
EFFECTS OF PROCUREMENT PROCEDURES ON PERFORMANCE OF PUBLIC BUILDING CONSTRUCTION IN THE MINISTRY OF EDUCATION AND VOCATIONAL TRAINING, ZANZIBAR

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<http://doi.org/10.35409/IJBMER.2023.3487>

ABSTRACT

The study focused on effects of procurement procedures on performance of public building construction in the Ministry of Education and Vocational Training (MEVT), Zanzibar. The specific objectives of the study were to; analyze the effects of procurement planning on performance of public building construction in the MEVT, assess how procurement selection criteria affect performance of public building construction in the MEVT and to analyze the effects of procurement contract monitoring on performance of public building construction in the MEVT. Descriptive research design was adopted; the population of the study was 28 where a sample of 26 respondents was gotten from using Yamane formula of 1967. The sample was selected from the population by use of purposive sampling technique. Data used in the study was collected using questionnaire and interview. Qualitative data was analysed thematically while the quantitative data was analysed using Mean and standard deviation, frequency distribution and percentages; and multiple regressions. The findings showed that, procurement planning, procurement selection criteria and procurement contract monitoring varied on affecting performance of public building construction in the MEVT. The regression analysis found that, procurement planning, procurement selection criteria and procurement contract monitoring affected performance of public building construction by 59.2%, 37.3% and 30.7% respectively. All variables were significant at 0.000 and 0.001, $P < 0.05$. The study had the following recommendations; The Ministry of Education and Vocational Training, Zanzibar to increase procurement planning by devising efficient procurement planning standards, have stringent procurement selection criteria and to increase procurement contract monitoring by employing staff with skills of monitoring and evaluation of projects.

Keywords: Procurement, Building Construction, Projects, Resource-Based Theory

1. INTRODUCTION

1.1 Background to the Study

Procurement systems are vital in ensuring the successful implementation of a construction project (Kiroombo, 2018). According to Lyimo (2022) procurement is acquiring products through competitiveness of producers and consumers. The performance of a project has been described as the degree of achievement of project objectives with regards to quality, cost and time (Chitkara, 2005). Construction products and processes have a large impact on safety, health and environmental aspects and especially in any country's Ministry of Education and Vocational Training since many students every year use these buildings (Lema, 2013).

Asante (2016) stated that construction project is a complex process that involves many stakeholders, long project durations and complex contractual relationships. Mwaipopo (2017) agreed on the complexity of procurement process and argued that for performance of any construction project the process of procurement must be well governed. The procurement process involves the following key stages: procurement planning, procurement selection criteria, procurement contract monitoring. Naftal (2018) observed that procurement planning is the plan that is used to manage the process of procuring goods or contractor. The author opined that procurement selection criteria is the plan set by an organization in order to be able to select the contractors or bidders of the procurement. Procurement contract monitoring is the part of procurement management which makes sure that contract is followed effectively. Laedreet *al.* (2006) stated that procurement contract monitoring is integral part of procurement process.

The Resource-Based Theory by [Wernerfelt](#) in 1984, talks of competitive advantage, which is a function of effective and efficient performance. The author argued that competitive advantage in organizations in the angle of human resources is determined through the capacity of human resource to carry out proper planning, selection of best decision and effective monitoring.

An effective procurement process that is laid down ensures the continuous availability of the right materials in the right quantities, from the right suppliers available at the right time and reasonable prices (Lyimo, 2022). In Africa, public sectors have been struggling with ineffective procurement and thus provision of poor buildings. There have been numerous collapses of buildings in many countries due to the quality of the procured materials or the quality of the contractors (Bekele, 2018). For procurement function to effectively impact positively on the performance of project, there has been a need to pay significant attention from one planning cycle to another (Emaru, 2016). Efficiency and competitiveness of services provided by the organization are among the benefits that can be realized through procurement and therefore it is necessary to look at the procurement procedures.

In many countries including Zanzibar the construction industry has, however, attracted criticism for inefficiencies in outcomes such as time and cost overruns, low productivity, poor quality and inadequate customer satisfaction (Mlinga, 2020). In order to enhance performance of projects and especially in Zanzibar, an increased understanding of how different procurement procedures affect different aspects of project performance is vital.

1.2 Statement of the Problem

Effective and efficient procurement practice is the nerve center in a successful project and this requires a tight system to be followed and adopted (Mwaipopo, 2017). Procurement of infrastructure projects is facing a global challenge. However, in developing nations it is of unique interest to the many failed projects especially construction of infrastructure projects (Laedre *et al.*, 2006). These procurement challenges include procurement planning, procurement selection criteria and procurement contract monitoring. Construction of buildings which include classes by the Zanzibar Ministry of Education and Vocational Training (MEVT) are among important projects that bring development within the country through improvement of the

education sector. Brown and Hyer (2010) emphasized the importance of procurement in project management. Peteraf (2017) argued that procurement is the cornerstone of a successful construction project. In Zanzibar construction projects have been identified with quality challenges such as 19 newly constructed schools were found to have leaking roofs, cracks on walls, columns and floors, poorly fixed tiles and poorly constructed plumbing and electricity systems (Zanzibar House of Representatives, 2019). Other, structures have been found to be below value for money (Mlinga, 2020). The auditing report of 2019 noted that inspections and monitoring of the procurement procedures are not well conducted in Zanzibar government projects including school construction projects. Several studies carried out on the procurement procedures have been focusing on how procurement procedures affect time, cost and quality on the public projects but could not mention procurement planning, procurement selection criteria and procurement contract monitoring. Therefore, this study was designed to examine the effects of procurement procedures on performance of public building construction projects in the Ministry of Education and Vocational Training, Zanzibar.

1.3 General Objective

To examine the effects of procurement procedures on performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar

1.3.1 Specific Objectives

- i. To analyze the effects of procurement planning on performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar.
- ii. To assess how procurement selection criteria affect performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar.
- iii. To analyze the effects of procurement contract monitoring on performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar.

1.4.1 General Research Question

What are the effects of procurement procedures on performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar?

1.4.2 Specific Research Questions

- i. What are the effects of procurement planning on performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar?
- ii. How do procurement selection criteria affect performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar?
- iii. What are the effects of procurement contract monitoring on performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar?

1.5 Relevance of the Research

The study results will provide useful inputs or suggestions to the construction industry and other organizations especially the Ministry of Education and Vocational Training on how to improve execution performance of building construction projects. The study also is useful to the policy makers in understanding the existing loopholes in the procurement process. The study may act as

literature review to future researchers who will be interested the field of procurement and performance of building construction projects.

1.6 Organization of the Research Report

The research report is organized in three chapters. Chapter 1: Introduction - presents and elaborates the background, objectives of the study, the research questions and significance of the study. This chapter also describes the problem statement and the organization of the study. Chapter 2: Literature Review - Describes the theoretical foundation of the study. Also discussed in this chapter are empirical studies. The chapter identifies the gaps in prior studies. At the end of the literature review a conceptual framework is also illustrated showing how the variables relate. Chapter 3: Research Methodology - This chapter discusses the research methods used in the study. The chapter covers research design, research area, research population, sample, data collection method and data analysis. Chapter 4: Data presentation and Analysis – This chapter presents the data collected in the field and analysis. The chapter also presents the discussion of the results of the analysis of the data. Chapter 5: Summary, Conclusion And Recommendations- The chapter presents the summary of the results, the conclusion made based on the findings and the recommendations.

2.LITERATURE REVIEW

2.1 Overview

This chapter presents the literature review. In this chapter key terms are defined. Moreover, the chapter presents the theoretical literature review, empirical literature review, the research gaps and the conceptual framework.

2.2 Conceptual Definitions

2.2.1 Procurement Procedures

Procurement procedures are the set activities involved in obtaining the goods and services a company needs to support its daily operations (Mwaipopo, 2017). Hillerbradt and Hughes (2016) define procurement as the plan available for buying or obtaining goods and services.

2.2.2 Performance

Luka (2016) defined performance in relation of building construction as the carrying out of works according to requirements set out in a contract. The author observed that these could be; work done in line with the project programme, observing date of completion, and environmental and other standards. Ogunsanya *et al.* (2019) defined in relation to building construction as the attribute of a building that expresses how well that building is. In this study the definition by Luka (2016) is used because it is more comprehensive.

2.2.3 Public Building

These are buildings that are accessible to the public and are funded from public sources (Owiti *et al.*, 2017). Anane *et al.* (2019) typically wrote that public buildings are buildings funded through tax money.

2.3 Theoretical Literature Review

The study theoretical foundation was based on the Resource-Based Theory.

2.3.1 Resource Based Theory

Resource-Based Theory (RBT) was postulated by Wernerfelt in 1984, who proposed a model on the effective management of firms' resources, diversification strategy, and productive opportunities. Resource based theory identifies and analyzes an organization's strategic advantages that will in turn be a source of competitive advantage. These competitive advantages may be organizational, human or financial and their advantages are conferred based on their rareness, uniqueness and value. Resource based theory emphasizes that competitive advantage in organizations in the angle of human resources is determined through human resource proper planning, selection of best decision and monitoring (Wernerfelt, 1984). According to Penrose (2009), the theory suggests that organizations that own "Strategic Resource" have important competitive advantages over the other organizations that do not have strategic resources. The resources become strategic resources when they are valuable, exceptional, difficult to imitate and non-substitutable. The theory basically tries to justify why firms in the same industry perform differently by looking for the internal sources of sustained competitive advantages (Naftal, 2018). The organization resources include all tangible and intangible assets such as technological, human and physical assets as well as the capabilities, organization processes and information. If the resources are not sufficient, they should be accompanied by capabilities which result from complex pattern of interactions and coordination amongst the resources. This theory is relevant in the study from the view point that procurement practices and performance results from availability of enough work tools or tangible and intangible assets such as computers, human resources, photocopy machine, internet services, printers and financial resources that will facilitate procurement officers to conduct their activities and their responsibilities in the most effective and efficient manner. Since Resource based theory emphasizes that competitive advantage in organizations in the angle of human resources is determined through human resource proper planning, selection of best decision and monitoring, in this study proper planning get us to the first hypothesis:

H0₁: There is no significant effect of procurement planning on performance of public building construction projects.

According to Wernerfelt in 1984 selection of best decision is emphasized by the resource based theory and thus it is advocated that the decision of which selection criteria to use in procurement is considered thus arriving to the second hypothesis;

H0₂: There is no significant effect of procurement selection criteria on performance of public building construction projects.

Human resource is key to the resource based theory, monitoring is a key function of human resources and thus key to the study thus leading us to the third hypothesis;

H0₃: There is no significant effect of procurement contract monitoring on performance of public building construction projects.

2.4 Empirical Literature Review

2.4.1 General studies.

Lema (2013) conducted a study on the challenges affecting procurement processes for Parastatal

Organizations, the case of PPF Pension Funds. The objective of the study was to investigate factors affecting procurement processes for Parastatal Organizations with specific focus to Pension Funds Head Quarters' in Samora/Morogoro Road, Ilala District in Dar es Salaam. The cross-sectional survey study was conducted whereby data were obtained through questionnaires administered to 45 respondents and involved a sample size of 50%. The results established the findings which revealed that, delay of funds from central government and other sources, lack of awareness on implementation of the procurement procedures, inadequate allocation of funds (insufficient budget). The current study is not focusing on challenges rather on the effects of procurement procedures on performance of construction projects.

A mixed research by Marunda (2016) on Factors Affecting Procurement Performance in Public Organization in Tanzania using Arusha Urban Water Supply and Sanitation Authority (AUWSA) as case study. The study concluded that procurement ethical practices, e-procurement, adoption of company flexibility on procurement planning and communication have significant effect on procurement performance at AUWSA. Also the study concluded that procurement performance at AUWSA is influenced by overall resource allocations, proper allocation of human resources and financial resources, appropriate procurement planning and proper allocation of Information Technology (IT). The study highlighted appropriate procurement planning as factors affecting procurement performance but fall short of investigating procurement selection criteria and procurement contract monitoring. At the same time the context of procurement planning is different from the context of the current study.

Naftal (2018) did a study on Practice of International Procurement in Public Sectors: A Case of Tanzania's Immigration Department. The essence of an efficient public sector procurement system no doubt is to create wealth and efficiency, transparency and accountability within the procurement system as well as adherence to procurement laws. The study revealed that the Public Procurement Act, somewhat, succeeded in harmonizing the process of procurement in the public entities to secure fiscal transparency, efficiency and increase competition among the local industry. The challenges identified at the Immigration Department represents a bigger problem at all government ministries, agencies and departments, among other things, it tends to limit the realization of efficiency and value for money in procurement processes. The study focused on practice of international law in public sector unlike the current study focusing mainly on procurement procedures.

2.4.2 Studies in African countries

Emaru (2016), from Uganda conducted a study about factors affecting procurement practices in the Uganda National Agricultural Research Organization (NARO). The mixed research study results revealed that 61% of the respondents indicated that procurement plans in the procurement functions impacted positively on performance of procurement, about 63% of the respondents indicated that the funds allocated to the departments of procurement were largely inadequate and 37% of the respondents indicating that the funds were adequate. The study concluded that professionalism and competence of employees should be promoted and work ethics should be observed in all procurement departments as a vital tool in the success of any organization's enactment. The study also concluded that staff competence affect significantly the efficiency of

procurement functions at NARO. The study was squarely on challenges affecting procurement practices.

Kiromo (2018) aimed at evaluating the factors affecting procurement and supply chain performance in building construction firms in Nairobi. According to the findings; majority got their building materials from suppliers, majority ordered building materials using both written requisitions and verbal requests. The study found that majority were faced with distance problem between supplier depots and construction sites. The current study will deal with procurement procedures and not factors affecting procurement and supply chain.

Bekele (2018) conducted a study aimed to examine factors that affect procurement performance in public higher institutions a case of Jimma University. Specifically, the study sought to examine the variables procurement planning, resource allocations, staff competency, information technology, procurement process and procurement follow-up mechanisms that affect the performance of procurement. The study was conducted through a descriptive design of research. The study employed purposive sampling technique to select the respondents. The sample size of the study is 257 respondents from academic and administrative staffs who currently working at management position and have direct relationship with procurement activities. A structured questionnaire and interview as a data collection instrument were used. The field data was statistically analyzed using descriptive statistics and narrative summary analyses. The findings indicated that procurement planning, employee competency, information technology, procurement process, procurement follow up mechanism and organizational structure are highly affecting the performance of procurement function and resource allocation or budget allocation affect the procurement process at minimum level.

Asante (2016) in Ghana, carried out a study to ascertain factors affecting public procurement practices at the Kintampo Municipal Assembly (Ghana). The results of the study showed that procurement practice is a major hindrance to both private and public sectors in organization growth. Poor procurement functions in the public and private sectors have been a problem due to unprofessional staff, insufficient resources, traditional procedures and inability to embrace electronic procurement (e-procurement), shortage of quality assurance policies, proper regulations and established procurement plan. The finding of the study also disclosed that lack of expertise, political interference, weak institutional structures, inability to implement or monitor policies and laws are the most significant factors affecting procurement practices in the public sectors in Ghana. The study fall short as did not investigate procurement procedures and performance of projects.

2.4.3 Studies in Tanzania

Lyimo (2022) conducted a study on factors affecting procurement practices in public procuring entities in Tanzania. The study used Tanzania Electric Supply Company Limited (TANESCO) as the case study. A case study research design was used. The factors considered were staff competence and resources allocation. The findings revealed positive relationship between staff competence and Procurement Practices. The findings showed positive relationship between Resource Allocation and Procurement Practices. Also, the study unveiled that there is significant

relationship between Inter-departmental and Procurement Practices. The study recommended that, it is worthwhile that staffs be adequately trained and sensitized in order to boost the skills and competency levels required by staffs involved in the procurement process. The company would benefit if the management (at the top and middle level), support the procurement department by allocating more resources and encourage trainings to improve the skills and knowledge of the procurement staff hence embracing inter-department relationships. This current study will assess the effects of procurement planning, procurement selection criteria and procurement contract monitoring on performance of public building construction.

Mwaipopo (2017) conducted a study and the aim of the study was to assess factors affecting procurement practices in parastatal organizations. The study found out that procurement officers are competent in a wide variety of generic procurement skills though to some extent they lack development capacity trainings but financial resources and supporting facilities are the hindrance factors towards procurement functions. The study concludes that, despite the efforts made by the government through different organs auditing and training respectively in order to improve procurement practices in Tanzania specifically to the public sector still there is a need to address challenges for instance shortage of funds and working facilities which have been observed as moderately hindrance factors towards procurement practices specifically to parastatal organizations in Tanzania.

Ivambi (2016) conducted a study, with the aim to analyze challenges affecting procurement practices for Parastatal Organization, the case of Parastatal Pensions Funds. Through the study, factors which were found to be directly affecting procurement practices were lack of knowledge in Information and Communication Technology (ICT) use against e-procurement (79%), lack of record keeping (64%) and lack of regular training on procurement (72%). The study recommends that good procurement practice is still a problem in most public and non-public organizations in Tanzania. Further effort in solving problems in our institutions should focus on regular trainings, how to keep records and ensuring staffs are aware with ICT use/ e-procurement. The strategies for minimizing factors affecting procurement practice should include improving ethical issues, ICT competencies, enhancing facilities and skills for modern record keeping. The current study is not focusing on challenges rather on procurement procedures and performance of projects.

2.5 Research gap

Earlier research efforts in this area have been limited to the investigation of challenges affecting procurement process or factors affecting procurement practices. The studies included those of Emaru (2016), Kiromo (2018), Bekele (2018), Asante (2016), Lyimo (2022), Mwaipopo (2017) etc. Also these studies were not done in Zanzibar. The current study focused on effects of procurement procedures on performance of building construction projects in the Ministry of Education and Vocational Training in Zanzibar.

2.6 Conceptual Framework

The conceptual framework will be as shown on Figure 2.1. The Independent variables are three; Procurement Planning with two constructs (Procurement risk planning and Scope creep planning), Procurement Selection Criteria (Contractor/vendor experience and Ability to constant

supply product) and Procurement Contract Monitoring (On-site inspection and Performance monitoring of the contractor). The dependent variable is Performance of Public Building Construction with four constructs (Cost, Time, Quality and Satisfaction).

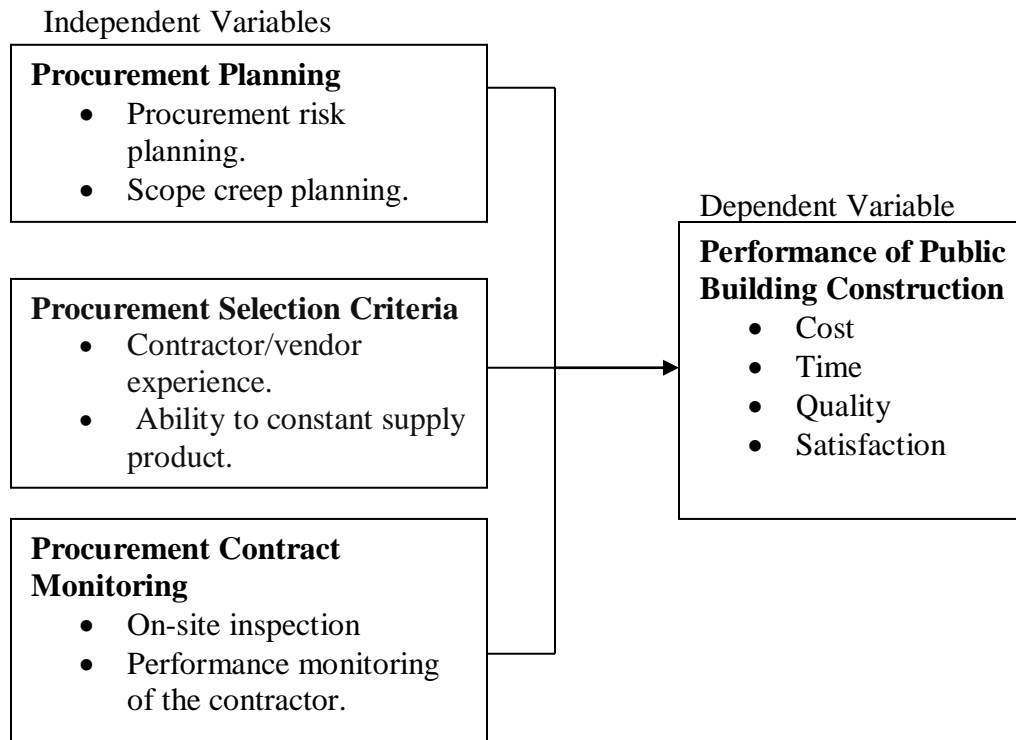


Figure 2.1: Conceptual Framework

Source: Researcher (2022).

3.RESEARCH METHODOLOGY

3.1 Overview

This chapter gives an overview of the research methodology that was used in the study. The chapter opens with research design and study population. It then gives a detailed description of the study area, sample and the sampling procedure, variables measurement procedure, methods of data collection, validity and reliability, data processing and analysis.

3.2 Research Design

According to Saunders *et al.* (2009) research design of a study is a series of decisions made by the researcher concerning how the study was conducted. The study was conducted through descriptive research design. Descriptive research design is a method that aims to obtain information to describe a phenomenon, situation, or population (Parampreet *et al.*, 2018). The information may be obtained by use of interview or administering a questionnaire (Schoonenboom and Burke, 2017). According to Sekaran and Bougie (2013) the design is ideally suitable for studies where data is intended to describe existing conditions. The descriptive research design involved qualitative and quantitative research approach. The reason to use qualitative technique was because it needed descriptions and other oral evidences from the respondents. On the other hand, quantitative research approach was used to measure the level of effects of the independent variables (procurement planning, procurement selection criteria and procurement contract monitoring) on the dependent variable (performance of public building construction).

3.3 Population of the Study

The target population of the study was 28. This is according a visit by the researcher at the Ministry of Education and Vocational Training found that there were 15 employees at the Procurement Management Unit, 6 Accounting Officers, 2 Internal Auditors, and 5 Engineers. The visit also found that these categories of population have once been involved in a building construction project in the Ministry of Education and Vocational Training regardless of the size. The distribution is shown in the Table 3.1.

Table 3.1: Distribution of population

Category of respondent	No. of Population
Procurement Management Unit Employees	15
Accounting Officers	6
Internal Auditors	2
Engineers	5
Total	28

Sources: Researcher (2022)

3.3.1 Sample Size

Kothari (2004) defines sample as the number of respondents selected to participate in the study from the population. It depends on the accuracy needed, population size, population heterogeneity whether the sample is subdivided or not and resources available (Patrik and Ugo, 2019). The sample size was calculated using formula provided by Yamane (1967). Therefore the sample size was calculated as below;

$$n = \frac{N}{1 + N(e)^2}$$

$$n = 28$$

$$1 + 28(0.05)^2$$

$$= 26.1 \approx 26$$

Where;

N = Number of study population

n = Sample size

e = Sampling Error

Therefore, the sample was 26 respondents.

Table 3.2: Distribution of Sample Size.

Category of respondent	No. of Population
Procurement Management Unit Employees	14
Accounting Officers	5
Internal Auditors	2
Engineers	5
Total	26

Sources: Researcher (2022)

3.3.2 Sampling Design and Procedures

The researcher used purposive sampling for this study. Purposive sampling is a procedure that involves the selection of persons who represent the desired population used (Schoonenboom and Burke, 2017). This is non-probability sampling method which involves the conscious selection of certain subjects to be included in the study. Usually, the sample being investigated is quite small, especially when compared with probability sampling techniques (Swedberg and Richard, 2017). The main goal of purposive sampling was to focus on particular characteristics of a population that are of interest, which best enabled answer the research questions.

3.4. Variables and Measurement Procedures

i) Procurement Planning

Procurement planning is a plan that is used to manage the process of procuring goods, works or services. This study focused on Procurement risk planning and Scope creep planning.

a) Procurement risk planning

Procurement risk management is the process of identifying both internal and external risks to the supply chain. This was measured by adequacy of needs analysis, roles and responsibilities set, legal jurisdiction explained and the measurement procedure used was questionnaire and interview.

b) Scope creep planning

Scope creep is the slow increase of time and material needed by suppliers to complete an order. This can create extra expenses for a company and should be mitigated by defined cost and time

limits. This was measured by detailed project restrains (defined cost and time limit for each procurement process). The procedure of measurement used was questionnaire and interview.

ii) Procurement Selection Criteria

Procurement selection criteria involved Contractor/Vendor experience. It also involved Ability to constant supply product.

a) Contractor/Vendor experience

This is the practice of the supplier or contractor that a company is established and ready to service the requirements of the contract. This was measured by number of years of supplying similar products or handling similar project. The procedure of measurement used was questionnaire and interview.

b) Ability to constant supply product

The supply of materials is important towards implementing public building construction projects. A vendor/contractor who has supply issues affects the ability to supply materials/services required for construction project and this is an important factor when selecting a vendor/contractor. This ability to supply products was measured by commitment and capacity of the contractor (speed and time to supply, public accountability and quality of level of material). The procedure of measurement used was questionnaire and interview.

iii) Procurement Contract Monitoring

Procurement contract management is the process of managing contracts related to procurement and purchases made. This constituted, On-site inspection and Performance monitoring of the contractor.

a) On-site inspection

On-site inspection to inspect quality of the materials delivered. This was measured by the nature of monitoring. The procedure of measurement used was questionnaire and interview.

b) Performance monitoring of the contractor

This was measured by performance reviews, quality of material delivered, verified work, accepted work and payments made against the work that has been both verified and accepted.

iv) Performance of Public Building Construction

The performance of public building construction was measured by its value for money, time taken to complete, quality of the construction and satisfaction of the projects. The procedure of measurement used was questionnaire and interview.

3.5. Methods of Data Collection

The study used both questionnaire and interview to collect data.

3.5.1 Questionnaire

A questionnaire is a set of questions that is full of traits and clues in order that the respondents can tick the appropriate clue of his/her opinion or write short answers. The questionnaire has to do with formulating precise written questions for those whose opinion or experiences are interested with, the reason of using this method is because of its low cost, free from bias of the

interviewer, respondent have adequate time to well thought out answers, large samples can be made by use of it and thus the results can be made more dependable and reliable (Saunders *et al.*, 2007). The questionnaires were prepared following the problem, literature review and conceptual frame work of this study. The questionnaires were distributed to the 26 respondents by the researcher.

3.5.2 Interview

Interview was used to collect views from the respondents on the topic at hand. Interview method used structured interviews to the selected respondents to directly seek their opinion as advocated by Kothari (2004). Eight respondents were earmarked for interview however seven were available for the interviews because one was outside Zanzibar for duty during the time of the interview. These included 3 employees at the Procurement Management Unit, 2 Accounting Officers, 1 Internal Auditor and 1 Engineer. These interviewees were selected randomly from each category. Saunders *et al.* (2007) argue that a minimum of five respondents for interview where other methods of collecting data have been used is sufficient. Also, the interviewees came from those also given questionnaire to enhance data triangulation. To ensure confidentiality each participant was given an alphanumeric code: R1, R2 ... R7.

3.6 Validity and Reliability

3.6.1 Validity

Validity means the correctness of a research work's description, explanation, interpretation, or conclusion. It implies the rationality of research instruments, which is to measure what they are intended to measure (Kombo and Tromp, 2006). The questionnaire was given to experts in procurement and quality assurance to make sure that all the questions in the questionnaire are valid. Additionally 10 samples of questionnaires were distributed for a pilot study. The validity was calculated by using the formula by Polit *et al.* (2006):

CVI = $\frac{\text{Number of Items Regarded Relevant}}{\text{Total Number of Items}}$

Total Number of Items

Polit *et al.* (2006) observed that instrument would be valid, if the scores are above 0.5 in a range of 0.1 to 1 from number line as a standard and also the minimum requirement of justifiable validity statistically. This was also supported by Sekaran and Bougie (2013). Therefore for this study the CVI was calculated as below;

$$\text{CVI} = \frac{14 (\text{Number of Items Regarded Relevant})}{19 (\text{Total Number of Items})}$$

$$= 0.736 \approx 0.74$$

Therefore, a researcher proceeded to collect data since the CVI was 0.74 far above the range of 0.5 advocated by Polit *et al.* (2006) and Sekaran and Bougie (2013).

3.6.2 Reliability

According to Kombo and Tromp (2006) reliability of a tool is a measure of how consistent the

results from a test are; for instance, when a researcher administers a test to a subject twice and gets the same score on the second administration, then reliability proves the trustworthiness of the findings. In the study, Cronbach's Alpha was used to measure the reliability. The researcher continued using the instrument on; if the Cronbach's Alpha value was more than 0.60 as advocated by Pallant (2016).

Table 3.3 Reliability statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items in
.949	.950	19

Source: Researcher (2022)

The Cronbach's Alpha was 0.949 which was way above the proclaimed 0.60 by Pallant (2016) thus the researcher opined the instrument was reliable and proceeded to collect data.

3.7. Data Processing and Analysis

The researcher collected both qualitative and quantitative data. The qualitative data was grouped into themes and analyzed thematically. This brought out the views of the respondents. The quantitative data was analyzed as recommended by Kothari (2006) using Mean and standard deviation, frequency distribution and percentages, and multiple regressions with the help of the Statistical Package for Social Science (SPSS) software. Mean and standard deviation is considered in this study to measure the average distance between the values of the data in the set and the mean. A low standard deviation indicates that the data points tend to be very close to the mean; a high standard deviation indicates that the data points are spread out over a large range of values (Mugenda and Mugenda, 2003). The rating scale in Table 3.4 was used to interpret the response from the respondents.

Table 3.4 Rating scale

Range of the Mean	Participant Response	Inference
1.00 - 1.80	Strongly Disagree	Very Low
1.81 – 2.60	Disagree	Low
2.61 - 3.40	Neutral	Average
3.41 - 4.20	Agree	Moderately high
4.21 – 5.00	Strong Agree	High

Source: Rating Scale adopted from Gay (2005).

Frequency distribution and percentages was used to analyze how the participants responded to the questions in the questionnaire. Saunders and Thornhill (2007) posit that Frequency distribution and percentages displays how respond answers looked like and actually how many respondents involved in a particular respond.

Multiple regression analysis was done to assess the impact of the independent variable

(procurement planning, procurement selection criteria and procurement contract monitoring) on the dependent variable (performance of public building construction). The regression model was:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$$

Where:

Y = Performance of Public Building Construction (Measured by Cost, Time, Quality and Satisfaction).

β_0 = Constant

X1 = Procurement planning.

X2 = Procurement Selection Criteria.

X3 = Procurement Contract Monitoring.

ε =Error Term

3.8 Ethical Considerations

Treating the information given by the respondent as strictly confidential and guarding his or her privacy is one of the primary responsibilities of the researcher (Sekaran and Bougie, 2016). The study did not use people’s names instead used codes to avoid bias from respondent and bring the validity of the report. The consideration of ethical issues like confidentiality was necessary for the purpose of keeping privacy as well as the safety of the participants; therefore, in this research, the researcher did not expose any information without the participant consent. The researcher relayed all important details of the study, including its aims and purpose. All information that was given was only for the use of the research purposes. The participation of the respondents was voluntarily. Ethical consideration used in this study because helped to ensure that respondents give their comments openly and honestly and up-to-date information without fearing identification for victimization.

4. DATA PRESENTATION AND ANALYSIS

4.1a Introduction

This chapter presents the findings from the data collected through the questionnaire and interviews. The chapter is divided into six parts. The first part presents the response rate. The second part presents the findings on the demographic characteristics of the respondents of the study. The third part of the chapter presents results based on frequency and percentages, the fourth part presents results of mean and standard deviation, the fifth part presents the results of multiple linear regressions and lastly the sixth part presents the qualitative analysis of the findings with respect to the (themes) interview questions.

4.1 Response rate

The analysis of the response rate is shown in Table 4.1.

Table 4.1: Response rate

Category	Number	Percentage
Returned Questionnaires	24	92.3
Un-returned Questionnaires	2	7.7
Total	26	100
Present for interview	7	87.5
Not present for interview	1	12.5

Total	8	100
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Source: Researcher (2022)

The total population of this study was 28 which included employees at the Procurement Management Unit, Accounting Officers, Internal Auditors and Engineers from the Ministry of Education and Vocational Training Zanzibar. The target sample was 26. A total of 26 questionnaires were delivered to the respondents but 24 questionnaires were filled and returned. This represented 92.3% response rate, which is quite suitable to make a finale for the study. This response rate was favourable according to Mugenda and Mugenda (2003) who asserted that a 50% response rate is adequate for analysis and reporting in research; 60% good and above 70% is very good for data analysis and reporting. Mwangi (2015) asserted that a response rate of above 69% is adequate for satisfactory research findings. Based on the above, the response rate of 92.3% was found to be adequate and good for analysis and generalization of the results (Table 4.1). On the other hand 8 people were targeted for interviews; however, 1 of the earmarked respondent was not available during the time of the interview as had travelled on duty outside Zanzibar. Therefore, 7 respondents were interviewed.

4.2 Demographic characteristics of respondents

The demographic characteristics analyzed were based on gender, age and level of education. These features are essential because they may suggest the possible reasons for the responses from the participants (Swedberg and Richard, 2017)

4.2.1 Gender of Respondents

The purpose of obtaining data on the basis of sex was to gain the insights so as to determine the composition of the respondents. The table 4.2 displays the results.

Table 4.2: Gender distribution

Variable	Frequency	Percentage	Cumulative percentage
Male	15	62.5	62.5
Female	9	37.5	100
Total	24	100	

Source: Researcher (2022)

Table 4.2 shows that 15 respondents equal to 62.5% were male while 9 respondents equal to 37.5% were female. This data implies that both genders were represented and thus the results were out of gender bias.

4.2.2 Age of respondents

The age of respondents was considered as an important characteristic to analyze as Sekaran and Bougie (2013) opined that people of different ages may have different response on a particular issue. The age distribution is shown in Table 4.3.

Table 4.3: Respondents age

Variable	Frequency	Percentage	Cumulative percentage
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18-30 years	2	8.3	8.3
30-40 years	6	25	33.3
40-50 years	10	41.7	75
50-60 years	5	20.8	95.8
Over 60 years	1	4.2	100
Total	24	100	

Source: Researcher (2022)

The findings in Table 4.3 indicate 18-30 years were 2 (8.3%), 30-40 years were 6 (25%), 40-50 years were 10 (41.7%), 50-60 years were 5 (20.8%) and 60 and above years was 1 (4.2%). This implied that all respondents were adults and capable of expressing their experiences with regard to the topic at hand. On the other hand, it also shows that all ages were represented.

4.2.3 Respondents Education

The education level of respondents was categorized into three; Diploma, degree, and postgraduate. Findings (See Table 4.4).

Table 4.4: Education of respondents.

Variable	Frequency	Percentage	Cumulative percentage
Diploma	3	12.5	12.5
Bachelor Degree	13	54.2	66.7
Postgraduate	8	33.3	100
Total	24	100	

Source: Researcher (2022)

The results on Table 4.4 showed that 3 respondents which is equivalent to 12.5% had diploma level, 13 respondents equivalent to 54.2% had bachelor degree and 8 respondents equivalent to 33.3% had postgraduate level of education. This implied that all the respondents had the capacity to understand the questionnaire and respond to the questions.

4.3 Effects of procurement planning on performance of public building construction

This was the first objective of the study. Statements on procurement planning were given to the respondents and asked to indicate how they agreed or disagreed with the statement on affecting performance of public building construction at MEVT. The response scale for the questions was: 1= Strongly Agree, 2= Agree, 3= Neutral, 4= Disagree, 5 = Strongly Disagree.

4.3.1 Whether procurement needs and requirements are done effectively to increase performance of public building construction

Table 4.5: Response on whether procurement needs and requirements are done effectively to increase performance of public building construction

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Strongly agree	3	12.5	12.5	12.5
	Agree	4	16.7	16.7	29.2
	Neutral	1	4.2	4.2	33.4
	Disagree	14	58.3	58.3	91.7
	Strongly Disagree	2	8.3	8.3	100.0
	Total	24	100.0	100.0	

Source: Field Data, 2022

The results on Table 4.5 show that 3 respondents equal to 12.5% observed strongly agree, 4 respondents equal to 16.7% agreed, 1 respondent equal to 4.2% remained neutral, 14 respondents equal to 58.3% disagreed and 2 respondents equal to 8.3% strongly disagreed. The results implied that majority of the respondents 16 disagreed with the statement procurement needs and requirements are done effectively to increase performance of public building construction. The results are in support Peteraf (2017) who opined that procurement needs and requirement is integral for the performance of any project success.

4.3.2 Whether roles and responsibilities are set before procurement process starts to foster performance of public building construction

Table 4.6: Roles and responsibilities are set before procurement process starts to foster performance of public building construction

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	10	41.6	41.6	41.6
Agree	6	25	25	66.6
Neutral	3	12.5	12.5	79.1
Disagree	2	8.4	8.4	87.5
Strongly Disagree	3	12.5	12.5	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.6 show that 10 respondents equal to 41.6% observed strongly agree, 6 respondents equal to 25% agreed, 3 respondents equal to 12.5% remained neutral, 2 respondents equal to 8.4% disagreed and 3 respondents equal to 12.5% strongly disagreed. The results implied that majority of the respondents 16 either agreed or strongly agreed with the statement roles and responsibilities are set before procurement process starts to foster performance of public building construction. The results were different from the results of Anane *et al.* (2019) who found that organization do their procurement process without setting roles and responsibilities however, the results concurred with the findings of Chepkesis *et al.* (2018).

4.3.3 Whether relevant legal jurisdiction is explained before procurement process to increase performance of public building construction

Table 4.7: Relevant legal jurisdiction is explained before procurement process to increase performance of public building construction

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	2	8.4	8.4	8.4
Agree	4	16.6	16.6	25
Neutral	0	0	0	25
Disagree	14	58.4	58.4	83.4
Strongly Disagree	4	16.6	16.6	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.7 indicate that 2 respondents equal to 8.4% observed strongly agree, 4 respondents equal to 16.6% agreed, 14 respondents equal to 58.4% disagreed and 4 respondents equal to 16.6% strongly disagreed. The results implied that majority of the respondents 18 either disagreed or strongly disagreed with the statement relevant legal jurisdiction is explained before procurement process to increase performance of public building construction. The results were similar to the findings of Jackson & Ombui (2018).

4.3.4 Whether cost is scrutinized for each procurement process to foster performance of public building construction

Table 4.8: The cost is scrutinized for each procurement process to foster performance of public building construction

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	3	12.5	12.5	12.5
Agree	3	12.5	12.5	25
Neutral	1	4.2	4.2	29.2
Disagree	16	66.6	66.6	95.8
Strongly Disagree	1	4.2	4.2	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.8 show that 3 respondents equal to 12.5% observed strongly agree, 3 respondents equal to 12.5% agreed, 1 respondent equal to 4.2% remained neutral, 16 respondents equal to 66.6% disagreed and 1 respondent equal to 4.2% strongly disagreed. The results implied that majority of 17 respondents either disagreed or strongly disagreed that the cost is scrutinized

for each procurement process to foster performance of public building construction. The results differed with the results of Ogwang and Waweru (2017).

4.3.5 Whether time limit is set for each procurement process to foster performance of public building construction

Table 4.9: Time limit is set for each procurement process to foster performance of public building construction

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	16	66.7	66.7	66.7
Agree	4	16.7	16.7	83.4
Neutral	0	0	0	83.4
Disagree	2	8.3	8.3	91.7
Strongly Disagree	2	8.3	8.3	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.9 shows that 16 respondents equal to 66.7% observed strongly agree, 4 respondents equal to 16.7% agreed, 2 respondents equal to 8.3% disagreed and 2 respondents equal to 8.3% strongly disagreed. The results implied that majority of the respondents 20, either agreed or strongly agreed that, time limit is set for each procurement process to foster performance of public building construction. The finds concurred with the finding of Munyawera *et al.* (2018).

4.3.6 Mean and Standard Deviation of the statements on effects of procurement planning on performance of public building construction.

Table 4.10: Mean and standard deviation

Statement	N	Mean	Standard Deviation
Procurement needs and requirements are done effectively to increase performance of public building construction	24	2.71	0.19
Roles and responsibilities are set before procurement process starts to foster performance of public building construction	24	3.86	0.67
Relevant legal jurisdiction is explained before procurement process to increase performance of public building construction	24	2.39	1.04
The cost is scrutinized for each procurement process to foster performance of public building construction	24	2.11	1.41
Time limit is set for each procurement process to foster	24	3.24	0.52

performance of public building construction			
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Source: Researcher (2022)

The results in Table 4.10 show that statements: Procurement needs and requirements are done effectively to increase performance of public building construction had mean score of 2.71 which meant the statement was observed averagely, roles and responsibilities are set before procurement process starts to foster performance of public building construction had mean score of 3.86 which meant the statement was observed moderately high, relevant legal jurisdiction is explained before procurement process to increase performance of public building construction had mean score of 2.39 which meant the statement was observed in a low manner, the cost is scrutinized for each procurement process to foster performance of public building construction had mean score of 2.11 which meant the statement was observed in low manner and time limit is set for each procurement process to foster performance of public building construction had mean score of 3.24 which meant the statement was observed in an average manner. The results implied some statements were observed in a low manner while others were observed in moderately high manner. Munyimi (2019) acknowledged that in organization the statement on procurement planning were observed in a different manner some low while others were well observed.

4.4 Effects of procurement selection criteria on performance of public building construction

This was the second objective of the study. Statements on procurement selection criteria were given to the respondents and asked to indicate how they agreed or disagreed with them towards performance of public building construction at MEVT. The response scale for the questions was: 1= Strongly Agree, 2= Agree, 3= Neutral, 4=Disagree, 5 = Strongly Disagree.

4.4.1 Whether experience of a vendor/contractor is considered to increase performance of public building construction

Table 4.11: Experience of a vendor/contractor is considered to increase performance of public building construction.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	2	8.3	8.3	8.3
Agree	14	58.3	58.3	66.6
Neutral	1	4.2	4.2	70.8
Disagree	3	12.5	12.5	83.3
Strongly Disagree	4	16.7	16.7	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.11 show that 2 respondents equal to 8.3% observed strongly agree, 14 respondents equal to 58.3% agreed, 1 respondent equal to 4.2% remained neutral, 3 respondents equal to 12.5% disagreed and 4 respondents equal to 16.7% strongly disagreed. The results

opined with the results of Siongok and Noor (2016) who concluded that experience of a vendor is very important in procurement process.

4.4.2 Whether the ability to supply products/execute the construction works and commitment is crosschecked in order to enhance performance of public building construction.

Table 4.12: The ability to supply products/execute the construction works and commitment is crosschecked in order to enhance performance of public building construction.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	15	62.5	62.5	62.5
Agree	4	16.7	16.7	79.2
Neutral	0	0	0	79.2
Disagree	4	16.7	16.7	95.9
Strongly Disagree	1	4.1	4.1	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.12 shows that 15 respondents equal to 62.5% observed strongly agree, 4 respondents equal to 16.7% agreed, 4 respondents equal to 16.7% disagreed and 1 respondent equal to 4.1% strongly disagreed. The results imply that majority of the respondents 19 either agreed or strongly agreed with the statement the ability to supply products/execute the construction works and commitment is crosschecked in order to enhance performance of public building construction. The results concurred with the results of Iles (2017).

4.4.3 Whether the speed and time to supply/execute the construction works is key factor in selection in order to enhance performance of public building construction.

Table 4.13: The speed and time to supply/execute the construction works is key factor in selection in order to enhance performance of public building construction.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	16	66.7	66.7	66.7
Agree	4	16.7	16.7	83.4
Neutral	0	0	0	0
Disagree	2	8.3	8.3	91.7
Strongly Disagree	2	8.3	8.3	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.13 shows that 16 respondents equal to 66.7% observed strongly agree, 4 respondents equal to 16.7% agreed, 2 respondents equal to 8.3% disagreed and 2 respondents equal to 8.3% strongly disagreed. The results implied that majority of the respondents 20 either

agreed or strongly agreed that the speed and time to supply/execute the construction works is key factor in selection in order to enhance performance of public building construction. The findings were similar to the results of Kakwezi & Nyeko (2019).

4.4.4 Whether the public accountability of vendor/contractor is key factor in selection in order to enhance performance of public building construction.

Table 4.14: The public accountability of vendor/contractor is key factor in selection in order to enhance performance of public building construction.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	2	8.3	8.3	8.3
Agree	15	62.6	62.6	70.9
Neutral	0	0	0	70.9
Disagree	5	20.8	20.8	91.7
Strongly Disagree	2	8.3	8.3	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.14 show that 2 respondents equal to 8.3% observed strongly agree, 15 respondents equal to 62.6% agreed, 5 respondents equal to 20.8% disagreed and 2 respondents equal to 8.3% strongly disagreed. The findings differed with the results of Kakwezi & Nyeko (2019) who found that the public accountability of vendor/contractor is not key factor considered in procurement process.

4.4.5 Whether the quality level of the materials to be supplied/works to be executed is always considered in selection in order to enhance performance of public building construction

Table 4.15: The quality level of the materials to be supplied/works to be executed is always considered in selection in order to enhance performance of public building construction

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	4	16.7	16.7	16.7
Agree	4	16.7	16.7	33.4
Neutral	3	12.5	12.5	45.9
Disagree	10	41.6	41.6	87.5
Strongly Disagree	3	12.5	12.5	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.15 show that 4 respondents equal to 16.7% observed strongly agree, 4 respondents equal to 16.7% agreed, 3 respondents equal to 12.5% remained neutral, 10 respondents equal to 41.6% disagreed and 3 respondents equal to 12.5 strongly disagreed. The findings were similar to those of Kawina, R. C. (2019).

4.4.6 Mean and Standard Deviation of the statements on effects of procurement selection criteria on performance of public building construction

The mean and standard deviation was computed and the Table 4.16 shows the results.

Table 4.16: Mean and Standard Deviation

Statement	N	Mean	Standard Deviation
Experience of a vendor/contractor is considered to increase performance of public building construction	24	3.21	0.11
The ability to supply products/execute the construction works and commitment is crosschecked in order to enhance performance of public building construction.	24	3.11	0.70
The speed and time to supply/execute the construction works is key factor in selection in order to enhance performance of public building construction.	24	2.82	1.40
The public accountability of vendor/contractor is key factor in selection in order to enhance performance of public building construction.	24	2.55	1.60
The quality level of the materials to be supplied/works to be executed is always considered in selection in order to enhance performance of public building construction	24	1.78	0.17

Source: Researcher (2022)

The findings on Table 4.16 show that statements: Experience of a vendor/contractor is considered to increase performance of public building construction had mean score of 3.21 which meant the statement was observed averagely. The ability to supply products/execute the construction works and commitment is crosschecked in order to enhance performance of public building construction had mean score of 3.11 which meant the statement was observed averagely. The speed and time to supply/execute the construction works is key factor in selection in order to enhance performance of public building construction had mean score of 2.82 which meant the statement was observed averagely. The public accountability of vendor/contractor is key factor in selection in order to enhance performance of public building construction had mean score of 2.55 which meant that the statement was observed in low manner. The quality level of the materials to be supplied/works to be executed is always considered in selection in order to enhance performance of public building construction had mean score of 1.78 which meant the statement was observed in a very low manner.

4.5 Effects of procurement contract monitoring on performance of public building construction

In this objective, statements on procurement contract monitoring were given to the respondents and asked to indicate how they agreed or disagreed with them in affecting performance of public building construction at MEVT. The response scale for the questions was: 1= Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree

4.5.1 Supply/construction schedule is followed up to ensure performance of public building construction

Table 4.17: Supply/construction schedule is followed up to ensure performance of public building construction

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	2	8.3	8.3	8.3
Agree	14	58.4	58.4	66.7
Neutral	2	8.3	8.3	75
Disagree	4	16.7	16.7	91.7
Strongly Disagree	2	8.3	8.3	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.17 show that 2 respondents equal to 8.3% observed strongly agree, 14 respondents equal to 58.4% agreed, 2 respondent equal to 8.3% remained neutral, 4 respondents equal to 16.7% disagreed and 2 respondents equal to 8.3% strongly disagreed. The results implied that majority of the respondents 16 either agreed or strongly agreed with the statement supply/construction schedule is followed up to ensure performance of public building construction. The results concur with the results of King’oo & Muli (2019).

4.5.2 Whether performance reviews are done often to increase performance of public building construction

Table 4.18: Performance reviews are done often to increase performance of public building construction

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	3	12.5	12.5	12.5
Agree	4	16.7	16.7	29.2

Neutral	0	0	0	29.2
Disagree	7	29.2	29.2	58.4
Strongly Disagree	10	41.6	41.6	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.18 show that 3 respondents equal to 12.5% observed strongly agree, 4 respondents equal to 16.7% agreed, 7 respondents equal to 29.2% disagreed and 10 respondents equal to 41.6% strongly disagreed. The results implied that majority of the respondents 17 either disagreed or strongly disagreed with the statement performance reviews are done often to increase performance of public building construction. The results were not similar to findings of Mohamed *et al.* (2018) but were in support of the results of Mrope (2018).

4.5.3 Whether payment is only done for verified work in order to guarantee performance of public building construction

4.19: Payment is only done for verified work in order to guarantee performance of public building construction

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	2	8.3	8.3	8.3
Agree	10	41.7	41.7	50
Neutral	1	4.2	4.2	54.2
Disagree	7	29.2	29.2	83.4
Strongly Disagree	4	16.6	16.6	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.19 show that 2 respondents equal to 8.3% observed strongly agree, 10 respondents equal to 41.7% agreed, 1 respondent equal to 4.2% remained neutral, 7 respondents equal to 29.2% disagreed and 4 respondents equal to 16.6% strongly disagreed. The results implied that majority of respondents 12 either agreed or strongly agreed with the statement Payment is only done for verified work in order to guarantee performance of public building construction. However, on the other hand 11 respondents either disagreed or strongly disagreed with the statement. These results painted a picture of the statement is almost half observed and half not observed.

4.5.4 Whether quality of material delivered/executed works is always checked to enhance performance of public building construction

The researcher probed whether quality of material delivered/executed works is always checked

to enhance performance of public building construction. The table 4.20 shows the results.

Table 4.20 Quality of material delivered/executed works is always checked to enhance performance of public building construction

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	2	8.3	8.3	8.3
Agree	5	20.9	20.9	29.2
Neutral	12	50	50	79.2
Disagree	2	8.3	8.3	87.5
Strongly Disagree	3	12.5	12.5	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.20 show that 2 respondents equal to 8.3% observed strongly agree, 5 respondents equal to 20.9% agreed, 12 respondents equal to 50% remained neutral, 2 respondents equal to 8.3% disagreed and 3 respondents equal to 12.5% strongly disagreed. The results implied that there was no clear confirmation of whether observed or not from the respondents about this statement because only 7 respondents either agreed or strongly agreed and having 5 respondents either disagreeing or strongly disagreeing. Most of the respondents remained non committal.

4.5.5 Whether nature of monitoring is defined to enhance performance of public building construction

Table 4.21: Nature of monitoring is defined to enhance performance of public building construction

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	1	4.2	4.2	4.2
Agree	3	12.5	12.5	16.7
Neutral	0	0	0	16.7
Disagree	4	16.7	16.7	33.4
Strongly Disagree	16	66.6	66.6	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.21 show that 1 respondent equal to 4.2% observed strongly agree, 3 respondents equal to 12.5% agreed, 4 respondents equal to 16.7% disagreed and 16 respondents equal to 66.6% strongly disagreed. The results implied that majority of the respondents 20 either disagreed or strongly disagreed with the statement nature of monitoring is defined to enhance

performance of public building construction. The results were similar to the findings of Kimundu & Moronge (2019).

4.5.6 Mean and Standard Deviation of the statements on effects of procurement contract monitoring on performance of public building construction

Table 4.22: Mean and Standard Deviation

Statement	N	Mean	Standard Deviation
Supply/construction schedule is followed up to ensure performance of public building construction	24	2.61	0.31
Performance reviews are done often to increase performance of public building construction	24	1.64	0.97
Payment is only done for verified work in order to guarantee performance of public building construction	24	3.24	1.47
Quality of material delivered/executed works is always checked to enhance performance of public building construction	24	2.52	1.58
Nature of monitoring is defined to enhance performance of public building construction	24	1.81	0.44

Source: Researcher (2022)

The Table 4.22 shows that statements: Supply/construction schedule is followed up to ensure performance of public building construction had a mean score of 2.61 which meant the statement was observed averagely, performance reviews are done often to increase performance of public building construction had a mean score of 1.64 which meant the statement was observed in very low manner. Payment is only done for verified work in order to guarantee performance of public building construction had a mean score of 3.24 which meant the statement was observed averagely, quality of material delivered/executed works is always checked to enhance performance of public building construction had a mean score of 2.52 which meant the statement was observed in low manner, nature of monitoring is defined to enhance performance of public building construction had a mean score of 1.81 which meant the statement was observed in a low manner. The results implied the statements were observed differently some averagely while others low. The results reflected the findings of Anane *et al.* (2019).

4.6 Performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar

In order to check the performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar, statement on performance of public building construction were given to the respondents and asked to indicate how they agreed or disagreed with the statements on affecting performance of public building construction at MEVT. The response scale for the questions was: 1= Strongly Agree, 2= Agree, 3= Neutral, 4= Disagree, 5 = Strongly

Disagree.

4.6.1 Whether the cost of public building constructions at MEVT always display value for money

The researcher probed whether the cost of public building constructions at MEVT always display value for money. The results are shown in Table 4.23.

Table 4.23: The cost of public building constructions at MEVT always display value for money

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	2	8.4	8.4	8.4
Agree	4	16.6	16.6	25
Neutral	4	16.6	16.6	41.6
Disagree	10	41.7	41.7	83.3
Strongly Disagree	4	16.7	16.7	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.23 show that 2 respondents equal to 8.4% observed strongly agree, 4 respondents equal to 16.6% agreed, 4 respondent equal to 16.6% remained neutral, 10 respondents equal to 41.7% disagreed and 4 respondents equal to 16.7% strongly disagreed. The results implied that majority of the respondents 14 either disagreed or strongly disagreed with the statement, the cost of public building constructions at MEVT always display value for money.

4.6.2 Whether the public building constructions at MEVT are always completed on time

Table 4.24: The public building constructions at MEVT are always completed on time

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	4	16.7	16.7	16.7
Agree	2	8.3	8.3	25
Neutral	3	12.5	12.5	37.5
Disagree	13	54.2	54.2	91.7
Strongly Disagree	2	8.3	8.3	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.24 show that 4 respondents equal to 16.7% observed strongly agree, 2 respondents equal to 8.3% agreed, 3 respondents equal to 12.5% remained neutral, 13 respondents equal to 54.2% disagreed and 2 respondents equal to 8.3% strongly disagreed. The results implied that majority of the respondents 15 either disagreed or strongly disagreed with the statement the public building constructions at MEVT are always completed on time.

4.6.3 Whether public building constructions at MEVT are always quality

Table 4.25: Public building constructions at MEVT are always quality

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	3	12.5	12.5	12.5
Agree	3	12.5	12.5	25
Neutral	2	8.3	8.3	33.3
Disagree	14	58.4	58.4	91.7
Strongly Disagree	2	8.3	8.3	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.25 show that 3 respondents equal to 12.5% observed strongly agree, 3 respondents equal to 12.5% agreed, 2 respondents equal to 8.3% remained neutral, 14 respondents equal to 58.4% disagreed and 2 respondents equal to 8.3% strongly disagreed. The results implied that majority of the respondents 16 either disagreed or strongly disagreed with the statement public building constructions at MEVT are always quality.

4.6.4 Public building constructions at MEVT are always satisfactory

Table 4.26: Public building constructions at MEVT are always satisfactory

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly agree	5	20.8	20.8	20.8
Agree	6	25	25	45.8
Neutral	1	4.2	4.2	50
Disagree	10	41.7	41.7	91.7
Strongly Disagree	2	8.3	8.3	100.0
Total	24	100.0	100.0	

Source: Researcher (2022)

The results on Table 4.26 show that 5 respondents equal to 20.8% observed strongly agree, 6 respondents equal to 25% agreed, 1 respondent equal to 4.2% remained neutral, 10 respondents equal to 41.7% disagreed and 2 respondents equal to 8.3% strongly disagreed. The results implied that the respondents were divided almost in the middle on the agreement or disagreement whether the statement public building constructions at MEVT are always satisfactory.

4.6.5 Mean and standard deviation of the statements on performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar

Table 4.27: Mean and standard deviation

Statement	N	Mean	Standard Deviation

The cost of public building constructions at MEVT are always display value for money	24	3.11	0.54
The public building constructions at MEVT are always completed on time	24	1.84	0.17
Public building constructions at MEVT are always quality	24	2.15	1.22
Public building constructions at MEVT are always satisfactory	24	2.66	1.8

Source: Researcher (2022)

The findings on Table 4.27 show that statements: The cost of public building constructions at MEVT are always display value for money had mean score of 3.11 which meant that the statement was observed averagely, the public building constructions at MEVT are always completed on time had mean score of 1.84 which meant that the statement was observed in a low manner, public building constructions at MEVT are always quality had mean score of 2.15 which meant that the statement was observed in low manner, public building constructions at MEVT are always satisfactory had mean score of 2.66 which meant that the statement was observed averagely. The finding collaborated with the results of Jackson and Ombui (2018).

4.7 Regression Analysis

Regression analysis was done to assess the strength of the relationship between the dependent variable and predictor variables as well as the importance of the predictors to the relationship.

Table 4.28: Regression Coefficient

Model	Unstandardized Coefficients	Standardized Coefficients		T	Sig.
	B	Std. Error	Beta		
(Constant)	.104	.143		.725	.469
1 Procurement planning	.592	.086	.575	6.894	.000
Procurement selection criteria	.373	.040	.470	2.571	.001
Procurement contract monitoring	.307	.112	.334	2.295	.001
a. Dependent Variable: Performance of public building construction					

Source: Researcher (2022)

The regression equation was $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \epsilon$, therefore it becomes $Y = 0.104 + 0.592X_1 + 0.373X_2 + 0.307X_3$

The beta values were positive and thus implied positive relationship of the predictor variables with the dependent variable. This means that increase of independent variable (predictors) leads to increase of the dependent variable (performance of public building construction). The results

in Table 4.28 show that, the increase of one unit of procurement planning increases performance of public building construction by 59.2% with significant of 0.000, $P < 0.05$. Thus, the study rejected the null hypothesis; H_0 : *There is no significant effect of procurement planning on performance of public building construction projects* and accepted the alternative hypothesis; H_a : *There is significant effect of procurement planning on performance of public building construction projects*

Secondly, the results show that the increase of one unit of procurement selection criteria increases performance of public building construction by 37.3% with significant of 0.001, $P < 0.05$. Thus, the study rejected the null hypothesis; H_0 : *There is no significant effect of procurement selection criteria on performance of public building construction projects* and accepted the alternative hypothesis; H_a : *There is significant effect of procurement selection criteria on performance of public building construction projects*.

Thirdly the results show that the increase of one unit of procurement contract monitoring increases performance of public building construction 30.7% with significant of 0.001, $P < 0.05$. Thus, the study rejected the null hypothesis; H_0 : *There is no significant effect of procurement contract monitoring on performance of public building construction projects* and accepted the alternative hypothesis; H_a : *There is significant effect of procurement contract monitoring on performance of public building construction projects*. The results concur with the results of Munyawera *et al.* (2018) who found that procurement planning practices had a significant role on performance of organizations. However, the results were different from the findings of Munyimi (2019) who found that without integrity entrenchment in the procurement process all the aspects would have little effect on the performance of projects whose items are being procured. The researcher supported the findings of Munyimi (2019) by noting that procurement planning, procurement selection criteria and procurement contract monitoring can be done excellently however the results of these aspects can highly affected by lack of integrity thus causing poor performance of the project whose items are being secured.

4.8 Qualitative Analysis

Qualitative analysis was done with aims to increase the overall understanding of the quality, characteristics and meanings of the topic at hand. The advantage of this was to concentrate more on the topic and gather meaningful data to supplement the quantitative analysis (Mugenda and Mugenda, 2003). To make sure the results are within the set objectives the themes corresponded to the questions in the interview.

Question One: Is procurement planning important towards performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar? Explain in what ways procurement planning affect MEVT public building construction? The question was posed to the respondents in order to know if procurement planning is important towards performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar. The respondents agreed that procurement planning is important. For example Respondent R1 said:

Procurement planning is very important. Procurement planning is the roadmap to implementation of MEVT projects. Effective planning leads to successful public building construction.

Also respondent R2 said:

Yes it is important. There is no procurement without planning. If there is no planning you will

not know when to find consultant, when to find contractor etc. Therefore the success of MEVT depends on the proper procurement planning.

Respondent R5 said:

Yes it is important because you cannot undertake any construction project successfully without planning. Planning gives you an overview of the project issues such as budget, time and performance standards.

These results concurred with the findings of Ogwang and Waweru (2017) who found that procurement planning had influence on performance of the project that the procurement was being secured.

Question Two: Do procurement selection criteria affect the performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar? State some of the effects you know. In this question the respondents were in agreement that procurement selection criteria affect the performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar. For instance respondent R4 said:

Yes. If procurement selection criteria are not set properly, there may be delays in project implementation. For example if complicated criteria are set for simple works that can be done by local artisans, it will cause delays in getting proper contractor as well as increase cost of the project.

Respondent R5 said:

Yes. Because if selection criteria are poorly defined, you may end up with the contractor that has lower standards or cannot perform according your standards.

Also R1 said:

Yes. When the criteria are very weak for a serious task, the Ministry may end up with contractor with low capacity. Likewise when the criteria are very high compared to the actual work, the MEVT may get very expensive and complicated contractor for small work. No value for money.

The findings showed that procurement selection criteria affect the performance of public building construction in the Ministry of Education and Vocational Training and were similar to the finding of Kakwezi &Nyeko (2019).

Question Three: Do you think procurement contract monitoring affects performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar? Explain giving examples of effects. The question wanted to know if procurement contract monitoring affects performance of public building construction in the Ministry of Education and Vocational Training. The respondent R1 said:

Yes, procurement contract monitoring affects performance of projects in MEVT because if enough effort is not made on monitoring onsite and contract, the Ministry may find it too late to rectify mistakes. This will cause poor quality work, delays and variations.

Respondent R7 said:

Yes, examples if onsite inspection is not done properly tests may not be done; works may be performed below standard/ specifications.

The results were in agreement with the results of Kanchana *et al.*, (2018) who found that procurement contract monitoring is a factors affecting contract management in construction industry.

Question Four: In your view do you think building construction projects have performed well in the Ministry of Education and Vocational Training, Zanzibar? If yes state in what aspect? In this question the researcher wanted to know if building construction projects have performed well in the Ministry of Education and Vocational Training, Zanzibar. The respondents seemed to observe yes. However, the explanation indicated that there were some issues or that the performance was not 100%. For example respondent R2 said:

Yes to the maximum the projects perform well, however due to unforeseen or unpredicted works there are needs for increasing or changing the scope of work that lead to additional costs and delays. Sometimes delays in payment lead to delay in completion of construction works

Also R6 said

Yes, but not 100% because sometimes due to carelessness of supervisors there is no effective supervision that leads the contractor to underperform. It becomes difficult to rectify defects on time, this leads to delays and additional cost.

Question Five: In the MEVT relevant legal jurisdiction is explained before procurement process to increase performance of public building construction? If yes explain the extent.

This was the last question and theme and the researcher wanted to know if relevant legal jurisdiction is explained before procurement process to increase performance of public building construction. The respondents seemed to agree that relevant legal jurisdiction is explained before procurement process to increase performance of public building construction. Example respondent R4 said:

Yes, before procuring any construction contractor, discussion is held to identify size of the project, capacity of contractor to perform the project, cost of the project etc. Then procurement plan is set and followed out throughout the project period.

Respondent R7 said;

Yes, all projects are done according to plan prepared by following guidelines of Zanzibar Public Procurement and Disposal of Public Asset Act No. 11 of 2016

The results differed with the findings of Kagume & Wamalwa (2018) who found that sometimes relevant legal jurisdiction is not explained before procurement process leading to poor performance of public construction.

5. SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of findings, conclusion and recommendations of the study based on the study objectives. The chapter also highlights suggested areas for further research.

5.2 Summary

The specific objectives of the study were to: analyze the effects of procurement planning on performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar, assess how procurement selection criteria affect performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar and analyze the effects of procurement contract monitoring on performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar.

The findings showed that procurement planning statements, procurement selection criteria statements and procurement contract monitoring statements had varied effects on performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar. The regression analysis found that, the increase of one unit of procurement planning increases performance of public building construction by 59.2%, the increase of one unit of procurement selection criteria increases performance of public building construction by 37.3% and the increase of one unit of procurement contract monitoring increases performance of public building construction 30.7%. All variables were significant at 0.000 and 0.001, $P < 0.05$.

5.3 Conclusion

The study concluded that procurement planning, procurement selection criteria and procurement contract monitoring statements affect performance of public building construction. The study concluded that effects are significant. The conclusion concurs with the results of Kakwezi & Nyeko (2019) who concluded that procurement processes affected performance of projects. This conclusion was also supported by the conclusions of Munyimi (2019) who concluded that quality controls in procurement should put in the procurement process in order to enhance performance of projects.

5.4 Recommendations

The study had the following recommendations:

- i. The Ministry of Education and Vocational Training, Zanzibar to increase procurement planning by devising efficient procurement planning standards, these would increase performance of public building construction.
- ii. The Ministry of Education and Vocational Training, Zanzibar to have a stringent procurement selection criteria in order to have the best contractor or vendor thus increasing performance of public building construction.
- iii. The Ministry of Education and Vocational Training to increase procurement contract monitoring by employing staff with skills of monitoring and evaluation of projects. This will enhance performance of public building construction.

5.5 Areas of Further Studies

The study focused on effects of procurement procedures on performance of public building construction and concentrated on procurement planning, procurement selection criteria procurement contract monitoring. Other studies are required in other areas of procurement process such as negotiating terms, inspecting goods and record keeping of all the steps in the process and see if similar results will be obtained.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

Dear Sir/ Madam,

I am a student pursuing Master degree in Project Management at Open University of Tanzania. I am conducting a study on **“EFFECTS OF PROCUREMENT PROCEDURES ON PERFORMANCE OF PUBLIC BUILDING CONSTRUCTION IN THE MINISTRY OF EDUCATION AND VOCATIONAL TRAINING, ZANZIBAR”**. This study is purely for academic purposes. Your views are crucial for the success of this study.

Please complete to the best of your ability the questionnaire enclosed here in following the instruction given after each item and return your completed questionnaire to the researcher.

Your contribution will be highly appreciated and the information you are going to provide will be treated confidential and will be applied **only** for the purpose of writing academic report. **(Do not write your name in this paper)**

Please tick the correct answer OR, write appropriately your best answers to the questions.

Part One: Demographics

1. What is your gender?

Male	Female

2. Select your age group.

18-30 years	30-40 years	40-50 years	50-60 years	Over 60 years
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3. Select your highest academic qualification?

Diploma Level	University Degree	Post Graduate
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Part Two: Effects of procurement planning on performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar

4. Aspects on procurement planning were given to the respondents and asked to indicate how affected performance of public building construction at MEVT.

The response scale for the questions is as below:

1= Strongly Agree, 2= Agree, 3= Neutral, 4= Disagree, 5 = Strongly Disagree

S/N	Aspect	S	A	N	D	S D
1	Procurement needs and requirements are done effectively to increase performance of public building construction					

2	Roles and responsibilities are set before procurement process starts to foster performance of public building construction					
3	Relevant legal jurisdiction is explained before procurement process to increase performance of public building construction					
4	The cost is scrutinized for each procurement process to foster performance of public building construction					
5	Time limit is set for each procurement process to foster performance of public building construction					

Part Three: Effects of procurement selection criteria on performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar.

5. Aspects on procurement selection criteria were given to the respondents and asked to indicate how affected performance of public building construction at MEVT.

The response scale for the questions is as below:

1= Strongly Agree, 2= Agree, 3= Neutral, 4= Disagree, 5 = Strongly Disagree

S/N	Aspect	S A	A	N	D	S D
1	Experience of a vendor/contractor is considered to increase performance of public building construction					
2	The ability to supply products/execute the construction works and commitment is crosschecked in order to enhance performance of public building construction.					
3	The speed and time to supply/execute the construction works is key factor in selection in order to enhance performance of public building construction.					
4	The public accountability of vendor/contractor is key factor in selection in order to enhance performance of public building construction.					
5	The quality level of the materials to be supplied/works to be executed is always considered in selection in order to enhance performance of public building construction					

Part Four: Effectsof procurement contract monitoring on performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar

6. Aspects on procurement contract monitoringwere given to the respondents and asked to indicate how affected performance of public building construction at MEVT

The response scale for the questions is as below:

1= Strongly Agree, 2= Agree, 3= Neutral, 4= Disagree, 5 = Strongly Disagree

S/N	Aspect	S A	A	N	D	S D
1	Supply/construction schedule is followed up to ensure performance of public building construction					
2	Performance reviews are done often to increase performance of public building construction					
3	Payment is only done for verified work in order to guarantee performance of public building construction					
4	Quality of material delivered/executed works is always checked to enhance performance of public building construction					
5	Nature of monitoring is defined to enhance performance of public building construction					

Part Five:Performance of public building constructionin the Ministry of Education and Vocational Training, Zanzibar

7. Aspects on Performance of public building constructionwere given to the respondents and asked to indicate how affected performance of public building construction at MEVT

The response scale for the questions is as below:

1= Strongly Agree, 2= Agree, 3= Neutral, 4= Disagree, 5 = Strongly Disagree

S/N	Aspect	S A	A	N	D	S D
1	The cost of public building constructions at MEVT are always display value for money					
2	The public building constructions at MEVT are always completed on time					
3	Public building constructions at MEVT are always quality					
4	Public building constructions at MEVT are always satisfactory					

APPENDIX II: INTERVIEW GUIDE

- 1) Is procurement planning important towards performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar? Explain in what ways procurement planning affect MEVT public building construction?
- 2) Do procurement selection criteria affect the performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar? State some of the effects you know.
- 3) Do you think procurement contract monitoring affects performance of public building construction in the Ministry of Education and Vocational Training, Zanzibar? Explain giving examples of effects.
- 4) In your view do you think building construction projects have performed well in the Ministry of Education and Vocational Training, Zanzibar? If yes state in what aspect?
- 5) In the MEVT Relevant legal jurisdiction is explained before procurement process to increase performance of public building construction? If yes explain the extent.