

The Effect of Procurement Practices on the Public Project Performance: The Case of North Showa Zone, Oromiya Region, Ethiopia

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Abstract

The overall objective of this study was to assess the effects of procurement practices on the performance of public projects in the case of North Shoa Zone. The specific objectives of the study were, to find out the effects of procurement planning, supplier selection process, procurement contract management and procurement staff competency on the performance of projects. The study took a quantitative research approach and explanatory research design. A census sampling technique was employed to select 114 employees related to project procurement practices and project management as respondents. All of the questionnaires were submitted back for analysis, representing a response rate of 100%. A structured questionnaire was administered to collect data from the respondents. The data was finally analyzed using Statistical Package for Social Sciences (SPSS) V.28 to compute descriptive statistics such as the mean and standard deviation and inferential statistics like Pearson's correlation analysis to obtain findings vital for the research study. In addition, regression analyses were conducted to estimate the average effects of procurement practices on public project performance. Majority of the respondents indicated that procurement practices affect project performance to a large extent. The regression analysis result indicated that procurement planning, supplier selection process, procurement contract management, and procurement staff competency had significant positive influence on performance of projects. The analysis further revealed that the four independent variables in this study accounted for around 68 % of change in project performance. It therefore recommended that implementing procurement practices effectively helps to improve projects performance.

Keywords: public procurement, procurement planning, contract management.

Introduction

Background of the study

The average share of public procurement in GDP globally lies between 10 and 15 percent, implying that public procurement is as used in middle-income and poor countries as in high-income ones. The data from government sources or international development institutions show that low-income countries have the largest share of public procurement in GDP, at 14.5 percent, followed by upper-middle income countries, at 13.6 percent due to both significant inflows of development assistance that go through public procurement and the small size of its tax base, which makes government expenditures almost entirely

dependent on development aid (WB, 2016).

According to the Federal Democratic Republic of Ethiopia procurement agency (2011) procurement is purchasing, hiring, or obtaining by any other contractual means of goods, works, and services. It is the process of acquisition usually by means of contractual arrangement after public competition goods, works, services and other supplies by the public entity. According to the Ministry of Finance and Economic development of Ethiopia (2010) like the other countries more than 64 percent of the total expenditure is used for procurement of goods and services.

Even though several Organizations in Ethiopia are

taking steps to refine their procurement systems, the process is largely still covered by confidentiality, inefficiency, corruption and under cutting. In all such cases, huge amounts of resources are wasted. The principal reason for the enactment of the Procurement Act was to have a legal regime that weeds out inefficiencies in the procurement process, remove patterns of abuse, and the failure of the public purchaser to obtain adequate value in return for the expenditure of public funds (Osterveer, 2015).

Statement of the problem

Procurement is part of the fiscal policies and programmes directed toward achieving effective and efficient public financial management and national development. As an economic instrument for guaranteeing national development, well-planned and implemented procurement has the potential of contributing to the realization of effective project implementation and completion because it ensures the public get the value for their money because they ensure accountability and transparency hence cost effective, timely and quality service delivery (Onyango, 2012).

Several studies have been done on strategic procurement practices, but few studies have focused on the effect of procurement practices on the performance of project. Benn (2015) focused on strategic purchasing, supply management practices and buyer performance improvement in UK manufacturing organizations where strategic purchasing was found to have an indirect, significant effect on improving buyer performance, acting through supplier integration. Strategic purchasing also had a significant effect on the use of socialization mechanisms, but not on supplier responsiveness. Nutakor (2016) on challenges with the implementation of sustainable procurement practices in the mining industry in western region of Ghana found challenges such as ICT difficulties, innovation, remuneration and increased cost, regulation and governance, inadequate funding, consumer perception, among others were very critical challenges inhibiting sustainable procurement practices. Okong'o (2016) focused on the influence of strategic procurement on the performance of Kenya Power Company Limited and established strategic procurement had a positive impact on the performance of public enterprises; such as reduced costs, improvements in quality of goods and services in the organization.

The main objectives of the Ethiopian Public Procurement and Property Administration Agency proclamation 649/2009 (very recent amendment) is to

harmonize public procurement processes in the public service, secure judicious, economic and efficient use of state resources, ensures fair public procurement, transparent and non-discriminatory and to reduce or eliminate corruption in the procurement process (Public Procurement proclamation 649/2009).

Despite the important role played by the Procurement system, some government institutions in Ethiopia still practice lengthy bureaucratic procurement processes in acquiring goods and services, lack of proper direction, poor coordination and negotiation with suppliers, slow with a lot of bureaucracy, lack of open competition and transparency, differing level of corruption, and not having a cadre of trained and qualified procurement specialists who are competent to conduct and manage the procurement process in a professional, timely, and cost effective manner has made some government projects to fail (Sylvia et al. , 2011; Nyakundi, et al., 2012), for example renaissance dame project and many other government projects believed to have failed due to poor procurement practices. Thus, improvement in procurement management system as a whole is off great need in developing country like Ethiopia where, implementation of project procurement management processes and procedures is still at early stage.

Locally, (Yirga, 2011), (Anteneh, 2015) (Shimelis, 2020)) have examined the effect of procurement practices on the performance of organization. Based on their findings problems related with procurement planning, supplier selection practice, procurement staff competency, procurement transparency, and failure to go with plan or working with the unsound plan, non-transparent plan repeatedly occurred in different organizations and there was the gap to make corruption and malpractices due to piece meal purchasing without market price assessment trend.

North Showa zone of Oromia region is also not free from procurement inefficiencies. Many capital projects construction are delayed much longer time than they should have been completed. For instance Chefe drinking water Project in Yaya Gulele Woreda Sadeni Beyo Kebele commenced in January 2015 with planned completion period of one year. The contractor completed the civil work, but due to government procurement deferment the electro mechanical work is not done. Other five water projects in the zone have been delayed for an average of five years after their civil work has been completed. Still now these projects are not in a position to benefit the society.

According to the annual report held on 2018/19,

different project team members and project managers reveals that most of delay in projects occurs due to quality problem of the purchased item, corruption, lack of adequate make/buy analysis and fail to deliver the ordered items on time by procurement and supply department. Therefore in this study the research aims to assess the effect of procurement practices on performance of projects. In addition, the above studies has focused on the performance of a single projects and did not focus on the whole process that procurement shall pass through on a project; thus, this study seeks to fill the gap by focusing on the effect of the whole process of procurement practices on the performance of public projects by taking North Shoa Zone as a case study.

Research questions

This study is attempted to answer the following basic research questions:

- How does the procurement planning affect project performance?
- What effect does supplier selection have on performance of project?
- How does a procurement contract management affect performance of project?
- What effect does staff competency have on the performance of project?

Objective of the study

General objective

The overall objective of this study is to assess the effect of procurement practices on public project performance in North Shoa Zone.

Specific objectives

The specific objectives of this study are:

- To explain the effect of procurement planning on the performance of project
- To examine the effect of supplier selection on the project performance
- To explain the effect of procurement contract management on the performance of project
- To examine the effects of procurement staff competency on the performance of project

Scope and Limitation of the study

The study focuses on examining the effect of procurement practice on the performance of public project, the case of north Shewa zone. This study assess the effect of procurement practice on project performance only in construction projects, water and energy projects and finance sector at north Shewa zone because of time constrains and other resource

limitations. Moreover, lack of proper documentation on the required information is another limitation. This ultimately may reduce the number of valid data case in the analysis. Despite these limitations, the study generates valuable information which may be of great use to different stakeholders.

Literature Review

Basic concept and definition of Procurement

According to Ethiopian Public Procurement and Property Administration report (2011) 64% of much public organization's budget goes to procuring public goods and services in Ethiopia.

Procurement practices are considered as the procedures and guidelines or means of acquiring goods, services and works at the best possible cost to meet an organization's needs in terms of quality, quantity and location. Procurement also extends to the ultimate disposal of property at the end of its useful life. Sound public procurement policies and practices are among the essential elements of good governance (Akech, 2014).

Procurement performance is the analysis of effectiveness and efficiency of the outcome of procurement activities, where the accomplishment of a given task is measured against preset known standards (Knudsen, 2016).

Empirical Review

Anteneh Getahun (2015), conducted study on assessment on procurement planning and implementation effectiveness in Ethiopia the case of Ministry of Urban Development Housing and Construction/MUDHCO/. He deploys descriptive statistical method and the selection of the respondents was done using stratified random sampling techniques. Based on the analysis, the Ministry has a trend in the preparing procurement plan. However, having a plan by itself does not ensure success; it largely, depends on the extent of implementation. In the case organization, the procurement plan, specification and bid documents and market price assessments were found poor and incomplete. Moreover, there was a long delay in the evaluation of technical documents.

Martha (2015), conducted study on effective public procurement management in implementation of successful public projects in Ethiopia which is a case study on Addis Ababa city government housing development project office. The study examines the impact of current public procurement practice on construction of condominium housing, procurement planning, procurement method, procurement contract

administration and the procurement policy. The researcher adopted purposive sampling using interview, and questionnaire technique as the research instrument which was analyzed using descriptive statistics. The researcher recommends the studied organization to prepare its own procurement policy, procurement planning with appropriate stakeholders, ensuring long term relationship and the use of electronic recording to control contract management process.

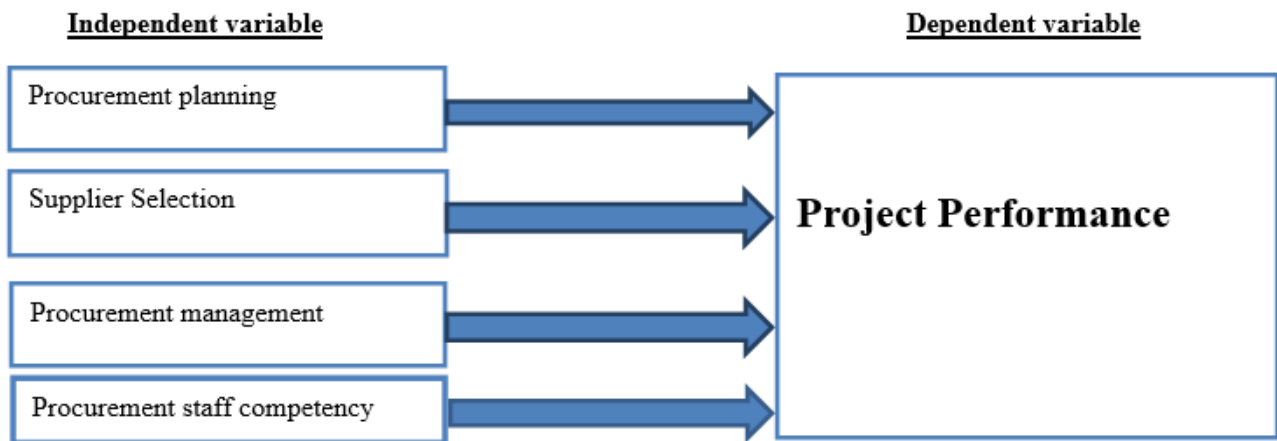
Erick *et al* (2018) evaluates the effect of procurement practices on the performance of public hospitals in Kenya. They analyzed the data using descriptive statistics and inferential statistics like regression analysis and Pearson’s correlation analysis. Their findings indicate that tendering practices, supplier selection policies, ethical practices and inventory control had significant positive influence on

performance of public hospitals in Kenya. Ethical practice showed a stronger positive influence among the variables on performance of public hospitals.

Freweyni (2019) assess the effect of procurement management practice on the project performance in the case of commercial bank of Ethiopia. She used Regression analysis to investigate the effect of procurement functions on project performance. She identified that need assessment, supplier sourcing, contract management and inventory management affects Project Performance to a large extent and helps to ensures that service deliveries are good.

Conceptual framework of the study

Based on previous empirical studies, a frame work that explains the relationship between the independent and dependent variables are prepared in figure as shown below.



Source: researchers own modified, (2023)

Fig 1: Conceptual Framework

Research Methodology

Research Design

According to Kothari (2004) research is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedures. It is the conceptual structure with in which research is conducted; it institutes the blue print for the collection, measurement and analysis of data. The study adopted an explanatory research design as the study intended to explain cause and effect between independent and dependent variables in the study area. Both qualitative and quantitative approaches were employed for the study.

Sources and Method of Data Collection

The study has employed primary data. Primary data was obtained through questionnaire and structured interview schedule that was administered to the

respondents by the trained enumerators in an effort to conserve time and money as well as to facilitate easier analysis. In line with the objective of the study, the research was used Likert scale which is a very popular rating scale for measuring ordinal data in social science research. Closed ended questions using a 5-point Likert scale were asked to the respondents to express their level of agreement or disagreement assigned (1=strongly disagree, 2=disagree, 3= moderate, 4=agree, 5=strongly agree).

Target population of the study

A target population is the population to which the researcher ultimately wants to generalize the results (Bogdan and DeVault, 2015). According to information obtained from Human Resource Department recently there are a total of 114 employees related to project procurement practices

and project management (NSZ, 2022). Thus, the target population for this study was project management staff members, procurement and supply staff officers and business development staff members and specific individuals who were engaged in project procurement.

In this study, the researcher was used a census method because the population size is affordable and the researcher can be able to contact all the respondents. Census method is employed if a researcher has direct access to the entire population of interest (Kombo & Tromp, 2013). It can be acknowledged that in such an inquiry when all the respondents are covered no element of chance is left and highest accuracy is obtained (Kothari, 2004). Thus, the sample size for this study is 114 respondents.

Method of Data Analysis

Both descriptive statistics and econometric methods of the data analysis were employed. After coding and feeding the collected primary data into SPSS version 28.0. Descriptive statistics such as frequency counts, percentage, mean, and standard deviation and inferential statistics in form of F- test and t- test were calculated to describe the characteristics of the respondents.

Model specification

Regression is a technique used to predict the value of a dependent variable using one or more independent variables (Albaum, 1997). Regression analysis is a statistical tool for the investigation of relationships between variables. The investigator assesses the “statistical significance” of the estimated relationships, that is, the degree of confidence that the true relationship is close to the estimated relationship (Malhotra, 2007). Linear regression estimates the coefficients of the linear equation, involving one or more independent

variables that best predict the value of the dependent variable (Field, 2005).

Multiple linear regression equation was employed in order to determine the explanatory power of the independent variables in the relationship and to determine the most dominant variables that influenced the project performance.

Model equation: $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$

Where Y is the dependent variable (performance of project)

β_0 is constant, $\beta_1, \beta_2, \beta_3,$ and β_4 are regression (predictors) coefficient

X1, X2, X3 and X4 are independent variables (X1 is procurement planning, X2 is supplier selection process, X3 is procurement contract management and X4 is procurement staff competency)

Data Analysis and Discussion

Introduction

This chapter presents the analysis, presentation and interpretation of the data collected from the respondent’s through questionnaires.

Descriptive Statistics Results

This section presented the descriptive results of the study’s main objectives as obtained from the respondents. These objectives were structured to the effect of procurement planning, supplier selection, contract management and procurement staff competency on project performance in North Zone of Oromiya region.

Procurement planning

Procurement planning was measured using eight (07) items scored on a five-point Likert scale of (5) = strongly agree (4) = agree (3) = moderate (2) = disagree (1) strongly disagree and the respondent’s feedback on the effect of procurement planning on project performance are displayed in table below.

Table 1: The effect of procurement planning on project performance

Questions	Mean	Std. Deviation
Financial Resources are well planned	4.05	1.199
Competent Suppliers are selected	4.13	1.152
Quality materials is considered while planning	4.32	1.295
Well planned deliveries of materials within time schedule	4.45	1.176
Enough time is put into considerations for the project completion	4.20	1.241
The project is finished within the specified budget	3.54	1.043
The project is finished within the required time	2.56	.945
Average mean	3.89	

Source: Primary data (2015)

The findings in table 7 above indicate that majority of

the respondents believes that procurement planning affects project performance to a large extent as

indicated by a mean of 3.89 on average. The results also show that the well-planned financial resources were agreed upon by all parties having a mean of 4.05, selection of competent suppliers having a mean of 4.13, considering quality materials having a mean of 4.32, well planned deliveries of materials within time schedule having a mean of 4.45, considerations of enough time for the project completion having a

mean of 4.20, finishing the project within the specified budget and time having a mean of 3.54 and 2.56 respectively. These variables have mean values that are skewed to the left.

Supplier selection

The study also sought to investigate the effects of supplier selection process on project performance.

Table 2: The effect of supplier selection process

Questions	Mean	Std. Deviation
The project advertised in order to get the right supplier	3.74	1.049
The project invited all suppliers when evaluating for bids	4.34	1.273
Supplier selection done as per the Act and Regulations	4.18	1.277
Contracts committee when evaluating the bids	4.38	1.181
There is proper evaluation of supplier's abilities before undertaking a decision to source products or services	4.17	1.186
The project gave suppliers enough days for complain for unsuccessful suppliers	4.29	1.075
Tender was issued to the right supplier	4.09	1.138
Regular review of the procurement policies on supplier selection	4.07	1.146
Many suppliers are satisfied with the procurement policies	4.02	1.027
Average mean	4.14	

Source: Primary data (2015)

An average mean score of 4.14 implies that the respondents believe that supplier selection process affects project performance to a large extent. The results also show that the project advertised in order to get the right supplier was agreed upon by all respondents having a mean of 3.74, the project invited all suppliers when evaluating for bids having a mean of 4.34, supplier selection done as per the act and regulations having a mean of 4.18, contracts committee when evaluating the bids having a mean of 4.38, proper evaluation of supplier's abilities before undertaking a decision to source products or services

and giving enough days for complain for unsuccessful suppliers both having a mean of 4.09, issuing tenders to the right supplier and regular review of the procurement policies on supplier selection both having a mean of 4.07, and finally suppliers satisfaction with the procurement policies was agreed by respondents having a mean of 4.02.

Contract Management

This study also surveyed how procurement contract management affects project performance. Results obtained from the respondents are described in Table 9 as below.

Table 3: The effect of procurement contract management

Questions	Mean	Std. Deviation
Legal team were consulted before signing the contract	4.28	1.248
Procurement department goes through process needs of the project	4.13	1.228
Contracts are managed fairly and justly	4.21	1.172
Time factors was considered while making procurement contract	2.89	1.232
Financial factors was considered while making procurement contract	3.32	1.243
Delivery date are considered while making procurement contract	4.00	1.184
Quality of materials are considered while making procurement contract	4.14	1.208
Delivered goods are rejected due to non-conformity to specification	4.23	1.112
The agreed quantity and quality was delivered on time	4.39	1.096
Regular monitoring and evaluation of contracts to ensure timely delivery of good and services	4.04	1.136
Average mean	3.96	

Source: Primary data (2015)

On average, most respondents believed that contract management affects project performance to a large extent as indicated by a mean score of 3.96.

Specifically, the descriptive results also show that consulting legal team before signing the contract was agreed upon by all respondents having a mean of 4.28, procurement department goes through process

needs of the project having a mean of 4.13, contracts are managed fairly and justly having a mean of 4.21, consideration of time, financial factors, delivery date and quality of materials while making procurement contract having a mean score of 2.89, 3.32, 4.00, and 4.14 respectively, delivered goods and services are rejected due to non-conformity to specification having a mean of 4.23, the agreed quantity and quality was delivered on time having a mean of 4.39, and finally

regular monitoring and evaluation of contracts to ensure timely delivery of good and services was agreed by respondents having a mean of 4.09.

Procurement staff competency

Finally, the study sought to find out the effect of procurement staff competency on project performance. The results are presented as follows in Table 10.

Table 4: The effect of procurement staff competency

Questions	Mean	Std. Deviation
Procurement staff have good Level of experience and knowledge on procurement	4.30	1.130
Skills and professional qualifications of procurement staff enhances efficiency	4.32	1.276
Regular and timely sharing of critical information	4.23	1.075
Project personnel participated in the drafting of the evaluation criteria for bids to ensure quality of procurements	4.27	1.249
An evaluation panel with proper technical skills is constituted on time	4.34	1.044
Some procurement staff solicit for 'kick backs' from suppliers	4.32	1.226
The project manager provide regular training to procurement staffs	4.18	1.083
Overall, the selection and evaluation process improved project performance	4.25	1.325
Average mean	4.28	

Source: Primary data (2015)

The finding in table 10 above indicates that procurement staff competency affects project performance on average to a large extent as indicated by a mean score of 4.28. The descriptive results also show that procurement staffs level of experience and knowledge on procurement was agreed upon by all respondents having a mean of 4.30, skills and professional qualifications of procurement staff enhances efficiency having a mean of 4.32, regular and timely sharing of critical information having a mean of 4.23, participation of project personnel in the drafting of the evaluation criteria for bids to ensure quality of procurements having a mean score of 4.27, an evaluation panel with proper technical skills is constituted on time having a mean of 4.34, procurement staffs ask 'kick backs' from suppliers having a mean of 4.32, project managers provide regular training to procurement staffs having a mean of 4.18 and finally the selection and evaluation process improved project performance was agreed by respondents having a mean of 4.25.

Correlation Analysis

Pearson correlation was applied to examine the magnitude of the relationship between the independent variables (Procurement practices) and dependent variables (project performance). Pearson correlation coefficients usually vary from negative -1 to positive +1. The Negative -1 value shows no

correlation and positive values there is correlation where Pearson moment coefficient < 0.3 which shows a weak correlation, Pearson moment coefficient $> 0.3 < 0.5$ shows moderate correlation and Pearson correlation coefficient > 0.5 show a strong correlation.

The study shows that procurement planning, procurement contract management, procurement staff competency had a strong correlation with Pearson correlation coefficients > 0.5 (0.773**, 0.655**, 0.712**, 0.621** respectively) indicates high relationships between procurement practices and performance of projects. However, independent variables are positively correlated to performance of project. The study implied that procurement planning had a strongest correlation between procurement practices and performance of project. From the findings, the correlation matrix indicates that independent variables are very significant determinants on the performance of projects. This agrees with Aketch & Karanja (2013), states that there exists correlation between factors influencing procurement Performance.

Table 5: Correlation Analysis in procurement performance

		Performance of project	Procurement planning	Supplier selection	Procurement Contract Management	Procurement staff competency
Performance of project	Pearson Correlation	1				
	Sig. (2-tailed)	.000				
	N	114				
Procurement planning	Pearson Correlation	.773**	1			
	Sig. (2-tailed)	.000	.000			
	N	114	114			
Supplier selection	Pearson Correlation	.655**	.645**	1		
	Sig. (2-tailed)	.000	.000	.000		
	N	114	114	114		
Procurement Contract Management	Pearson Correlation	.712**	.732**	.647**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	114	114	114	114	
Procurement staff competency	Pearson Correlation	.621**	.572**	.522**	.565**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	114	114	114	114	114

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Primary data (2015)

Measure of Goodness of Fit

ANOVA test result

The study employed ANOVA test to test the significance of the regression line and whether any variables were omitted. This test was an F test. As shown in the ANOVA table 4.9 below, the p-value

(level of significance) is $0.000 < 0.05$. Thus, the regression model is statistically significant and the test indicates non-existence of any omitted variables or irrelevant variables. This showed that the regression model predicts the dependent variable significantly well at statistical significance 0.05. This implies that the line is a good fit.

Table 6: ANOVA test result

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	121.633	4	30.408	58.140	.000 ^b
Residual	57.532	110	.523		
Total	179.165	114			

a. Dependent Variable: Performance of project

b. Predictors: (Constant), Procurement staff competency, Supplier selection, Procurement Contract Management, Procurement planning

Source: Primary data (2015)

Multicollinearity test

Multicollinearity problem arises when at least one of the independent variables is perfect or is an exact linear relationship of the other independent variable (Gujarati, 2003). The existence of Multicollinearity might cause the estimated regression coefficients to have the wrong signs and smaller t-ratios that might lead to wrong conclusions. Therefore, it is important to check whether serious problems of Multicollinearity existed among and between the independent variables of the model estimation.

Prior to running a multiple regression analysis, the hypothesized explanatory variables were checked for the existence of multicollinearity. The technique of variance inflation factor (VIF) was used to detect the problem of Multicollinearity for explanatory variables (Chatterjee and Price, 1991). Value of VIF greater than 10 is often taken as a signal for the existence of Multicollinearity problem in the model. VIF tests revealed that the variance inflation factor values for all explanatory variables were less than 5. Therefore, there was no multicollinearity problem among all the explanatory variables. So, all explanatory variables

were included in the model.

Table 7: Variance Inflation Factor Results

Variable	VIF	1/VIF
PP	2.54	0.394027
PCM	2.52	0.396352
SS	1.99	0.503021
PSC	1.64	0.610417
Mean VIF	2.17	

Source: Primary data (2015)

Coefficient of Determination

Table 8: Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.824 ^a	.679	.667	.723

a. Predictors: (constant), procurement planning, supplier selection, procurement contract management, procurement staff competency

Source: Primary data (2015)

Regression Analysis

The study conducted a multiple regression analysis so as to determine the combined effect all the independent variables on project performance. Multiple linear regression analysis is a general statistical technique used to model the relationship between a single dependent variable and several independent variables. The main purpose of multiple regressions is to learn more about the relationship between several independent variables and a

As shown from the table below, the overall coefficient of determination R2 was 0.679 signifying that the four independent variables in this study collectively account for 67.9% of change in project performance. The remaining percentage of 32.1%, being accounted for by other factors not included in this study. This revealed that procurement practices as an independent variable had significant effect on the performance of project and further research should therefore be conducted to investigate other factors that affect project performance.

dependent variable.

The multiple linear regression equation for this study was:

$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \text{error}$ Where:
 - Y is project performance (response variable) β_0 is the regression intercept, β_1 to β_4 are the regression coefficients and X is the predictor variables; X1 = Procurement planning X2 = Supplier selection X3 = Contract Management X4 = Procurement staff competency.

Table 9: Regression Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.255	.268		.954	.342
Procurement planning	.456	.093	.421	4.890	.000
Supplier selection	.184	.090	.156	2.042	.044
Procurement Contract Management	.217	.100	.187	2.180	.031
Procurement staff competency	.240	.085	.196	2.828	.006

a. Dependent Variable: Performance of project

Source: Primary data (2015)

Therefore, the fitted multiple linear regression equation for this study is:

$Y (\text{project performance}) = 0.255 + 0.456 X_1 + 0.184 X_2 + 0.217 X_3 + 0.240 X_4$

As observed from the regression equation, taking all the factors (procurement planning, supplier selection, contract management and staff competency) constant at zero, project performance would be 0.255. Further, if all the other variables are kept constant, a unit increase in procurement planning will increase project performance by 45.6%. Likewise, a

unit increase in supplier Selection will increase project performance by 18.4%; a unit increase in contract management will increase project performance by 21.7%; a unit increase in procurement staff competency will increase project performance by 24 %. These results imply that of the four variables studied; procurement planning was the procurement practice that had the highest effect on project performance at 45.6%, followed by procurement staff competency at 24%, then contract management at 21.7% and finally supplier selection at 18.4 % increase effect.

At 5% level of significance and 95% level of confidence, procurement planning had a 4.89 level of significance, supplier selection had a 2.04 level of significance, contract management had a 2.18 level of significant and procurement staff competency had a level of significance of 2.83. Since all t calculated values exceed two, by using 2-t rule of thumb all the variables were significant in affecting project performance.

Conclusions and Recommendations

Conclusions

The general objective of this study was to explain the effect of public procurement practice on the project performances. Based on the findings of the study the following conclusions were drawn.

- The regression analysis indicates a coefficient for procurement planning to be 0.456, which implied that holding other procurement practices constant, a unit increase in procurement planning will increase project performance by 45.6%. The correlation analysis also indicates a strong positive correlation between procurement planning and project performance and it was therefore concluded that there is a significant relationship between procurement planning and project performance.
- Regarding the effect of supplier selection, regression analysis revealed a coefficient for supplier selection process as 0.184, implying that holding other procurement practices constant, a unit increase in supplier selection will increase project performance by 18.4%. The correlation analysis also indicates a strong positive correlation between procurement planning and project performance and it was therefore concluded that there is a significant relationship between procurement planning and project performance.
- The regression analysis also indicates a coefficient for procurement contract management to be 0.217, which implied that holding other procurement practices constant, a unit increase in contract management will increase project performance by 21.7%. The correlation analysis also indicates a strong positive correlation between contract management and project performance and it was concluded that there is a significant relationship between contract management and project performance.
- The regression analysis indicates a coefficient for procurement contract management to be 0.240, which implied that holding other procurement

practices constant, a unit increase in procurement staff competency will increase project performance by 24 %. The correlation analysis also indicates a strong positive correlation between contract management and project performance and it was concluded that there is a significant relationship between contract management and project performance.

- Overall, the study also concludes that an increase in each of the above-mentioned procurement practice increases the performance of a project implemented.

Recommendation for conclusion

According to conclusion on the findings, recommendations were forwarded for improvements in the procurement practices to effectively increase performance of projects.

- The findings show that procurement plans helped to increase the performance of projects implemented. The researcher therefore, recommends that the project plan should have been prepared by experienced, committed and knowledgeable procurement personnel who are aware of procurement methods and accurately predicts future changing circumstance in order to deliver the intended outcomes effectively and efficiently.
- Project managers should identify appropriate and quick procurement methods such as direct procurement of goods that can be readily acquired from within the country or from internationally recognized suppliers instead of open competitive bidding to avoid delays. All those involved in procurement activities have a responsibility to behave ethically at all times since ethical behavior supports openness and accountability in a procurement process and gives suppliers confidence to participate in the government market place and can also reduce the cost of managing risks like wrong procurement of equipment which was the key factor associated with project.
- Project managers should sign the contract agreement after the bid winner known. The contract documents should be stored and maintained in safe place to follow up the performances until the accomplishment of the activities. Procurement staffs should also be trained in record keeping to ensure projects are delivered as planned. Monitoring and evaluation system should be strengthened from project on set to track progress of activities to completion.

Successful contract management is significantly dependent upon what happens during the planning, offering, evaluation and award phases.

- In addition, the study recommends that, experienced and skillful procurement personnel should be recruited and trained the existing employees so as to fully adopt acceptable tendering regulation, implement procurement policies, complete the implementation of purchasing manuals, serve suppliers effectively, and submit proposals to potential suppliers to complete projects without compromising the allocated budget, time and quality.

Further research

Finally, further research works on other procurement practices (like monitoring, procurement methods, and international procurement practice) are suggested. In addition, before any project is perceived for implementation, it is better to add options of special procurement, the strategic planning must be flexible to account any unexpected future changes (hold contingency) and update the types of procurement methods to be executed on account of projects national significance established in accordance with Article 60 of the Ethiopian federal government procurement and property administration proclamation.

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