaboration with public entities (Polytechnics) must ensure compliance through rigorous monitoring and evaluation of the procurement policy to ensure VFM.

Keywords – Public Procurement, Value for money, Polytechnics, Procurement Act 663

1. INTRODUCTION

Public procurement refers to the Government activity of purchasing goods, works and services needed to carry out its operation. Public procurement is the term commonly used in English language for this activity. In Ghana, the terminology is the same. However, the World Trade and Organization and the USA system refer to Public procurement as Government contracts or Public contracts (Arrowsmith *et al* 2011)

In Ghana, the public procurement process is based on the Public Procurement Act (Act 663) 2003 which was enacted to harmonize public procurement processes in the Public Service to ensure secure judicious, economic and efficient use of state resources. Additionally, Public Procurement Act (PPA) presents a comprehensive legislative framework designed to eliminate the shortcomings and organizational weaknesses, which were inherent in public procurement in Ghana. The PPA is established on the five (5) basic pillars namely: comprehensive, transparent, legal and institutional framework; clear and standardized procurement procedures and standard tender documents; independent control system; proficient procurement staff; and anti-corruption measures (Anvuur and Kumaraswamy, 2006).

According to the Public Procurement Act, 2003 (Act 663), public procurement is the acquisition of goods, works and services at the best possible total cost of ownership, in the right quantity and quality, at the right time, in the right place for the direct benefit or use of governments, corporations, or individuals, generally via a contract (PPA Module, 2007).

Therefore, public procurement is the process by which organizations acquire goods and services using public funds. It includes planning, inviting offers, awarding contracts and managing contracts. For procurement to achieve its goals, it should follow these two (2) principles: Professionalism and Value for Money. Professionalism is the discipline whereby educated, experienced and responsible procurement officers make informed decisions regarding purchase operations. The role of procurement professionals is critical to Ghana's economic development.

Value for money is derived from the optimal balance of benefits and costs on the basis of total cost of ownership. As such, value for money does not necessarily mean that a tender must be awarded to the lowest tenderer (Civil Service College, 2010). Value for money is a term generally used to describe an explicit commitment to ensuring the best results possible are obtained from the money spent. In the UK Government, use of this term reflects a concern for more transparency and accountability in spending public funds, and for obtaining the maximum benefit from the resources available (Barnett *et al* 2010). Value for money in public procurement is achieved through pursuing the lowest whole of life cost, clearly defining relevant benefits and delivering on time. Preventing waste and fostering competition, transparency and accountability during the tendering process are key conditions to achieving value for money. Value for Money refers to a judicious, economic and efficient use of state resources at a reasonable cost. Value for money is not about achieving the lowest initial price: it is defined as the optimum combination of whole life costs and quality.

The government of Ghana, in consultation with its development partners, has identified the public procurement system as an area that required urgent attention in view of the widespread perception of corrupt practices and inefficiencies, and to build trust in the procurement system. A study by the World Bank (2003a) reported that about 50-70% of the national budget (after personal emoluments) is procurement-related. Therefore, an efficient public procurement system could ensure value for money in government expenditure, which is essential to a country facing enormous developmental challenges. Hence, the study aims to investigate the contribution of public procurement to value for money in Sunyani Polytechnic.

2.0 LITERATURE REVIEW

2.1 Public Procurement

Public procurement has to do with how Tax Payers' money is spent by Public Entities to procure works, goods and services (Walker & Brammer, 2009). According to the Ghana Public Procurement Act, 2003 (Act 663), public procurement is the acquisition of goods, works and services at the best possible total cost of ownership, in the right quantity and quality, at the right time, in the right place for the direct benefit or use of governments, corporations, or individuals, generally via a contract (PPA Module, 2007).

Public procurement covers the supply in public institutions and agencies as well as publicly owned entities and is characterized by taxes which represent a major source of funds. The objectives of sound supply management in the public sector are basically effective contribution to organizational goals and assurance of value for money spent (Leenders *et al*, 2006)

Arrowsmith (2010) posits that public procurement refers to the government activity of purchasing the goods and services needed to perform its functions. According to Odhiambo and Kamau (2003), public procurement is broadly defined as the purchasing, hiring or obtaining by any contractual means, goods, construction works and services by the public sector. It involves the purchase of commodities and contracting of construction works and services if such acquisition is effected with resources from state budgets, local authority budgets, state foundation funds, domestic loans or foreign loans guaranteed by the state, foreign aid and revenue received from the economic activity of state.

Procurement in government is a process seeking to obtain services, goods and works in conformity with applicable laws and regulations. It is the process by which Government and public sector institutions buy inputs for vital public sector investments in physical infrastructure and for strengthening institutional human capacities which lay the foundation for national development. Procurement takes many forms. It encompasses the acquisition of goods, real property, capital equipment, built assets and services. Procurement costs in many Ministries and Departments are substantial, consuming scarce resources of tightly constrained Government budgets. Quality, timeliness, and appropriateness of the procured inputs largely determine whether the public investment will succeed. Efficient public procurement system is therefore vital for achieving Value for Money and hence accelerated growth and development of the country.

2.2 Overview of Public Procurement in Ghana

According to World Bank (2003) reports, Ghana has accumulated considerable and valuable experience on public procurement under civil and military administrations. In the pre-independence era, that is prior to 1957, there was a public procurement policy in which public procurement was treated as part of the colonial administrative process in the British Empire. The colonial administration engaged Public Works Department (PWD) for procurement of works and Crown Agents for procurement of goods. From Independence (1957) to 1967, Government relied less frequently on Crown Agents for procurement of goods and procured goods directly through Ministries, Departments and Agencies (MDAs). For procurement of works, Government set up Ghana National Construction Corporation (GNCC) to carry out works and reduced the force account component of PWD. In 1960, the Government established the Ghana Supply Commission (GSC) for procurement of goods for all public institutions. Essentially GSC took over the functions of Crown Agents. In 1976, the Government established Ghana National Procurement Agency (GNPA) for procurement of bulk items such as sugar, fertilizers, auto parts, etc. for sale to public and private sectors. GSC and GNPA had purchasing manuals for their use. In 1975, the Architectural and Engineering Services Corporation (AESC) was established to carry out consulting services for works contracts. Except for SOEs, public institutions were mandated to use GSC, GNPA GNCC and AESC for public contracts (World Bank, 2003). In 1967, the Government set up Central, Regional and District Tender Boards as advisory bodies for works contracts and

subsequently, in 1996, changed them to contract-awarding authorities.

By 1996, GSC was overwhelmed by the demands from its clients, inefficiency was rampant, and there were numerous complaints on contract prices, delayed delivery and at times, delivery of wrong items. MDAs began to handle procurement of goods following FAR rules but without institutional arrangements. Works procurement procedures, though not comprehensive, are described under the Central, Regional and District Tender Board procedures. There are still no guidelines on procurement of consultant services. AESC and GSC were transformed into limited Companies in 1996 and 1999 respectively, thus rendering them no more providing-services to public institutions on a mandatory basis. Due to the inadequacy of public procurement procedures, procurement procedures under World Bank-financed project signed from 2000, defined in a "Procurement Procedures Manual" prepared for the project. These manuals are based on World Bank guidelines and Bank's standard bidding documents are used (World Bank, 2004). Hence, the Public Procurement Authority' Annual Report of 2007 clearly articulated the purpose of the public procurement reforms in Ghana as to mainstream "good practices" into the procurement of goods, works and services, which transcend into the achievement of savings and value- for- money.

2.3 Value for Money In Public Procurement

Given the limited resources available to government, ensuring VFM in procurement is key to ensuring the optimum utilisation of scarce budgetary resources. VFM is the primary driver for procurement. It usually means buying the product or service with the lowest whole-life costs that is „fit for purpose" and meets specification. Where an item is chosen that does not have the lowest whole-life costs, then the additional „value added" benefit must be clear and justifiable. Assessment of supplier bids should be conducted only in relation to a published set of evaluation criteria, which must be relevant to the subject of the contract, and any „added value" that justifies a higher price must flow from these defined criteria (Office of Government, 2007).

Value for Money in the public sector involves consideration of the contribution to be made to advancing government policies and priorities while achieving the best return and performance for the money being spent (Bauld & McGuinness, 2006, p. 20). This means that public procurement entities can choose to award a contract based on other criteria other than the lowest price. One of the factors considered is the whole life cycle cost (Raymond, 2008).

All public procurement of goods, works and services, must be based on Value for Money assessment, having due regard to propriety and regularity. Value for Money is not about achieving the lowest initial price, but the optimum combination of whole life costs and quality (World Bank, 2003).

Behan (1994) points out the real Value for Money is how much the goods or service purchased cost to own and use. Barnett et al, (2010) indicate that Value for Money reflects a concern for more transparency and accountability in spending Public Funds, and for obtaining the maximum benefit from the resources available.

Batho Pele Handbook (2007) suggests that Value for Money is achieved when public procurements are executed economically and efficiently. For this to happen, government

departments are required to adapt to creative ways to simplify procedures and eliminate wasteful expenditure and inefficiency to promote productive use of resources in public procurement. At the heart of the concept of Value for Money, are three critical elements namely economy, efficiency and effectiveness. This is known as the 3 E's. (Batho Pele Handbook, 2007)

Economy: Explores whether specific inputs are acquired at the lowest cost and at the right time.
Efficiency: This refers to how productively inputs are translated into outputs. It further means that there should be maximum output with little cost.
Effectiveness: The extent to which outputs achieve the desired outcomes (Batho Pele Handbook, 2007).

The Researcher defined Value for money in public procurement as the achievement of the lowest whole of life‖ cost and clearly defined benefits, purpose of goods, works and services procured at the right time, within budget and scope, and of the required quality.

2.4 Whole Life Costing

Flanagan et al (1989) cited in (SCI-Network, 2011) noted, Whole Life Costing (WLC) is an economic evaluation technique that concerns the assessment of the total cost of an asset over its operating life, including initial capital costs, maintenance costs, operating costs and the cost or benefit of the eventual disposal of the asset at the end of its life. It can also be said to be the total cost of owning an asset over its entire life. Whole life cost includes all costs such as design and building costs, operating costs, associated financing costs, depreciation, and disposal costs. Whole-life cost also takes certain costs that are usually overlooked into account, such as environmental impact and social costs.

The Cyprus Procurement Directorate (2008) indicates that whole life costing of an item can be broadly divided into three (3) categories: acquisition, operating and disposal costs.
• Acquisition costs are incurred for item procured.
• Operating costs are incurred as a result of actually using the item or keeping it available (maintenance costs).
•Disposal costs are incurred on disposal or when dealing with site contamination or other harmful effects. There may also be some income that will be realised on disposal if the assets have a resale or residual value. This and any rental income when assets are not in use can be offset against the costs in determining the whole life cost.

1.5 Factors Ensuring Value for Money in Public Procurement

The Public Procurement Act, 2003 (Act, 663) emphasizes that the basic objectives of good procurement are to procure the right quality of goods, works or services from a reliable supplier in the right quantity ensuring cost effectiveness; delivered at the right time; to the right place; in the right quantity and at the right price whilst achieving the lowest total cost. In the achievement of the objectives of a good procurement system, the following factors are of utmost importance: Professionalism; Transparency; Value for money; Competitiveness and Accountability. Other factors include Fairness; Efficiency and ethical approach to the conduct of procurement functions.

2.5.1 Value for money and competitiveness in public procurement

Value for money refers to the optimum combination of „whole life cost" and „quality" to meet the customer or the end-users requirement of the procured goods or service under consideration and usually reflected in the price of the item procured. The object of the Public Procurement Board is „to harmonize the processes of public procurement in the public service to secure a judicious, economic and efficient use of state resources in public procurement" attest to the value for money principle of the procurement system (Public Procurement Act, 663). Competitiveness on the other hand refers to the active participation of the private sector and or suppliers in the procurement process through the making of procurement information accessible to all; through advertising of tenders; sourcing reviews; prequalification and the adoption of transparent procedures in the procurement systems. The benefits of competitiveness cannot be overemphasized and includes potential savings for the economy; increases in the supplier base; and the development of the local industries within the economy and thereby eventually leading to economic development and poverty reduction. Consequently, Value for Money (VFM) is a measure of economy, efficiency and effectiveness (3Es) with which the financial resources of the Government are converted. The Association of Chartered Certified Accountants, ACCA (1999) explains that Value for Money is concerned with obtaining the best possible combination of services from the least resources. It is thus, the pursuit of economy, efficiency and effectiveness which are briefly explained below:

a. Economy

According to the ACCA (1999), economy is the term and condition under which an organization acquires human and material resources of the appropriate quality and standard at the lowest cost. The Ministry of Finance of Jamaica (2010) also related economy to procurement by stating that procurement is a purchasing activity whose purpose is to give the purchaser best value for money and that for complex purchases, value may imply more than just price since quality issues also need to be addressed.

b. Efficiency

The ACCA (1999) defines efficiency as the relationship between goods and services produced and resources used to produce them. It goes on further to stress that an efficient operation produces the maximum output for any given set of resource inputs; or, it has a minimum input for any given quantity and quality of services provided. Relating efficiency to a procurement system, the Ministry of Finance of Jamaica (2010) asserts that an efficient procurement is simple and swift, producing positive results without protracted delays. In addition, efficiency implies practicality, especially in terms of compatibility with the government's administrative resources and professionalism.

c. Transparency & Accountability (Ethical Standards)

Good procurement holds its practitioners responsible for enforcing and obeying the rules. It makes them subject to challenge and to sanction, if appropriate, for neglecting or bending those rules. Accountability is at once a key inducement to individual and institutional probity, a key deterrent to collusion and corruption, and a key pre-requisite for procurement credibility.

The Ministry of Finance of Jamaica (2010) concludes that a sound procurement system is the

one that combines all the above elements. The desired impact is to inspire the confidence and willingness-to-compete of well-qualified vendors. This directly and concretely benefits procuring entities, responsive contractors and suppliers. It is the view of the researcher that the achievement of all that have been discussed above, especially, economy, effectiveness and efficiency depends upon the existence of sound arrangements for the planning, appraisal, authorization and control of the use of resources and that it is management's responsibility to establish these arrangements and to ensure that they work effectively and efficiently.

d. Accountability, fairness and efficiency in public procurement

Accountability, fairness and efficiency are three cardinal pillars that procurement reforms seek to achieve in that a very fair and accountable procurement system helps in the efficient utilization of the state resources judiciously. Procurement practitioners need to be very fair in their day-to-day dealings with their suppliers and potential bidders and the public at large in order to earn the trust of the various actors within the procurement system. Accountability refers to the process of holding an individual or an organization fully responsible for actions and functions they are engaged in and over which they have authority to exercise those functions. The benefits of accountability and fairness are as follows: the strengthening of the perception of transparency and fairness; the reduction of the incidence of corruption; the development of mutual trust and the fact that procedures are adhered to for example in all stages of the tendering process. An efficient public procurement system has the benefit of being operated in a very timely manner with little or no bureaucracy and thereby helping to instill and underpin the trustworthiness of the procurement system.

e. Competition

Competition has been regarded as one of the most important factors in attaining value for money in Public Procurement Policies (PPPs). This is on the premise that competition amongst bidders can lead to improvements in pricing and alternative means of delivering VFM. According to Pitt *et al*. (2006), where a PPP project has been awarded through an open tender, the argument for VFM is made easier to substantiate. Kee and Forre (2002) also observe that competition can produce an efficient delivery of goods and services. They further elaborate on a competitive market model which envisions many markets comprising a large number of buyers and sellers, complete knowledge on quality and production costs, arm's length negotiations, and absence of impediments to the entry of firms in the market. With the presence of these conditions, it is believed that a market would be a producer and allocator of services superior to the public sector (Kee and Forre, 2002). In summary, risk transfer has been regarded as the driver of efficiency, competition and contestability to ensure that it is effectively transferred (OECD 2008). Competition can either be for the market (i.e. in the bidding process) or competition/contestability in the market which occurs after the contract is concluded and is in operation. One may, therefore, conclude that whether or not a PPP represents value for money is dependent upon sufficient risk transfer and competition. On the contrary, the absence of competition or potential entry would lead to difficulties in attaining higher efficiency and value for money.

f. Professionalism and transparency in public procurement

Professionalism is the discipline whereby educated, experienced and responsible procurement officers make informed decisions regarding procurement functions and therefore can be

argued that the role that procurement professionals play in the procurement system of the Ghanaian economy is critical to the economic development of the country (Public Procurement Board, 2007). It is therefore in recognition of this fact that one important object of the Public Procurement Board is states: "the professional development, promotion and support for individuals engaged in public procurement and to ensure adherence to ethical standards by trained persons" (Adjei, 2006). Transparency, on the other hand, means the application of the same rules to all suppliers of goods, works and services and that these rules are publicized as the basis of procurement decisions prior to their use. Transparency enables the creation of open, fair and transparent procurement procedures. Transparency helps in the growth of in-country investments and competitiveness as the public sector is seen as a responsible business partner. Transparency is considered one of the best deterrents to corruption and allows access to information by the public. Furthermore, Managers ensure that goods and services and capital assets are procured within the legal framework by procurement personnel and are accountable to actors in policy-making and management. Procurement professionals make sure that operational agencies comply with procurement regulations and that they are directly involved in procuring goods, services and capital assets as authorised and funded. According to Leenders et al (2003), the procurement department is in an extremely strategic position, due to its intimate relations with other functional departments on the one hand, and its close and on-going contact with large and diverse groups of outside organizations on the other. As a result of the access to information that the procurement department has regarding price trends, new and improved products and services, market conditions, and business outlooks, which is of particular importance for the purchasing department to develop, it can also make significant and valuable strategic contributions to the other departments that it serves. These contributions, according to Leenders et al (2003), provide another basis upon which to evaluate procurement departments' performance. Again, Ivancevich et al (1994) explain that an organizational structure is the framework of goods and departments that direct the behaviour of individuals and groups towards achieving the organizational objectives. The contributions of the Procurement Office staff definitely depend on whether or not Top-Management is prepared to work with the suggestions of the Procurement Unit or not.

3.0 **METHODOLOGY**

3.1 Research Design

The study used a descriptive survey employing cross-sectional survey design aimed at ensuring value for money in Polytechnics in Ghana. A descriptive research is designed to obtain information concerning the current situation and other phenomena and wherever possible to draw valid conclusion(s) from the facts discussed. Descriptive survey attempts to describe or define a subject often by creating a profile of a group of problems, people or events through the collection of data and tabulation of the frequencies on research variables or their interaction as indicated. According to Paulin (2007), "descriptive studies are based on some previous understating of the nature of the research problem". The data was collected on a sample of four (4) Polytechnics in Ghana. The design seeks to capture both qualitative and quantitative aspects.

3.2 Target Population

According to Amin, (2005), Target population refers to the entire group of individuals or objects to which researchers are interested in generalizing the conclusions. The target population of this study was all the procurement practitioners in all Polytechnics in Ghana. In total, there are 10 polytechnics in Ghana. They are all public institutions. These Polytechnics are established through institutional Acts of Parliament under the Polytechnic Act, which provides for the development of polytechnics education, the establishment, accreditation and governance of polytechnics.

3.3 Sample and Sampling Techniques

According to Orodho, (2002) Sampling means selecting a given number of subjects from a defined population as representative of that population. Any statements made about the sample should also be true of the population. Purposive sampling was used to select procurement practitioners and stakeholders in polytechnics in Ghana since they can give accurate information on ensuring value for money Polytechnics in Ghana. To eliminate bias, simple random sampling was employed in this study. A sample of 200 respondents was picked using stratified random sampling techniques based on departments. This was necessary because the technique gives all the departments a fair chance of being selected. Stratified sampling in this study will be convenient due different experience and level of motivational expectations across the departments.

3.4 Research Instruments

Data was collected using postal questionnaires. The survey was created using suitable questions modified from related research and individual questions formed by the researcher. Likert scale was used to determine if the respondent agreed or disagreed in a statement.

3.5 Data Collection Procedure

Primary and secondary data was used for the study. Primary data is the information the researcher obtained from the field using the questionnaires. The questionnaires were administered by the researchers. The questionnaires were used because they allow the respondents to give their responses in a free environment and help the researchers obtain information that would not have been given.

3.6 Pilot Testing

The research instrument was pre-tested before final administration to the respondents. Pre-testing allows errors to be discovered before the actual collection of data begins and 1% of the population is considered adequate for pilot study that is 20 out of the 200 selected respondents seen to be knowledgeable in procurement matters.

Researchers conducted a pilot test to ensure that there is validity and reliability of instrument using Cronbach's alpha while conducting the research in order to obtain data that is consistent with the main objective. An alpha score of 0.70 or more indicates that the

instrument is reliable. Besides this, pre-testing aided the researchers in clearing any ambiguities and ensuring that the questions posed measured what was intended.

Data Processing and Analysis

The completed questionnaires were edited for completeness and consistency, checked for errors and omissions and then coded to SPSS and analyzed qualitatively and quantitatively. Qualitatively, the data was sought into themes, categories and patterns. This enabled the researcher to make general statements in terms of the observed attributes hence conceptualization according to Saunders (2007). Once the data had been checked, they were arranged in a format that enabled easy analysis. Quantifiable data from the questionnaires was coded into the software for analysis. Statistical Package for Social Sciences (SPSS 23.0) was then used to analyse the data. This version of SPSS was selected for analysis since it offers a more user-friendly interface and can easily be linked with Microsoft office utility programs. Descriptive statistics was used. Editing involves going through the questionnaires to see if respondents responded to questions and see if there are blank responses. Tabulation involved counting the number of cases that fall into various categories. Descriptive statistics such as mean, standard deviation was then generated, each for the outsourcing strategies.

Standard deviation represented the degree of variability in the responses. Respondents are required to provide answers by marking a number on a 5-point Likert Scale in order to make it easier for them. The five-point Likert scale scoring system mentioned earlier formed the basis of calculating the mean score for each of the factors. The relative ranking of the factors by all respondents was then determined by comparing the individual mean score and the standard deviation for each criterion. Table 3.1 shows the rating systems for the questions in the questionnaire.

Table 3.1: Rating System for the Questionnaire

Likert Scale/Rating Score	**Level of Importance**
1	Highly unaware
2	Unaware
3	Neither Aware or unaware
4	Aware
5	Highly Aware

4.0 RESULTS AND DISCUSSIONS

4.1 Reliability and Validity Test

A pilot study was conducted to find out if the respondents could answer the questions without difficulty. Respondents in the pre-test were drawn from Sunyani Polytechnic (equating to twenty purposively selected respondents) seen to be knowledgeable in procurement matters. They were asked to evaluate the questions for relevance, comprehension, meaning and clarity. The instrument was modified on the basis of the pilot test before administering it to the study respondents. Cranach's Alpha was, therefore, used to test reliability of the instrument. A coefficient of 0.7 and above shows high reliability of data (Saunders, 2007). The Cronbach's Alpha test of the instrument resulted in a value of 0.787 which is greater than 0.7, thus the questionnaires were reliable.

4.2 Background of Respondents

This section presents background information on respondents such as the gender of respondent, level of educational qualification, age of respondent and years of experience. Such analyses are vital because the background of the respondents helps generate confidence in the reliability of data collected; and eventually, the findings of the study.

4.2.1 Gender of Respondents

Table 4.1 Gender of Respondent

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
MALE	127	63.5	63.5	63.5
FEMALE	73	36.5	36.5	100.0
Total	200	100.0	100.0	

Source: Authors Fieldwork (2016)

Table 4.1 shows the frequency and percentage of the gender of the respondents. The respondents made up of 127 males constitute the highest with 63.5% whilst the remaining 36.5% constitute 73 females. This shows that the public sector is dominated by males in Ghana.

4.2.2 Age of Respondents

Table 4.2 Age of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	41	20.5	20.5	20.5
	26-33	36	18.0	18.0	38.5
	34-41	69	34.5	34.5	73.0
	42-49	31	15.5	15.5	88.5
	50 years and above	23	11.5	11.5	100.0
	Total	200	100.0	100.0	

Source: Authors Fieldwork (2016)

Table 4.2 shows the age of the respondent, 20% respondents out of the 200 respondents are 18-25years old, 18% are between the ages 26-33 years. In addition, 34.5% of respondents are within ages of 34-41years, with ages between 42-49years having 15.5% of the respondents. Ages 50 years and above had 11.5% of the respondents.

4.2.3 Educational Level of Respondents

Table 4.3 below shows the educational level of the respondents. Majority of the respondents at 45.5 percent had either a diploma or professional certificates. Respondents who had attained postgraduate qualifications were 26.5 percent, 28 percent were graduates with first degrees. This shows that all of the respondents are well educated and capable of understanding the purpose of the study**.** The deduction from the above statistics is that most of the respondents have higher degrees; hence their involvement in procurement decision is most likely.

Table 4.3 Educational Level of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	DIPLOMA/ PROFESSIONAL CERTIFICATE	91	45.5	45.5	45.5
	BACHELOR'S DEGREE	56	28.0	28.0	73.5
	MASTERS/POSTGRADUATE DEGREE	53	26.5	26.5	100.0
	Total	200	100.0	100.0	

Source: Authors Fieldwork (2016)

4.3 Analysis of Dependent Variables

The respondents were asked to rate the factors (variables) which ensures value for money in public institutions. Using the five-point Likert scale rating, a criterion is deemed significant if it has a mean score of 3.5 or more. Where two or more criteria have the same mean score, the one with the lowest standard deviation is assigned the highest significance ranking. Standard deviation values of less than 1.0 indicate consistency in agreement among the respondents of the reported level of results (Ahadzie, 2007). They were altogether used to assess the various variables under the different sub-sections. The procedure, findings and relevant discussions are as follows.

4.3.1 Factors Ensuring Value for Money in Procurement

In assessing the factors that ensures value for money in procurement of services and goods, it was important to ascertain the level of awareness among the respondents. In view of this fourteen(14) factors were identified from literature and respondents were asked to rate them according to their degree of awareness on them on a five-point Likert scale items (highly unaware, unaware, neither aware nor unaware, aware, highly aware). Therefore, in establishing the level of awareness, two (2) different measures were adopted – mean score and standard deviation.

From the analysis, the respondents indicated that they had a higher level of awareness of factors in ensuring value for money in the procurement process. 'The procurement activities of the institution aims at achieving VFM' was ranked 1st with a mean of 3.83 and a standard. deviation of 0.833. The second factor in ensuring VFM was 'The VFM in the institution serves as a check against unplanned procurement activities' with a mean of 3.81 and a standard deviation of 0.804.

As already mentioned above, a mean score of less than 3.5 shows that a criterion is not significant.

From the table 4.4 below, 'The procurement officials of the Polytechnic are professionals and experienced in the field', ' The management regularly appraise its procurement activities to ensure VFM', VFM ensures that the Institution links its budgets to procurement activities', the institution has a policy on VFM for procurement activities, 'The institution plans annual procurement spending to ensure VFM', ' VFM has reduced corruption and improved service delivery in procurement activities of the institution', Procurement entity liaises with the Public Procurement Authority always for timely and required procurement information', Procurement activities of the institution are assessed annually by the Public Procurement Authority', 'The management supports VFM objective of the Polytechnic', 'Procurement activities in the Institution are simple and timely resulting in VFM, 'The Institution applies fair and transparent rules for the selection of tenderers and 'the institution's procurement activities are established through competitive process and negotiation' were the other major factors in ensuring value for money in public procurement in their order of ranking with a mean value above 3.5.

The results confirm findings in literature in which 'Procurement Entity liaises with Public Procurement Authority always for timely and required procurement information', 'Procurement activities of the institution are assessed annually by the Public Procurement Authority', 'Management supports VFM objectives', 'Institution plans annual procurement spending to ensure VFM" (Ademan, 2014; Public Procurement Act of Ghana, Act 663, 2003).

Table 4.4 Factors ensuring value for money (VFM) in procurement

VFM Factors	Mean Score	Std. Deviation	Ranking
The procurement activities of the Institution aim at achieving VFM	3.83	0.833	1ST
The VFM in the Institution serves as a check against unplanned procurement activities	3.81	0.804	2ND
The Procurement officials of the Polytechnic are professionals and experienced in the field	3.79	0.801	3RD
The management regularly appraises its procurement activities to ensure VFM	3.77	0.825	4TH
VFM ensures that the Institution links its budgets to procurement activities	3.76	0.822	5TH
The Institution has a policy on VFM for procurement activities	3.74	0.999	6TH
The Institution plans annual procurement spending to ensure VFM	3.72	0.822	7TH

VFM has reduced corruption and improved service delivery in procurement activities of the Institution	3.71	0.883	8TH
Procurement Entity liaises with Public Procurement Authority always for timely and required procurement information	3.68	1.002	9TH
Procurement activities of the Institution are assessed annually by the Public Procurement Authority	3.67	0.884	10TH
The management supports VFM objectives of the Polytechnic	3.65	0.855	11TH
Procurement activities in the Institution are simple and timely resulting in VFM	3.63	0.829	12TH
The Institution applies fair and transparent rules for the selection of tenderers	3.62	0.898	13TH
The Institution's procurement activities are established through competitive process and negotiation	3.57	0.949	14TH

Source: Authors Fieldwork (2016)

4.3.2 Challenges in Achieving Value for Money in Procurement

Respondents were asked to score the major challenges in achieving Value for Money (VFM) in Polytechnics. When the responses of the professionals (head of departments, procurement officers, administrators, finance officers and accounts officer) on the challenges in achieving VFM were compared, the results showed no significant difference at 5% significance level. Hence, all the data were pooled together (Table 4.5). Table 4.5 below, shows that the mean scores of all the 6 challenges evaluated are greater than the neutral value of 3 for all the respondents (head of department, finance, accounts, administrators and procurement officers). The results in Table 4.5 below reveals that all the six factors are major challenges in achieving value for money in procurement activities.

Table 4.5 Challenges facing Polytechnics in achieving value for money in procurement

Challenges to VFM	Mean	Std. Deviation	Ranking

	Score		
Lack of accountability and transparency in procurement of goods and services at the Institution	**3.85**	**0.898**	**1ST**
Inadequate skilled personnel in the procurement sector	**3.78**	**0.841**	**2ND**
Lack of top management supports for VFM programme	**3.74**	**0.830**	**3RD**
Inadequate measures for monitoring and evaluation of the procurement policy to ensure VFM	**3.70**	**0.874**	**4TH**
Problem of non-compliance with the VFM objectives of the Institution	**3.69**	**0.943**	**5TH**
Lack of appropriate bidding or incorrect utilization of the limited bidding process	**3.67**	**0.887**	**6th**

Source: Authors Fieldwork (2016)

The analysis further revealed that, 'Lack of accountability and transparency in procurement of goods and services at the Institution', 'Inadequate skilled personnel in the procurement sector, 'Lack of top management supports for VFM programme', 'Inadequate measures for monitoring and evaluation of the procurement policy to ensure VFM', 'Problem of non-compliance with the VFM objectives of the Institution' and 'Lack of appropriate bidding or incorrect utilization of the limited bidding process' were the major challenges in achieving value for money in public procurement. Table 4.5 shows that 'Lack of appropriate bidding or incorrect utilization of the limited bidding process' is the least ranked challenge with a mean of 3.67 and a standard deviation of 0.887.

This finding confirms that in existing literature, that Lack of accountability and transparency in procurement of goods and services at the Institution, lack of competent procurement workforce is one major challenge in public procurement (Ademan, 2014). Also Thai, (2004) indicated that maintained forms and procedures may be convenient and useful tools, but adding value for effort will succeed only with the complete commitment and involvement of top management, along with appropriate personnel.

4.3.3 Measures Employed to Ensure Value for Money in Public Procurement

On measures that would ensure value for money in Public Polytechnics in Ghana, the mean scores of eight variables were measured and their rankings are presented in Table 4.6. The mean for all the variables which enhance value for money in public procurement was greater than the neutral value of 3.0, signifying that all the variables were of importance.

From table 4.6 below, the highest ranked measure was 'Pre-disclose the selection criteria to bidders and to forbid the procurement entity to change them once the process has started' with a mean value of 3.85 and a standard deviation of 0.863. The challenges include proper dissemination of the procurement law. The second ranked measure was 'Criteria for the selection of suppliers should be set and agreed by all the parties' with a mean value of 3.84

and a standard deviation of 0.786.

Other important measures to achieving value for money include 'Regular procurement audits and monitoring for compliance with procurement activities in the polytechnic', 'Strong or Consistent enforcement of the prevailing rules and regulations', 'Mechanisms of enforcement should not become a barrier so as to make the system insufficient, bureaucratic and costly', 'Punitive sanctions to procurement officials who fail to comply with the procurement activities in the Polytechnic', 'Procurement contract document should be stated in simple language devoid of different interpretations requiring revisions and reviews' and 'Supplier/Contractor/Consultant who attempts to influence procurement process should be sanctioned and debarred from government of Ghana contract' in their order of rankings. The findings of this study was inconsistent with the findings of Ademan (2014) in order of rankings of the measures.

Table 4.6 Measures to enhance value for money in public procurement

VFM Measures To enhance value for money	**Mean Score**	**STD. Deviation**	**Ranking**
Pre-disclose the selection criteria to bidders and to forbid the procurement entity to change them once the process has started	3.85	0.863	1ST
Criteria for the selection of suppliers should be set and agreed by all the parties	3.84	0.786	2ND
Regular procurement audits and monitoring for compliance with procurement activities in the Polytechnic	3.76	0.899	3RD
Strong or Consistent enforcement of the prevailing rules and regulations	3.73	0.843	4TH
Mechanisms of enforcement should not become a barrier so as to make the system insufficient, bureaucratic and costly	3.72	0.863	5TH
Punitive sanctions to procurement officials who fail to comply with the procurement activities in the Polytechnic	3.70	0.822	6TH
Procurement contract document should be stated in simple language devoid of different interpretations requiring revisions and reviews	3.69	0.824	7TH
Supplier/Contractor/Consultant who attempts to influence procurement process should be sanctioned and debarred from government of Ghana contract.	3.67	0.870	8TH

Source: Authors Fieldwork (2016)

5.0 CONCLUSIONS AND RECOMMENDATIONS

The study has shown that the term 'value for money' seems abstract and subjective, and not every Public Procurement Official can be presumed to be implementing it given that there is a lack of

understanding of what it means. A clearer definition of Value for Money is therefore required in order to facilitate its effective implementation in Public procurement.

Value for money is therefore not a choice of goods or services which is based on the lowest bid price but a choice based on the whole life costs of the project or service. Given the limited resources available to government, ensuring VFM in procurement is key to ensuring the optimum utilization of scarce budgetary resources. VFM is the primary driver for procurement.

The primary aim of this research was to evaluate ways of ensuring value for money in public procurement using some selected Polytechnics in Ghana as the case study. From the findings of the study, a well-functioning public procurement system is critical for the improved delivery of decentralized goods, works and services. The findings from the study inform on recommendations to be put forward. From the study the following recommendations are made:

- Management supports for VFM programmes at all levels of administration should be encouraged.
- Procurement regulatory authorities (Public Procurement Authority) in collaboration with public entities (Polytechnics) must ensure compliance through rigorous monitoring and evaluation of the procurement policy to ensure VFM.
- Stakeholders of public entities should also invest in training of their staff on achieving value for money in their procurement activities.

6.0 LIMITATIONS

The findings of the study were only limited to the four (4) selected Polytechnics in Ghana and did not explore the views of the other public entities, so it may reflect some partial view.

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