Procurement Contract Management and Procurement Performance in Parastatal Organisations in Tanzania

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ABSTRACT
Despite a lot of initiatives being undertaken by the United Republic of Tanzania to improve public procurement, the performance of many of the contracted projects is not satisfactory since a significant amount of public money is lost through procurement contract management. The aim of this study was to determine the role of procurement contract management in Tanzania's parastatal entities. The study examined the impact of contract preparation, the competence of the contract management team, and the contract allocated budget on procurement performance and made recommendations for improving it. The study used a quantitative approach with an explanatory research design whereby data were collected by using a close-ended questionnaire. Simple random sampling technique was used to select 241 respondents who were heads of departments from the 93 parastatal organizations. The data were analysed descriptively by computing descriptive statistics and inferentially using a multiple regression model. The findings indicated that contract preparation, competence of contract management teams, and contract allocated budget had significant positive relationships with procurement performance at p<0.05. The study recommends that parastatal organizations' management should ensure that there is proper contact preparation, each contract being managed by a competent contract management team, and there is enough budget allocation for every project before it is started.

Keywords: Contract preparation, competence of contract management team, contract budget, procurement performance.

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1.0 Introduction

Contract management is a critical component of the procurement process. It includes all activities related to contract drafting, review, revision, and analysis, as well as system implementation and software use (Wafula & Makokha, 2017). It ensures that each party to the contract performs its duties and responsibilities in accordance with the contract agreement (Lowe, 2007; Becit & Görener, 2019). It forms a basis for successful performance of the procurement project by observing that the contract is completed according to plan, specification, budget, and schedule (Muhammad, Saoula, Issa, & Ahmed, 2019). Bakr (2015) indicates that, for procurement contracts to be implemented as planned and provide the organization with the desired benefits, several factors must be met by both the procuring entity (client) and the contractor/service provider. On the procuring entity’s side, consideration must be given to factors such as a properly drafted contract document, an adequate allocated budget, competent and skilled contract managers, top management support, and a more favourable supplier relationship (Rendon, 2010; Mchopa, 2015). On the contractor's side, factors such as qualified and skilled personnel, adequate equipment and machinery, and a sound financial position are critical predetermined factors for successful implementation of procurement contracts (Bakr, 2015).

For effective implementation of the procurement contract, contract preparation is a paramount activity for the overall performance of the procurement process, right from the preparation of specifications of the requirements, clear evaluation criteria, clauses for protecting the procuring entity if things go wrong, and having a contract management plan are crucial aspects in the preparation stage (Love, Mistry & Davis, 2010; Oluka & Basheka, 2014; Hajek, Vrbova, and Kolis, 2017). Considering the importance of having an adequate and good contract document, the United Republic of Tanzania (URT) required all drafted contracts to be vetted by appropriate authorities as stipulated by the Public Procurement Act, 2011 and Public Procurement Regulations, 2013 (PPA, 2011 and PPR, 2013). Also, having a competent and skilled contract management team is a crucial aspect for effective contract management (Rendon, 2008). It is used as a monitoring mechanism to supervise the contractor/supplier's performance in order to minimize information symmetry and conflict of interest on their side (Matto, Ame, & Nsimbila, 2021). As revealed by Bakr (2015) in Iraq, skills and experience possessed by the contract management team are among the important factors for efficient contract management. Also, the PPR, 2013 reg. 252 (1, 2), insists that a procuring entity should appoint a contract manager for every contract who will be responsible for its supervision. Despite the legal requirement for having a qualified and skilled contract manager, numerous studies reveal that many procurement contracts were
implemented without a qualified contract manager, and as a result, the procuring entities were unable to obtain value for money from the procured projects (Oluka & Basheka, 2014).

Having an adequate allocated budget for the implemented projects is one of the paramount issues in the procurement process. A procuring entity is required to ensure that there is enough allocated budget before engaging in any procurement (PPR, 2013). However, studies show that many procuring entities enter into procurement contracts without having sufficient funds, resulting in PE failures to pay contractors or suppliers at the agreed time as a result of penalties and disputes between the parties (Oluka & Basheka, 2014; Durdyev, Ismail & Bakar, 2011). Olusegun and Michael (2011) argue that insufficient funds result in late payments to suppliers and contractors, which ultimately results in cost overruns in construction projects. Late payment to the supplier disturbs the supplier’s cash flow, which definitely affects business operations (Keng et al., 2019). Also, failure to pay a supplier on time has resulted in many suppliers quoting high prices in anticipation of the procuring entity delaying payment for the procurement, according to the Controller Audit General (CAG) report (CAG, 2020).

By realizing the importance of better procurement performance and the need to avoid the mismanagement of public funds due to poor contract management, the URT has taken a lot of initiatives to address this mismanagement. The procuring entity should ensure that there are sufficient funds allocated for the project before the procurement process begins. All contracts must be vetted by appropriate authorities; the contract must be managed by a competent contract management team; the contract variations must be approved by appropriate authorities (PPA, 2011; PPR, 2013). However, besides those undertaken efforts, several CAG and Public Procurement Regulatory Authority (PPRA) reports show that public funds are still wasted due to ineffective contract management (CAG, 2021; PPRA, 2020). For instance, the CAG report of 2020 revealed that procuring entities procured goods worth Tanzania shillings (TZS) 1,485,976,283 without conducting inspections, as well as instances of cost overruns on consultancy services worth TZS 13,262,485,818. There were goods paid for but not delivered totalling TZS 6,826,831,027; delays in the constructing of works, the supply of goods, and the provision of services totalling TZS 69,823,269,658; inadequate supervision of the construction of various courts; money was wasted totalling TZS 40,950,961,181; and, finally, contracts totalling TZS 14,578,220,387 were executed without performance securities as required (CAG, 2020).
Due to the vexing information received each year from various CAG and PPRA reports regarding the waste of scarce public funds, a number of scholars (Oluka & Basheka, 2014; Matto et al., 2021; Mchopa, 2015; Rashel, 2017) have been attracted to study the effect of contract management on procurement performance and determine possible measures of improvement. For instance, Mchopa (2015) and Matto at al. (2021) explored how to integrate contract management practices into Tanzanian public procurement to obtain value for money. Elsewhere in the world, studies by Oluka and Basheka (2014), Bakr (2015), Wafula and Makokha (2017), and Muhammad (2019) assessed other factors affecting procurement contract management in public procurement. While studies by Mchopa (2015) and Matto et al. (2021) used cost, time, and quality control as independent variables, measuring value for money; studies conducted presented experiences from the central government and LGAs, and a scanty amount of literature have been observed with regard to procurement contract management in parastatal organizations. This study was intended to fill in those identified gaps by assessing the role of procurement contract management on the performance of the procurement function of Tanzania parastatal entities. Specifically, contract preparation, competence of the contract management team, and contract allocated budget were used as independent variables to establish the relationship with procurement performance.

2.0 Theoretical Underpinnings

This study is grounded in the principal-agent theory. The theory explains the relationship between the principal and the agent: the principal hires the agent to carry out work on the principal's behalf (Jensen and Meckling, 1976; Moe, 1984). The theory assumes that both principal and agent are self-interested which lead to conflict of interest, and there is an information asymmetry that gives the agent discretionary authority (Eisenhardt, 1989). Scholars have proposed a number of monitoring mechanisms that can be used by the principal to mitigate the agent's interest behavioural patterns, like having a governing body, internal auditing unit, contract management team, and the like (Panda and Leepsa, 2017; Massawe, 2020; Matto et al., 2021). In this study, the principal is the procurement entity and the agent is the contractor or supplier who has been hired by the procuring entity to execute a specific task. According to this study, the contract management team has been used as a monitoring mechanism that the procuring entity might use to monitor the agent when executing the contracted assignment to ensure that the agent performed as agreed (Jensen & Meckling, 1976; Panda & Leepsa, 2017). Therefore, this theory is very useful to this study as it shows to what extent the contractor's divergent interests might affect the performance of the organization and the importance of having a contract management team that minimizes the risks associated with the contractor or supplier when executing the contract.
2.1 Conceptual Framework
According to Colin (2010), a conceptual framework is a group of broad concepts and principles that are taken from pertinent fields of study and used to organize a subsequent presentation. The conceptual framework that underlies this study stipulates that procurement performance is a dependent variable, while contract preparation, contract management team competence, and contract budget are independent variables. The conceptual framework for the study is depicted in Figure 1.

![Conceptual Framework Diagram]

3.0 Methodology
3.1 Data collection and analysis
The research design of this study was an explanatory research design aiming to establish the relationship between the independent and dependent variables (Saunders, Lewis, & Thornhill, 2012). Parastatal organizations were chosen based on recent CAG and PPRA reports that shown that there had a lot of incidences of procurement malpractice in parastatal organizations in Tanzania. The study purposefully used 93 parastatal organizations located in the Dar es Salaam region, ensuring the findings' generalizability, because approximately 70% (103) of all parastatal organizations in Tanzania are located there (PPRA, 2019). The study used a population of 712 heads of user departments, from which 258 respondents were chosen using a simple random sampling technique. The sample size was...
calculated using Yamane's Formula (1967), as shown below hereunder: 

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

Where: \( n \) = the required sample, \( N \) = target population, i.e., 712 e = marginal error i.e., 5%.

\[ n = \frac{172}{1+(172)(0.05)^2} \]

\[ n = 258. \]

Out of the 258 questionnaire copies which were distributed, 241 were returned and analysed. The questionnaire included a 5-point Likert scale on which 1 represented strongly disagree and 5 represented strongly agree. For each item and construct, the means and standard deviations of the scores were computed. Additionally, exploratory factor analysis (EFA) was used to determine whether previously discovered elements defined a specific construct. The data were analysed using multiple linear regression, as part of which reliability, data validity, multicollinearity test, sample adequacy test, and model fit test were also determined.

### 3.2 Reliability test

The reliability test was conducted using Cronbach's alpha coefficient, as recommended by Sekaran and Bougie (2009). According to the authors, a Cronbach's alpha score of 0.7 shows that the data collection tool is reliable. For this study, the reliability scores were as follows: contract preparation = .952; contract management team competence = .872; allocated budget = .938; and procurement performance = .884. Therefore, all variable instruments are reliable.

### 3.3 Multi-Collinearity Test Results

The multicollinearity of the independent variables was examined by using the level of tolerance and variance inflation factors. Hair, Black, Babin, and Anderson (2010) suggest that VIFs be less than 5 and tolerance levels be greater than 0.1. For this study, the results show that tolerance factors of 0.450, 0.403, and 0.369, respectively, indicate that the variables are not collinear. The VIF for the variables was less than 5 (2.221, 2.481, and 1.217, respectively), which is considered acceptable. Karl Pearson's coefficient of correlation was employed to determine the level of association between the variables. At a 95% level of confidence, it was shown that there was a significant positive association between all the variables (p = 0.05).

### 3.4 Kaiser-Meyer-Olkin (KMO) and Bartlett’s test

The study used Kaiser-Meyer-Olkin to examine the sampling adequacy. The result of Bartlett's test of sphericity had statistical significance (p = .000), and in the Kaiser-Meyer-Olkin test, the sampling adequacy value was 0.667, which is above the threshold value of 0.5 (Magasi, 2020), therefore supporting the factorability of the study's variables.
3.5 Multiple regression analysis
The study employed a multiple linear regression analysis model to investigate the causal effects and relationships between constructs, as it is known as the most appropriate technique for validating the causal effects between variables (Matto et al., 2021; Kariuki and Paul, 2019). The multiple linear regression model that was used is given as follows; \( Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \epsilon \). Where: \( Y = \) Procurement performance; \( \alpha = \) Constant of Regression; \( \beta = \) Beta Coefficients; \( X_1 = \) Contract preparation, \( X_2 = \) Competence of contract management team, \( X_3 = \) Contract budget and \( \epsilon = \) Error of Regression.

4.0 Findings and Discussion
4.1 Effect of Contract Preparation on Procurement Performance
To examine the extent to which contract implementation influenced procurement performance in parastatal organizations, respondents were requested to show their degree of agreement and disagreement with several statements. The respondents agreed that the contracts had specific and clear terms and conditions (mean 3.39). This means that all contract terms and conditions have been carefully drafted. This finding contradicts Oluka and Basheka’s (2014) findings, which indicate that there were no clear contract terms and conditions in Uganda, resulting in a great deal of variation and disputed experience in the implemented contracts. Moreover, respondents agreed that each implemented contract had a well-defined contract management plan (mean 3.34). This finding contradicts Rashel (2017), whose findings indicated that many local government authorities in Tanzania failed to implement contract management plans for the contracts they implemented. On the same point, respondents agreed that proper technical review of the requirements occurs prior to contract assignment (mean 3.40). This is consistent with the PPA's 2011 requirement that the contract document be vetted by the legal officer or Attorney General prior to being signed. This indicates that the procuring entities adhere to this statutory requirement. Finally, respondents disagreed that there is a system in place for regular assessment and evaluation of work/services (2.22). The findings corroborate Oluka and Basheka’s (2014) and CAG's 2020 report findings that many procuring entities failed to appoint contract managers to oversee contract implementation. As a result, contractors or service providers violate the terms and conditions of the contract. In general, these findings corroborate those by Mchopa (2015) and Matto et al. (2021) who found that efficient contract formation has a significant impact on the organization's ability to achieve value for money.

4.2 Effect of Competence of Contract Management Team
To examine the degree to which the competency of the contract management team influenced procurement performance in the parastatal organizations, the
respondents were requested to rate their degree of agreement with a number of statements. The respondents agreed that the contract management teams possessed the necessary skills for contract management (3.33). This contradicts Bakr (2015) whose findings indicated that one of the primary reasons for Iraq's poor contract management is a lack of skilled contract managers. Respondents further concurred that each member of the contract management team was aware of their respective responsibilities (3.32). This contradicts findings by Matto et al. (2021) who reported that in many procurement contracts, contract team members are not adequately briefed on their responsibilities. As well, respondents agreed that there were clear performance objectives and reporting lines (3.32). This contradicts Oluka and Bashuka’s (2014) finding that many contracts in Uganda lack clear objectives and reporting lines of performance. This results in delays and miscommunication among the contract management team members. Finally, respondents agreed that contract managers had delegated authority (3.32). This ensured that contract managers were not overburdened with activities related to all completed projects.

4.3 Effect of Contract Allocated Budget on Procurement Performance

In order to determine the degree to which the contract allocated budget affected the procurement performance in the parastatal organizations, respondents were requested to rate their agreement with a number of statements. The respondents disagreed that the organizations paid suppliers in accordance with the terms of the contracts (2.20). This finding is consistent with the CAG’s report (2021), which indicates that a significant number of procuring entities did not pay suppliers in accordance with contractual terms. Also, the respondents agreed that contract modifications are accomplished through the application of contractual provisions (3.88). This is in line with Oluka and Bashuka’s (2014) findings which revealed that contract variations are made in accordance with contractual terms in Uganda. According to respondents, PE always ensures that individual payments do not exceed the total cost (3.99). The respondents, on the other hand, disagreed that PE always ensures that regular interim payments are made based on general progress (2.22), a fact that had earlier been reported by Rashel (2017) that many local governments in Tanzania's PE failed to pay suppliers on time. Late payments to suppliers disrupt the supplier's cash flow, which has a direct impact on business operations (Keng et al., 2019). On a similar note, late payments to suppliers result in cost overruns due to penalties imposed by suppliers or contractors, which are borne by procuring entities (Rashel, 2017). The CAG made the same observation in the 2020 report regarding TZS 13,262,485,816 being a cost overrun on consultancy services paid to the German consultant, LAHMEYER GKW Consult GmbH, by the Ministry of Water.
Finally, the respondents agreed that PE always obtains payment security prior to executing a contract. However, this finding contradicts the CAG’s report (2020) which revealed that some procuring entities were engaged in contract implementation without requiring payment security, violating the requirement of PPA, 2011 sect 9. -(1), which states that the procuring entity shall require the successful tenderer to submit a performance security to ensure the contract's faithful performance and payment of all labourers, suppliers, mechanics, and subcontractors. By requiring payment security prior to engaging in contract implementation, the procuring entity ensures that its interests and the money intended to be paid to the supplier are protected.

4.4 Procurement Performance
The results show that, on average all items received the same mean score of 3.8, although the lowest number of complaints from user departments and the elimination of waste and damage received the highest mean score of 3.88, while timely delivery of procured goods/services, quality delivered goods/services, and cost reduction received the same mean score of 3.87. These findings concurred with the findings of Kariuki and Paul's (2019) who revealed that contract management has positive influence on county government procurement performance in Kenya. Furthermore, the findings are in line with Ogembo and Muturi’s (2019) findings who found that contract management has a positive effect on procurement performance in Kenya's Kisii County.

4.3 Inferential statistics
4.3.1 NOVA F test
The overall model fit was assessed using the ANOVA F test to determine whether it met the required statistical thresholds (Hair et al., 2010).

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>136.853</td>
<td>3</td>
<td>45.618</td>
<td>112.277</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>96.292</td>
<td>237</td>
<td>0.406</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>233.146</td>
<td>240</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results show that at the 95% confidence level, the p-value for the regression model F test was less than 0.05, indicating that the overall model fit was acceptable. The model’s conclusion was highly significant because the independent variables (competence, independence, and management support) teamed up to predict procurement performance.
4.3.2 Regression Model
Table 2 displays the summary results of the regression model.

Table 2: Regression model summary

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Adjusted R</th>
<th>R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.766a</td>
<td>0.587</td>
<td>0.582</td>
<td>0.63741</td>
<td>1.688</td>
</tr>
</tbody>
</table>

According to the results, the adjusted R squared was 0.587, indicating that contract preparation, the skill of the contract management team, and contract allocated budget could each account for about 58.7% of the change in procurement performance. Other variables that were not taken into account by the model could account for the remaining 41.3% variation in procurement performance.

4.3.3 Regression Model Result
The regression model results are presented in Table 3.

Table 3: Regression model result

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>0.303</td>
<td>0.324</td>
<td>.937</td>
<td>.</td>
</tr>
<tr>
<td>Contract preparation</td>
<td>0.344</td>
<td>0.123</td>
<td>0.173</td>
<td>2.787</td>
</tr>
<tr>
<td>Competence</td>
<td>0.999</td>
<td>0.095</td>
<td>0.693</td>
<td>10.546</td>
</tr>
<tr>
<td>Allocated budget</td>
<td>0.593</td>
<td>0.086</td>
<td>0.317</td>
<td>6.887</td>
</tr>
</tbody>
</table>

The results showed that the preparation of contracts had a coefficient of 0.344 (p-value = 0.00). This implies that parastatal entities' procurement performance increased by 34.4% for every unit increase in contract preparation. This result is in line with that of Matto et al., (2021), who found that the availability of value for money was positively and significantly correlated with contract formulation, with a coefficient of 1.285 (p-value = 0.00). Also, this finding correlates with Kingoto and Ismail's (2021) findings who found that contract structure significantly affects the performance of commercial state corporations in Nairobi City County, with a positive effect of 0.243 (p value = 0.004).

Additionally, the competency of the contract management team has a coefficient of 0.999 (p-value = 0.00). According to study findings, a one-unit increase in the contract management team’s competence enhanced the performance of the
procurement function by 99.9%. This research backs up the findings by Ogembo and Muturi (2019), who depicted that contract management teams have a positive influence on procurement performance with a coefficient of 0.334 (p-value = 0.001). These results concur with the results by Kariuki and Paul (2019) who found that contract managerial capacity had a significant and positive influence on infrastructure projects in Kitui County of Kenya, with a coefficient of 0.462 (p-value = 0.001).

Furthermore, the coefficient of the allocated budget was 0.593 (p-value = 0.00). This implies that increasing contract allocated budget by 59.3 per cent improved performance of the procurement function. This finding is consistent with that by Ochieng (2018) who found that budgetary allocation has a positive impact on procurement performance in Kisumu, with a coefficient of 0.161 (p-value=0.030). Also, Kirai and Kwasira (2016) backed up the findings by demonstrating that resource allocation had a positive impact on procurement performance with a coefficient of 0.338 (p-value=0.039). A similar conclusion was reached by Ogwel (2016), who revealed that budget planning and resource allocation have a positive influence on procurement performance with a coefficient of 0.337 (p-value= 027).

Therefore, from the above observation, it can be stated that all three variables of this study; contract preparation, competence, and the allocated budget; had a significant positive influence on procurement performance in the parastatal entities in Tanzania. This can be summarized by the regression equation given. 

\[
\text{Procurement Performance (Y)} = 0.303+0.344X_1+0.999X_2+0.593X_3+e.
\]

5. Conclusion and Recommendations
Effective contract management is necessary in order to ensure better procurement performance. This implies that there must be effective contract preparation for the procured project and management by a competent and skilled contract management team, while the allocated budget should be available at the required time. Through this fulfilment, the contracted project is going to be completed at the agreed time with the right quality at a reasonable cost. Therefore, it is recommended that the procurement management units prepare complete contract documents by using standard contract documents proposed by the PPRA or other approved authorities. Secondly, the accounting officer should ensure that there are competent contract management teams for every contracted project. And lastly, the procuring entity should ensure that there are sufficient funds allocated for every implemented project, and the accounting officer should certify the availability of funds before the beginning of its implementation.
References


