

Determinants of Procurement Performance of Public Sectors: In the Case of North Shoa Zone Finance and Economic Cooperation Department

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Abstract

This research examines the determinants of procurement performance of public sectors: in the case of North Shoa Zone finance and economic cooperation department. Seven determinants for procurement management practices were identified and a survey instrument was developed. The questionnaire consists of 43 statements, on a five-point Likert scale, to represent all the seven determinants for procurement. The study adopted both descriptive and explanatory research designs. The study employed purposive sampling technique to select study organization and census survey method was to select 127 respondents. The data collected was analysed by using descriptive statistics and linear multiple regression methods. From the findings, it is concluded that procurement planning, IT, professionalism of workforce, leadership involvement, resource allocation and procurement ethics positively affect procurement performance to a significant extent, whereas contract management has no significance influence on procurement performance. The study recommends that managers in the organization primarily need to work on these factors to improve procurement processes to increase operational efficiency and effectiveness of the user departments.

Keywords: Procurement performance, public sectors, finance and economic cooperation department

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Introduction

The procurement function has become increasingly important over the past decades since procurement and supply have become major determinants of organizational success. The procurement function usually takes large amounts of organizations' resources. Hence, it is becoming an expensive undertaking for many organizations, and if not properly done it can lead to significant regret (Choy & Lee, 2002). According to Abbeele (2006), public bodies have always been big purchasers, dealing with huge budgets. For example, according to the World Bank report (2018), public procurement amounted to \$11 trillion out of global GDP of nearly \$90 trillion in 2018, which is 12% of global GDP is spent. The size of public procurement as a share of GDP is nearly identical across low-income, middle- income and high-income countries. Among the 190 countries that it has studied, low-income economies procure on average 13% of GDP in goods, services and works. Middle-income countries procure 13.2% of GDP and high-income countries procure 14% of GDP. These differences are statistically insignificant.

In African countries, public procurement is increasingly being recognized as essential in-service delivery, and it accounts for a high proportion of total expenditure. For example, public procurement accounts for 60% in Kenya (Akech, 2005), 58% in Angola, 40% in Malawi and 70% of Uganda's public spending (Basheka and Bisangabasaija, 2010). According to annual report of the Ethiopian Federal Public Procurement and Property Administration Agency (EPPPPAA 2011), in Ethiopia public procurement expenditure takes the lion's share from the annual government budget by taking 64% of annual budget and 14% of the GDP. This is very high when compared with a global average of 12%.

Despite huge purchasers, the subject of public procurement would have received little attention by academic researchers and policy makers, because it was considered as an administrative function only. According to Dale (2010), procurement is still realized as a supplement rather than essential to business operations in most organization. In addition, many procurement activities still suffer from neglect, lack of proper direction, poor co-ordination, a lot of bureaucracy, lack of open competition and transparency, differing levels of corruption and not having a team of trained and qualified procurement specialists who are competent to conduct and manage the procurement process in a professional, timely and cost-effective manner (Joshua Joshua & Willy, (2017). In addition, Hui et al., (2011) concluded that accountability, transparency, corruption, integrity and cronyism that exist in the procurement system in

Malaysia are the main concerns that disturb the public, especially on the mismanagement that results in huge wastage of the public funds. Findings by Daniel (2010), Victor (2012) explored that implementation of procurement practices in public sector organizations in general left a major knowledge gap on effective implementation of procurement practices. This study, therefore, focuses on investigating the determinants of public procurement performance in the case of North Shoa Zone finance and economic cooperation department.

Literature Review

Public Procurement is a hot subject in public and scholastic circles. Public procurement has become an issue of public attention and debate, and has been subjected to reforms, restructuring, rules and regulations. According to Abbeelee, (2006), all goods and services for public use should be guided by the Public procurement requirement. Because of the significance function of public procurement, the public procurement performance in most countries is controlled by public procurement laws and regulatory frameworks. Thai (2004) indicates that every organization must have effective standard procurement procedures, the methods they use to acquire those things required for an organization to provide goods, services, and works to its clients. But, several factors affect the proper functioning of the public procurement system and its processes. In addition, the determinants of procurement practice differ from one study to another. This lack of absolute common determinants, which explains the manner in which the Procurement practices in order to bring about improved organization performance, has the problems of many researchers.

Hui et al., (2011) concluded that accountability, transparency, corruption, integrity and cronyism that exist in the procurement system in Malaysia are the main concerns that disturb the public, especially on the mismanagement that results in huge wastage of the public funds. The procurement officers were blamed for mal practice and non-compliance with the policies and procedures of the procurement system. Ngari, & Machoka. (2020) found that information technology, procurement planning and staff competence were significantly linked to performance. The study recommended the need to continue investing in technological innovations and integrating procurement systems.

Aketch, & Karanja. (2013) concluded that staff training and ICT influenced procurement performance; Additionally, the study concludes that organizing skills, the skills of procurement managers in organizations were an important factor for any economy to succeed and that a lack

of decision-making skills and expertise was a major constraint impeding the progress of the procurement sector in corporations. Kumar et al. (2005) also showed that there is no one method that covers every purchasing department in any organization, and a number of key measures were found to be common in evaluating challenges, these include, cost saving, vendor quality, delivery metrics, price effectiveness and inventory flow.

The above findings indicate that, there is no agreement on a single common theory or determinants of procurement management, which is required for its implementation. This lack of absolute common theory, which explains the manner in which the procurement management practices or determinants are related in order to bring about improved organization performance, has the problems of many researchers. In this study, seven determinants of procurement performance are adopted from different scholars as a procurement management construct (see Table 1).

Table 1

Determinants of Procurement Performance Supported by Different Researchers

Determinants of procurement performance	Supported Studies
Procurement Planning	(Basheka, 2008; Peter, 2012; Rotich, 2011; Mamiro, 2010)
Contract Management	(Rushton et al, 2010; Mangan et al, 2008; Michael Hugos, 2011; Kibogo, 2014; Maria’s, 2013)
Information Technology	(Benton,2007; Campbell, 2005; Hagén and Zeed, 2005; Kirungu, 2011)
Staff Competency and professionalism	(Boyatzis, 2008; Aketch and Karanja, 2013; Russell, 2004; Banda, 2009; Sultana, 2012; Appiah, 2010; Wanyonyi, 2015)
leadership and management support	(Kemunto & Ngugi, 2014; Oyuke and Shale, 2014).
Resource Allocation	(Shantanu et al., 2012; Ouma Danis et al., 2014; Onyango, 2012; Mamiro, 2010; Sme, 2002).
Procurement Ethics	(Wee, 2002; Gikonyo, 2010; Amos and Weathington, 2008).

Research Methodology

To meet the objective of research properly both descriptive and explanatory research method were used throughout this research. According to Kothari (2012), the main purpose of descriptive research is to describe the state of affairs as it exists at present. But, descriptive studies are not helpful in identifying cause behind described phenomenon, so to confront this gap this research use extra research method called as explanatory research. According to the Kothari (20012) explanatory research method is very important to explain the cause and effect of relationships of phenomenon.in addition for the purpose of the present study, quantitative research approach has been used to investigate the determinants of procurement performance of public sectors.

Population and Sample

To identify determinants of public procurement performance, the population of the study is focused on staffs that directly or indirectly have relationship with the procurement process. Therefore, the population of the study includes procurement and property officers, finance officers, procurement endorsing committee, pricing and disposal committee, user department planning experts, heads of finance and user departments. According to North Shoa Zone Finance and Economic Cooperation Department, the total population of the study was 127. Since the population is fairly small and manageable, census survey method was deployed to undertaken this research. The questionnaires were sent out using the face to face method for data collection to the targeted respondents. Finally, 121 usable questionnaires were returned. Therefore, 121 usable questionnaires were obtained for analysis purpose for the study. The usable questionnaire rate was 95%, normal for such research.

Questionnaire

To investigate the determinants of procurement performance, structured survey questionnaire was used for data collection. Based on the comprehensive review of procurement management literature, a total of 7 procurement Management constructs were adopted from several related studies. The questionnaires were tested, and refined, by means of a Pilot Study and then distributed to all sampled respondents. Following other similar studies Basheka and Bisangabasaija, (2010), Peter, (2012), Boyatzis, (2008), Aketch and Karanja, (2013) and Chari et al., (2016), a five-point Likert scale was employed for scoring responses (1 = strongly disagree and 5 = strongly agree). The questionnaires have 2 main sections. Section 1 covers

general information about the respondents. The Second section are attempted to investigate the determinants of procurement performance on seven procurement management constructs. A total of 43 statements are provided to be answered by the respondents. For each statement, respondents were asked to rate the extent of the current procurement practices in the organization.

Methods of data analysis

The responses were assigned numeric codes and data entered into a SPSS (version 24.0) file for statistical analyses. Descriptive statistical analyses (% age and frequency) were conducted for demographic variable for the research respondents' i.e. Job status of respondents, Experience, etc. The validity of the instrument was conducted by a wide review of the literature and by using experts' feedback of procurement management in the academic and public sectors. The reliability of the seven procurement management constructs was calculated by Cronbach's alpha (see Table 2). Nunnally (1978). advocates that reliability coefficients of 0.70 or more are considered good, although it may be reduced to 0.6 in exploratory research Hair et al. (1995) or even to 0.55 (Van de Ven & Ferry, 1979). Based on the table, value of Cronbach's α was well above the criteria. So, it can be concluded that the instrument used in this study was valid and reliable. Mean and standard deviation for individual items and over all mean for each construct were calculated to analyse the current level of procurement practices.

Table 2

Reliability Test Result of Variables

Variable	Cronbach's Alpha	No. of Items
Procurement Planning	.796	7
Contract management	.811	5
ICT Utilization	.830	7
Professionalism of workforce	.789	8
Leadership involvement	.794	5
Resource allocation	.823	4
Procurement ethics	.801	5
Procurement performance	.779	5

Source: Estimation based on Survey

Results and Discussions

General Profile of Respondent

Demographic factor examines the academic credentials of the respondents. The information is necessary to assist the researcher to recognize whether the respondents are educated or illiterate. Information on the academic qualifications of the respondents is statistically shown in table 3 below shows the cross tabulation of the educational level of respondents involved in this research. There were 121 respondents, out of which 7(5.8 %) had Diploma level of education, 97 (80.2%) of respondents had first degree level of education, 17(14 %) of respondents had second degree level of education. This shows that the respondents are objectively educated and they could understand and give rational responses to the questionnaire distributed to them (see Table 3).

Demographic factor examines the current position of the respondents. The study requested the respondent to indicate their current position. From the study findings majority of the respondents (25%) are top level managers. Procurement, finance and property administration staffs comprise 35%, endorsing committee and pricing and disposal committee 12%, and audit and planning officers comprise 6%, and planning experts in 28 departments 22%. These findings depict that all the management levels and concerned staff were represented in this study (see Table 3).

Table 3
Demographic Information

		Frequency	%	Cumulative %
Educational Level	Diploma	7	5.8	5.8
	First Degree	97	80.2	86.0
	Second Degree	17	14.0	100.0
	Total	121	100.0	
Job status of respondents	Finance & economic cooperation department head and vice head	1	.8	.8
	Procurement staffs	11	9.1	9.9
	Procurement endorsing & Performance committee	8	6.6	16.5
	of Budget & finance officers	23	19.0	35.5
	Property administration officers	8	6.6	42.1
	Pricing & disposal committee	6	5.0	47.1
	Audit & planning officers	7	5.8	52.9
	Zone department heads & vice heads	30	24.8	77.7
	Planning experts in 28 departments	27	22.3	100.0
	Total	121	100.0	
Experience	1-5 years	22	18.2	18.2
	6-10 years	50	41.3	59.5
	11-15 years	27	22.3	81.8
	16-20 years	15	12.4	94.2
	Beyond 21 years	7	5.8	100.0
	Total	121	100.0	

Source: Estimation based on Survey

The results in Table 3 also show that the biggest proportion 50(41.3%) of the study respondents had worked for a period of between 6 and 10 years. The second rank is those who had worked for a period of between 11 and 15 years (22.3%). Those who had worked for a period of between 1 and 5 years were 22(18.2%). Those who had worked for a period of between 16 and 20 years were 15(12.4%). Besides, those who had worked for a period of beyond 20 years were 7 (5.8%), The results indicated that experienced staffs are likely to perform better at the data filling due to the job experience gained over time.

Mean Values of Procurement Practice Construct

Mean for individual question and over all mean for each 7 dimensions were calculated to analyse the implementation levels of Procurement Practice. For easier interpretation of the results of the study, researcher refers to the interpretation of scores 1.00-1.80= worst, 1.80-2.60= low, 2.60-3.40= enough, 3.40- 4.20= high and 4.20-5.00= very high (Basheka and Bisangabasaija, 2010; Benton, 2007).

Table 4*Mean Values of Procurement Practice Construct*

No	Variables	N	Mean	Standard deviation
1	Procurement planning	121	3.39	1.06
2	Contract management	121	3.07	1.02
3.	Information technology	121	3.08	1.09
4	Professionalism of workforce	121	2.95	1.03
5	Leadership involvement	121	2.85	1.01
6	Resource allocation	121	2.75	1.07
7	Procurement ethics	121	3.60	0.98
Procurement practices			3.09	

Source: Estimation based on Survey

Table 4 above reveals that average value (mean) of procurement practices variable was in moderate category (3.09). The values of the seven-procurement practice construct range from 2.75 to 3.60, which corresponds to a 'moderate' level of practice. Procurement ethics (3.60) and Procurement planning (3.39) were the two highest practices in this study; while Resource allocation (2.75) and Leadership involvement (2.85) was the bottom two (see Table 5). From this result, it is observed that all the respondents rated at 'moderate' for degree of procurement practices in the organization, indicating that the organization is struggling to practice procurement management successfully.

Levels of procurement performance (PP) Improvement

To analyse the organization procurement performance improvement level over the last three years (2018-2020/21 G.C.), the researcher uses five-indicator questionnaire. Mean for individual question and over all mean for procurement performance were calculated.

Table 5*Mean values of procurement performance (PP) Improvement*

Items	N	Mean	Std. Deviation
The goods /services procured are matches right quality.	121	2.93	1.243
The goods /services procured are matches right quantity.	121	3.06	1.128
Goods/services procured at right time as planned.	121	2.62	1.142
Goods/services procured at right Price.	121	3.01	1.173
Goods/services procured from the right sources.	121	3.40	1.061
Procurement Performance		3.004	

Source: Estimation based on Survey

Table 5 indicates that average value (mean) of procurement performance improvement variable was 'moderate' improvement category (3.0). The values of the 5 procurement performance indicator items range from 2.62 to 3.40, which corresponds to between 'moderate' and 'high'

level of procurement performance improvement. the right sources (3.40) and right quantity (3.06) were the two highest procurement performance improvement in this study; at right time as planned (2.62) was the bottom one (see Table 5). From this result, it is observed that all the respondents rated at between 'moderate' and 'high' for degree of procurement performance improvement in the organization, indicating that the organization is struggling to improve procurement performance from different angle

Determinants of procurement performance in the public sector:

Multiple linear regression analysis is carried out in order to investigate the determinants of procurement performance in the public sector. The findings indicated that the model regression coefficient was 0.806, which indicated that the model predicted over 82% of the change in the independent variable. The R² value =0.676 meaning 67.6% of the variance in the model can be predicted using the independent variables or in simple words 67.6% of procurement performance is explained by the constructed independent variables. However, the remaining 32.4% changes in procurement performance of public sectors: in the case of North Shoa Zone finance and economic cooperation department are caused by other factors that are not included in the model (see Table 6).

Table 6

Regression model summary

Model	R	R Square	Adjusted-R Square	Std. Error of the Estimate
1	.822 ^a	.676	.656	2.24297

Predictors: (Constant), PE, IT, RA, CM, LSI, PP, POW

Source: Estimation based on Survey

The ANOVA Table 7 below, demonstrations the overall model significance, and this analysis help us to make sure the above multiple linear regression model summary is statistically significant predictor of procurement performance. The result shows that, (F=33.748) and the P value was .000 this indicates P < 0.05. Therefore, the model is statistically significant in predicting the effect of determinants of procurement performance (procurement planning, contract management, information technology, work force professionalism, leadership involvement, resource allocation, and procurement ethics) on procurement performance (i.e., the regression model is a good fit of the data well) (see Table 7).

Table 7*Analysis of variance (ANOVA)*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1188.482	7	169.783	33.748	.000b
	Residual	568.493	113	5.031		
	Total	1756.975	120			

a. Dependent Variable: DVPP

b. Predictors: (Constant), PE, IT, RA, CM, LSI, PP, POW

Source: Estimation based on Survey

Bellow coefficients table show that procurement planning has a positive relationship that is statistically significant ($\beta=0.151$; $P<0.05$) to procurement performance (see Table 8). The result indicates that procurement planning has positive significant effect on procurement performance. It means the presence of positive significant effect of procurement planning on procurement performance in this study therefore increase procurement performance of public sectors at north Shoa zone finance and economic cooperation department (pool system). The result is consistent with the study conducted by Japheth (2013), concludes that procurement planning positively affected procurement performance at the Ministry of Energy. This also supported by (Mamiro 2010 and Rotich 2011) explained that procurement planning is very critical element in procurement process and contributes significantly to organizational performance.

Table 8*Regression Coefficients*

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.
	B	Std. Error			
(Constant)	.680	1.845		.368	.713
PP	.151	.068	.156	2.219	.028
CM	.156	.071	.137	2.184	.031
IT	.249	.075	.208	3.338	.001
POW	.241	.049	.359	4.894	.000
LSI	.199	.078	.178	2.545	.012
RA	.020	.090	.013	.222	.825
PE	.343	.076	.312	4.496	.000

a. Dependent Variable: DVPP

Source: Estimation based on Survey

The above coefficients table show that contract management has a positive relationship that is statistically significant ($\beta=0.156$; $P<0.05$) to procurement performance (see Table 8). The findings show that contract management has positive significant effect on procurement

performance. It means the presence of contract management in this study therefore has significance effect on procurement performance of public sectors at north Shoa zone finance and economic cooperation department (pool system). The study findings concur with research conducted by Julius (2016) results show that contract management is a significant factor that influence procurement performance. Similarly, the research studied by Japheth (2013), concludes that contract management positively affected procurement performance. These empirical studies are supported by different scholars such as Kibogo (2014), asserted that the Kenya government had been losing hundreds of millions of taxpayer's money through cancelled contracts, unfinished projects, poor service or product delivery, corruption and extended contract periods.

The above coefficients table show that information technology has a positive relationship that is statistically significant ($\beta=0.249$; $P<0.05$) to procurement performance (see Table 8). The study revealed that information technology has positive influence on procurement performance of public sectors at north Shoa zone finance and economic cooperation department. It means the presence of information technology in this study therefore has positive effect procurement performance of public sectors at north Shoa zone finance and economic cooperation department (pool system). This result is concurring with empirical research conducted by Titus (2016), results show that information technology is influencing factor of procurement performance. Mukuru & Moronge (2018), on their study concludes that information technology is important factor that affects procurement practices. Furthermore, the result is supported in theoretically thus Thomson and Jackson (2007), states that Manual processes are slow and bulky; they cannot support today's demand-driven enterprises; ICT adoption enhanced the process of effective tendering through advertising, sourcing reviews, prequalification, potential for cost savings and greater awareness of new development. Therefore, ICT needs to be adopted to ensure proper functioning of the procurement system and to enhance procurement performance as well as the whole organizational goals.

The above coefficients table show that professionalism of workforce has a positive relationship that is statistically significant ($\beta=0.241$; $P<0.05$) to procurement performance (see Table 8). The findings indicate that professionalism of workforce has positive significant effect on procurement performance. It means the presence of positive significant effect of professionalism of workforce on procurement performance in this study therefore increase procurement performance of public sectors at north Shoa zone finance and economic

cooperation department (pool system). The result is consistent with the study conducted by Mukuru & Moronge (2018), whose finding established that staff competency is important factor that affects procurement practices in the government ministries in Kenya. The finding also agrees with research conducted by Jackline & Shitseswa (2017), whose study showed that staff competence has positive significant influence on procurement performance of public sugar manufacturing firms in western Kenya.

The above coefficients table show that leadership involvement has a positive relationship that is statistically significant ($\beta=0.199$; $P<0.05$) to procurement performance (see Table 8). The result shows that leadership involvement has positive significant effect on procurement performance. It means the presence of positive significant effect of leadership involvement on procurement performance in this study therefore increase procurement performance of public sectors at north shoa zone finance and economic cooperation department (pool system). The result is consistent with the study conducted by Kemunto & Ngugi (2014), whose research has shown that support for leadership and management plays a critical role in improving organizational performance. Mukuru & Moronge (2018), on their study shares the above sentiments, whose research has shown that top management support is important factor that affects procurement practices.

The above coefficients table show that resource allocation has no statistically significant positive relationship that is ($\beta=0.020$; $P>0.05$) to procurement performance (see Table 8). The findings reveal that resource allocation has positive but insignificant effect on procurement performance. It means the presence of resource allocation in this study therefore has no significant effect on procurement performance of public sectors at north Shoa zone finance and economic cooperation department (pool system). This finding contradicts with empirical research that conducted by Julius (2016), whose study established that resource allocation is a significant factor affected performance of procurement as well as resource confirmation and resource allocation help to make procurement effective when carried out appropriately.

The above coefficients table show that procurement ethics has a positive relationship that is statistically significant ($\beta=0.343$; $P<0.05$) to procurement performance (see Table 8). The result indicates that procurement ethics has positive significant effect on procurement performance. It means the presence of positive significant effect of procurement ethics on procurement performance in this study therefore increase procurement performance of public sectors at north shoa zone finance and economic cooperation department (pool system). The study

finding concurs with Ngugi and Mugo (2012), study that the finding revealed that ethics affected procurement process. Additionally, Getnet and Tilahun (2014), assert that ethics has positive significant effect on effective public procurement implementation.

Conclusion and Policy Implication

The main objective of this study was to examine the determinants of procurement performance of public sectors: in the case of north Shoa zone finance and economic cooperation department (pool system). For examine determinants of procurement performance, the researcher's prior task was identifying the determinant factors of the procurement performance. These factors are Procurement planning (PP), contract management (CM), information technology (IT), and professionalism of workforce (POW), leadership involvement (LSI), resource allocation (RA), and procurement ethics (PE). The study concluded that these independent variables except resource allocation (RA) are important determinant factors that affect procurement performance of public sectors at north Shoa zone finance and economic cooperation department (pool system).

Procurement performance determinant scale adopted and validated in the study can be used by management to assess the level of Procurement performance in the public organizations. For example, public organizational leaders wanting to implement procurement management initiatives can conduct an in-depth self-assessment to determine the extent to which managers within their organizations understand how, what, and why procurement management practices enhance performance. This study provides an appropriate step-by-step approach for such an evaluation.

Public organization that proclaim themselves as procurement management adopters may not be adopting the complete and comprehensive determinants of procurement performance as their original proponents had conceived them. Implementation of just a limited portion of the real determinants of procurement performance could miss out on the more important determinants. Therefore, this research study could provide insights to public organizations in Ethiopia in terms of the need of orientation through seminars and forums on determinants of procurement performance. To avoid delays in supply and provision of services, timeliness work plans and contract periods have to be respected. Procurement as a function within an organization must be supported by top management to ensure that formulated regulations, guides and policies seek to enhance the organization's performance.

The research findings also suggest interesting directions for future research. The research pursued the effects of seven independent variables (planning, contract management, information technology, professionalism, leadership involvement, resource allocation, and procurement ethics). The generalizability of the study may be limited due to other variables that may affect public procurement performance. Therefore, further research needs to be done by considering variables like training, inventory management, records management, political interference, and so on.

In addition, this study focused on government organizations at one point in time. Therefore, the next research could employ longitudinal study focusing on other sectors found in Ethiopia, both public and private to ascertain whether these findings would be the same or different.

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