



FACTORS AFFECTING THE EFFECTIVENESS OF PUBLIC PROCUREMENT PRACTICE IN DEBRE MARKOS UNIVERSITY

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ABSTRACT

The main purpose of the study is to identify factors affecting the effectiveness of public procurement practice in DebreMarkos University. In this study the researcher tries to see the correlation between the independent variable (implementation of procurement plan, organizational culture, ICT adoption, staff competency and operational procedures) and dependent variable (effectiveness of public procurement practice which is on time delivery, the right quality, right quantity, right source, right price and the level of customer satisfaction). The study assesses theoretical, empirical and conceptual review of related literature. The data gathering tools were primary and secondary data which were questioner and focus group discussion from 110 respondents using self-administered questionnaire and 15 interviewers and the final response rate was 90.16%. The research design were descriptive (frequency and percentage) and explanatory design (Pearson product moment correlation and multiple linear regressions) analysis with the help of SPSS 16.0 software packages were used and also uses quantitative and qualitative research approach or mixed approach. The correlation result (0.85) shows there is strong correlation between outcome variable and predictor variable (implementation of annual procurement plan, staff competency, organization culture, ICT adoption and operational procedures).The regression result ($r^2 = 0.74$) also shows predictor variables explain effectiveness of public procurement practice and all predictor variables significant and high impact on effectiveness and the reaming factors which account 0.26which

were unexplored variable affect effectiveness of public procurement. The finding revealed that effectiveness of public procurement practice strongly affected by implementation of procurement plan, staff competency, organizational culture, ICT adoption and operational procedures. And the result of the finding shows in DMU there were poor in procurement plan implementation, staff competency, organizational culture, ICT adoption and operational procedures which lead less effectiveness in public procurement practice.

Keywords: Public Procurement practice, Effectiveness, Efficiency

1. INTRODUCTION

Procurement can be defined as “...the acquisition, whether under formal contract or otherwise, of goods, services and works from third parties by contracting authorities”(Dobler, 1998).

Procurement is not simply the act of buying but “encompasses a complex range of operational, business, information technology, safety and risk management and legal systems, all designed to address on institution needs”(Ombaka, 2009).

An efficient public procurement system is very important to the development of African countries and is a tangible implementation of their national commitments to making the best possible use of public scarce resources (Basheka, 2009). As per the organization for Social and Economic Development (OECD, 2010), on the average developing countries public procurement accounts for up to 50% of GDP and 20% of public expenditures. This huge budget allotment makes as procurement as a heart of government operations.

“In Sub Saharan African Countries, studies have shown that out of the total public resources, procurement of goods, works and services account for about 70 percent of the total public expenditures”Gizachew, A. (n.d). as cited by (Anteneh, 2015).

Procurement is the nerve center of performance in every public or private institution, thus needs a tight system to be followed and adopted. Many procurement activities still poor in procurement planning and implementation, lack of proper direction, poor organizational culture, poor operational procedure/management, lack of ICT adoption, and not having competent, trained and qualified procurement specialists who are competent to conduct and manage the procurement process in a professional, timely and cost effective manner (Wanyonyi & Muturi, n.d).

“The efficiency and effectiveness of a public procurement system determines whether citizens get value from public expenditures. Procurement, when it is effective, improves service delivery, enhances trust between government and citizens, and assists in the development of a competitive private sector,” (Olive, 2014).

According to a report prepared by the Ethiopian Procurement and Property Administration Agency, public procurement was started in Ethiopia in 1940 E. C, and the recent Ethiopia government, to serve its citizens, in which much amount of money is invested (more than 65% of the government budgets), to maximize government economic value and enhance procurement and property administration and, established the Public Procurement and Property Administration Agency under Proclamation № 649/2009.

According to the Public Procurement and Property Administration Agency manual, since public organization entirely depends on the government budget and the organization’s success comes mainly from appropriately spending the procurement budget, the public organizations should manage the public procurement systems by ensuring value for money (PPA Manual, 2010).

Since DebreMarkos University is a federal government institution, its budget is allocated and approved by Ministry of Finance and Economic Development. DMU Annual budget for 2008 E.C were 475 million and from this annual budget 66 percent used for procurement (source: DMU 2008 E.C budget index). The University is responsible to perform the procurement activities according to the federal government procurement guidelines and manual. High amount of budget allocated for procurement and the strict government regulations and procedures demand careful and effective procurement management. The University has centralized and decentralized purchasing policy. The centralized policy concentrated to the Federal Procurement and Property Administration Agency and the University also decentralized to the colleges (source: DMU Procurement department manual).

Studies have been carried out in the past concerning procurement especially in the public sector in Africa but, a few related studies were done in Ethiopia and also as the knowledge of the researcher never found study conducted particularly in DMU concerning factors affecting the effectiveness of public procurement practice.

Different researcher in different country identified problems in the efficiency and effectiveness of public procurement and this study assessed the effectiveness of public procurement practice particularly in DMU, and come up with these ideas and identify the factors affecting the effectiveness of public procurement practice in DebreMarkos University. In addition, this research aspires to be pioneer in triggering further researches on the issue since it is untouched area by researchers.

Statement of the Problem

Public procurement is vital to government service delivery, yet constraints (different factors) affect its performance. Despite that Ethiopian Government trying to improve the procurement system, it is still poor in procurement planning and implementation, poor organizational culture, ICT adoption, bureaucratic procurement procedures, poor quality goods and services and poor internal operation system. Suppliers complain about the capability of public sector buyers(Chimwani, Iravo, & Tirimba, 2014).

Although public procurement is perceived as a major function of government, and although governmental entities, policy makers and public procurement professionals have paid a great deal of attention to procurement improvements, public procurement has been a neglected area of academic education and research (Thai, 2001).

Many public procurement activities suffer from in implementing procurement plan, poor in organizational culture, poor internal operation system, poor in Information communication technology adoption and most importantly not having trained and qualified procurement specialists, who are competent to conduct and manage such procurements, in a professional, timely and cost effective manner(Kiama, 2014).

In Ethiopia, there is a problem in preparing and properly implementing a procurement plan in public institutions; most organizations have been undertaking too much unjustified and unplanned purchase in each budget year (Yirga, 2011).

According to Tewodros(2007) research finding shows there is ineffective and inefficient in purchasing practice in Addis Ababa University college of commerce(AAUCC) (the Right quality, the right quantity, the right time, the right source and the right price),(Chekol & Tehulu, 2014),identified factors leading effective public procurement implementation in Amhara region

(familiarity, accountability, transparency, ethics and efficiency), research which was done in Kenya identified factors affecting performance of procurement functions (strategic planning, organization culture and regulation enforcement), (Wanyonyi & Muturi) and also studies in Zimbabwe shows there are challenges in implementing public procurement practice in developing countries (Musanzikwa, 2013). So, similar to other researchers which done in different area about public procurement the focus of this study is to assess what are the factors affecting the effectiveness of public procurement practice in DMU.

This study most importantly tried to identify practical gaps in the effectiveness of public procurement practice in DMU. The rational or central problems that need solution are, procuring at the right time, with right quality, the right quantity, the right source the right price and satisfying customers by deploying proper implementation of procurement plan, high competency of procurement officers in using annual procurement budget, team work between staffs, cooperation between colleges and procurement departments', efficient budget utilizations since huge amount of budget spent at the end of the budget year that leads inefficient use of public resource and the federal government procurement directives and manuals lead bureaucratic operations and fill and contract management system in DMU. As a result, this study sought to fill this research gap by identifying the factors affecting the effectiveness of procurement practice in DMU. The directive by the Federal Democratic Republic of Ethiopia (FDRE), to adhere to public procurement is aimed at increasing effectiveness and efficiency and thus enhances competitiveness. To address the issues by stating the problem as the factors affecting the effectiveness of public procurement practice in DebreMarkos University in line with this, the study attempts to answer the following questions.

- How implementations of annual procurement plan affect the effectiveness of public procurement practice?
- What is employees' capacity/staff competency in public procurement effectiveness?
- How does organizational culture affect the effectiveness of public procurement practice?
- What is the effect of ICT adoption on the effectiveness of public procurement practice?
- How operational procedures affect the effectiveness of public procurement practice?

Objective of the Study

The general objective of this study was to examine factors affecting the effectiveness of public procurement practice in DMU. The specific objectives of the study in DMU are;

1. To determine the proper implementation of procurement plan on effectiveness of public procurement practice.
2. To examine the extent in which competency of staff influence the effectiveness of public procurement practice.
3. To assess the impact of organizational culture on the effectiveness of public procurement.
4. To assess the effect of ICT adoption on the effectiveness of the public procurement practice.
5. To scrutinize the effectiveness of operational procedures on public procurement practice.

Hypothesis test

The hypothesis testes the significance of the predictor over the outcome variable in DMU

H1: Implementation of annual procurement plan has significance effect on the effectiveness of public procurement practice.

H2: Employees' capacity/staff competency has significance effect on effectiveness public procurement practice.

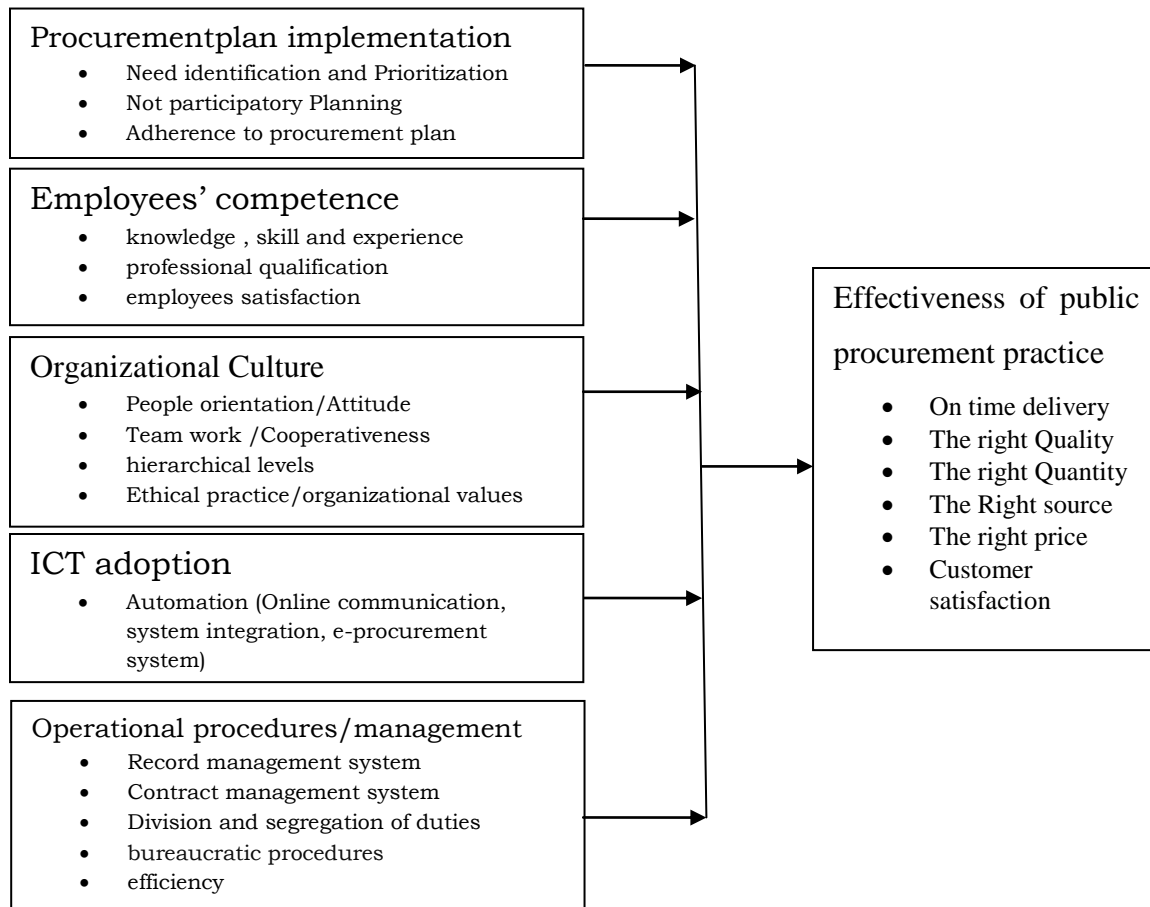
H3: Organizational culture has significance effect on effectiveness of public procurement practice.

H4: ICT adoption has significance effect on the effectiveness of public procurement practice.

H5: Operational procedures have significant effect on effectiveness of public Procurement practice.

2. Conceptual Framework

This part of the study identifies dependent and independent variables by deep assessment of theoretical and empirical framework from related literature review in the factors affecting the effectiveness of public procurement practice. The dependent variable being effective procurement practice and some of the parameters to be used in assessing the effectiveness of the procurement practice are: reduced lead time, satisfied customers, employee competency, and value for money, quality goods, and service and works. The independent variables are each discussed in this literature review. From this, the researcher develops their own model from different sources. This are:-



(Dependent variable)

(Independent variable)

Source: Kiage (2013), Wanyonyi and Muturi (n.d) and (Bashuna, 2013) Adapted from with Modification.

Figure -1 Conceptual Framework

Description of Variables

Implementation of annual Procurement plan: - Procurement planning is the process of deciding what to buy, when and from what source or doing works as planned (Basheka, 2008).

Organizational Culture: - "...the shared values, principles, traditions, and ways of doing things that influence the way organizational members act" (Kondalkar.v, 2007).

Staff competency: - is the applied knowledge and skills, experience and the behavior required to get things done very well in procurement staffs (Armstrong & Baron, 1995).

ICT adoption: - the process of capturing, transmitting and displays data and information technology and develop and communicating by using ICT in sated of manual system for the procurement department (Muthuri, 2014).

Operational Procedures: - the internal control and procurement procedure be followed by the entity.

Effectiveness of Public procurement practice: - as much as possible satisfying customer by providing and acquiring goods, services and works at the right quality, quantity, price, source, time and satisfying customers with high cooperation (Tewodros, 2007).

3. RESEARCH METHODOLOGY

The descriptive and explanatory designs were employed in the study. The design was used to describe and see causal relationship between the independent variables with dependent variable. In addition, the researchers applied both quantitative and qualitative research approach because the data is collected by using open ended questioners and focus group discussion questioners in addition to closed ended questioners.

The study population were targeted the academic and administrative staffs of middle, lower level managers and procurement departments of DebreMarkos University main campus. The researchers were used purposive sampling techniques to select participants having middle and lower level managerial positions in order to get appropriate information from colleges and directorates. This study took all the middle and lower level managers whose numbers were 122 from the total populations of 2000 staff in DMU. Sample sizes of 122 respondents were for survey questionnaire and 17respondents for focus group discussion question using purposive sampling technique. Questionnaires were distributed for colleges and directorates of 47 middle level managers including deans, vice deans, directors and vice directors and 75 for lower level managers which includes department heads, college research coordinators and registrars, directorate team leaders and college administrative who have more responsibility and frequent contact with procurement department/unit and from the total distributed questioners of 122, 42 middle level and 68 lower level managers totally 110 (90.16%)questionnaire returned the rest 12 question was left uncollected and for focused group discussion questions(i.e.all (100%) procurement unit selected

purposely 17 staffs by dividing in to three groups according to their work teams to find further information about procurement practice) and 15 (88.23%) group members discuss for the interview questions.

The source of data for the study was primary and secondary source. Primary data were collected from the main campus of DebreMarkos University based on the respondent's feedback. The secondary information obtained from files, Reports, office manuals, websites, articles journals and books were used to provide additional information where appropriate to make the study fruitful. Structured questionnaires and focus group discussion question were used to collect primary data. The questionnaire contained open ended (36) and close-ended(1) items of five point Likert scale type with five points ranging from one to five, representing strongly agree(5) to strongly disagree(1). Standardized questionnaires were adopted from different sources, mainly the questionnaire had been adopted from Gizachew, A.(n.d.) and (Bashuna, 2013)with little modification in their study on internal factors affecting Drug procurement processes and factors affecting effective Management of the procurement function respectively. The questionnaire and focus group discussion question were prepared and questionnaires reliability checked by pilot test Cranbach's alpha and its validity checked by management instructors in addition to my advisors. The questionnaire were prepared in English because all of the target respondents education level was degree and above.

To measure the reliability of the instruments used, Cranbach's alpha was employed. Pilot test was used to pre-test or try out a research instrument. The sample size of 10%-12% is a reasonable number of participants to carry out for pilot test(Baker & Risley, 1994).Therefore, in this study from 122 samples 10% of 12 respondents taken for pilot test to check the consistency and from distributed question similar and redundant questions avoided and the pilot survey Cranbach's alpha is 0.7 for the predictor variable and 0.87 for the outcome variables and the main survey respondents predictor variable Cranbach's alpha is 0.83 and the outcome variable alpha value is 0.76 which is reliable and greater than or equals to 0.7.

To check the pilot test of the population the researcher selected proportionate participants purposively from lower and middle managers that characteristics had the non-probability sample to compare these outcomes. To guard against this, the researcher conducted pilot studies to establish trust and respect with the participants.

The collected primary data were processed by descriptive (frequency, percentage and qualitative description) and inferential statistic (Pearson product moment correlation and multiple linear regression) analysis with the help of statistical package for social science (SPSS) version 16.0 software packages.

In this, study, person's correlation coefficient was used to determine the relationship between the factors affecting public procurement practice (annual procurement plan implementation, staff competency, organizational culture, operational procedures and ICT adoption) on effectiveness of public procurement practice. Person correlation was used to identify the correlation between independent and dependent variables.

Multiple regression analysis was used to identify the cause and effect between predictor variable (annual procurement plan implementation, staff competency, organizational culture, operational procedures and ICT adoption) and the outcome variable which was the effectiveness of public procurement practice (the right quality, price, source, quality, time and customer satisfaction). It is used because the study has multiple predictors and single outcome variables. This model was used to examine how multiple independent variables were related to a dependent variable as well as the actual predictive ability of the model for future cases. If there is more than one independent variable, there may be more accurate prediction on the dependent variable.

The equation of multiple regressions on this study was generally built around two sets of variable, which were dependent variables (effectiveness of public procurement practice and independent variables (annual procurement plan implementation, staff competency, organizational culture, operational procedures and ICT adoption). The basic objectives of using regression equation on this study were to make the researcher more effective at describing, understanding, predicting and controlling the stated variables. The following multiple linear regressions model was used to test the research question:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \epsilon \dots\dots\dots$$

Equation 0.1

Where: β_0 is the regression intercept; $\beta_1 - \beta_5$ are the regression coefficients; Y is the dependent variable (Effectiveness of public procurement practice in DMU); X1 is implementation of procurement plan; X2 is employee's competence; X3 is organizational culture; and, X4 is ICT adoption and X5 is operational procedures and also 'ε' is the **error term**.

4. RESULTS AND DISCUSSION

Correlation Analysis

The Results of correlation analysis

Variables		annual procurement plan implementation	Staff competency	Organizational culture	ICT adoption	operational procedures	effectiveness of public procurement practice
annual procureme plan implementati	Pearson Correlation Sig. (2-tailed) N	1 110	.683** .000 110	.541** .000 110	.447** .000 110	.601** .000 110	.713** .000 110
staff competency	Pearson Correlation Sig. (2-tailed) N		1 110	.620** .000 110	.551** .000 110	.675** .000 110	.769** .000 110
organizational culture	Pearson Correlation Sig. (2-tailed) N			1 110	.520** .000 110	.537** .000 110	.683** .000 110
ICT adoption	Pearson Correlation Sig. (2-tailed) N				1 110	.534** .000 110	.557** .000 110
operational procedures	Pearson Correlation Sig. (2-tailed) N					1 110	.716** .000 110

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

Source: Own survey results, 2016

From the above table finding shows that there is a positive correlation between the dependent variable (effectiveness of public procurement practice) and independent variable (implementation of annual procurement plan, staff competency, organizational culture, ICT adoption and operational procedures). When the correlation is 1 or -1, a perfectly linear positive or negative relationship exists; when the correlation is 0, there is no relationship between the two sets of data (Coetzee, 2003). If the correlation between two variables is from 0 to 0.19, very weak, from 0.20 to 0.39, weak, from 0.40 to 0.59, moderate, from 0.60 to 0.79, strong and from 0.80 to very strong (Evans, 1996). As a result this study finds that there is strong correlation between dependent and independent variable and also moderate correlation between independent variables. When considering the correlation between the independent variable and dependent variable (effectiveness), the larger the magnitude of the correlation, the stronger the linear association. This implies the variables are significant at $p = 0.000$ significance at 99% confidence level which is $p \leq 0.05$ and Pearson Correlation result for all variables are positive. Multi collinearity is not a threat if a correlation value is less than 80% (Kline, 1998). Since, the correlation between independent variable is positive and less than 0.8 and no multi collinearity problem exist.

Regression Analysis

The Results of Regression analysis

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.	Co linearity Statistics	
	B	Std. Error	Beta			Toleranc	VIF
1 (Constant) (B_0)	.124	.109		1.134	.259		
annual procurement plan implementation (B_1)	.200	.062	.232	3.201	.002	.485	2.063
staff competency (B_2)	.208	.062	.280	3.380	.001	.370	2.700
organizational culture (B_3)	.209	.062	.229	3.361	.001	.545	1.835
Information communication technology adoption (B_4)	.066	.078	.054	.843	.401	.613	1.630
operational procedures (B_5)	.180	.056	.236	3.227	.002	.473	2.113

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.	Co linearity Statistics	
	B	Std. Error	Beta			Toleranc	VIF
1 (Constant) (B ₀)	.124	.109		1.134	.259		
annual procurement plan implementation (B ₁)	.200	.062	.232	3.201	.002	.485	2.063
staff competency (B ₂)	.208	.062	.280	3.380	.001	.370	2.700
organizational culture (B ₃)	.209	.062	.229	3.361	.001	.545	1.835
Information communication technology adoption (B ₄)	.066	.078	.054	.843	.401	.613	1.630
operational procedures (B ₅)	.180	.056	.236	3.227	.002	.473	2.113

a. Dependent Variable: effectiveness of public procurement practice

Source: Own survey results, 2016

From this regression result this liner mathematical model developed:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \varepsilon$$

Where, $\beta_0=0.124$, $\beta_1=0.200$, $\beta_2= 0.208$, $\beta_3= 0.209$, $\beta_4= 0.066$, $\beta_5= 0.180$, $\varepsilon=0.264$

$$\text{So, } Y = 0.124 + 0.200X_1 + 0.208X_2 + 0.209X_3 + 0.066X_4 + 0.180X_5 + 0.264$$

At 5% level of significance and 95% level of confidence staff competency had a 0.001, implementation of annual procurement plan 0.002, operational procedures 0.002 organizational culture 0.001 and ICT adoptions had a 0.402 significance level and except ICT adaption all factors are significance (accept all hypothesis except ICT adaption) and the data findings analyzed Beta also shows that the most predictor factor is staff competency (beta=0.280) followed by operational procedures (beta=0.236) and implementation of annual procurement plan (beta=0.232) and the fourth and fifth were organization culture (beta=0.229) and ICT adoption (beta=0.054) respectively . There is no Multi Co linearity between variables since, the tolerance value is greater than 0.1 and VIF (variance inflation factor) not greater than 10. Multi co linearity is not a threat if tolerance value greater than 0.1 and VIF value not greater than 10 (Field, 2013) and (Liu, 2010) respectively.

The regression results in this study revealed that staff competency in public procurement processes have a need for knowledge and clarity of procurement rules is a very important factor. Assigning competent and skillful persons to the procurement department and familiar with rules & regulations can be improved the effectiveness of public procurement practice and also staff competency has positive and strong significance impact on effectiveness of public procurement practice. This finding is consistence with the other researchers like (Kiage, 2013), (Wanyonyi & Muturi)and(Chilikona S. and Muturi W, 2015).

The finding of this study furthermore revealed that proper implementation of annual procurement plan has a positive ($\beta=0.232$) and significant ($P<0.01$) association with effectiveness of public procurement practice and proper implementation of annual procurement plan increase effectiveness with planned need requisition, market assessment study, adequate specification preparation, participatory planning with different departments and developing a mechanism of strict follow up and expediting of the actual suppliers. Procurement planning had positive and significant effect on procurement performance (Kiage, 2013).

In addition, operational procedures in the internal procurement system have positive ($\beta=0.236$) and significant ($P<0.01$) association with effectiveness of public procurement practice by proper contract management; appropriate file record management, avoiding unnecessary bureaucratic procedures and increasing use of budget efficiency and value for money. Operational procedures had positive and significant influence on public procurement performance if adduct and good practice implemented (Chimwani et al., 2014).So the finding of this study is consistence with the above researcher.

Organizational culture in public procurement has a positive ($\beta=0.229$) and significant ($P<0.01$) association with effectiveness of public procurement practice. This finding is similar to the finding of (Wanyonyi & Muturi). This implies responsible officials in public procurement should strive to build good organization culture like people's attitude, ethics, transparency, accountability, and teamwork between procurement unites and departments that will contribute to the effectiveness of public procurement practice.

Finally ICT adoption has positive ($\beta=0.054$) and insignificant ($P<0.01$) effect on the effectiveness of public procurement practice in order to reduce rotten activates, to save time and to

increase transparency. This finding supported by the previous researcher of (Bashuna, 2013),(Wanyonyi & Muturi) and Chilikona S. and Muturi W.(2015).

The Results of Regression analysis Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.858 ^a	.736	.724	.22054	2.072

Source: Own survey results, 2016

From the above regression Table, give the estimated parameters of the model.

R² of 0.736 can be interpreted as 73.6% of the variation in the dependent /outcome variable (effectiveness of public procurement practice) can be explained by variation in independent /predictor variable (implementation of procurement plan, staff competency, organization culture, operational procedures and ICT adoption), where as the others (26.4%) are attributed by other variables. Hence the five independent variables explain 73.6% of the internal factors affecting public procurement practice with a particular reference to DebreMarkos University.

Durbin- Watson test check the auto correlation of the data and if the value of Durbin- Watson test 1.5 to 2.5 shows that there is no auto-correlation in the data (Ayyanger,2007). AS a result in this study the Durbin- Watson test result is 2.07 as a result there is no auto-correlation between the data.

The Results of Regression analysis variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.119	5	2.824	58.054	.000 ^a
	Residual	5.058	104	.049		
	Total	19.177	109			

Source: Own survey results, 2016

As shown in the above table the significance value is 0.00 which is less than 0.01 thus model is statistically significance and fits with the data in predicting how procurement plan implementation, staff competency, organizational culture, operational procedures and ICT adoption affect the effectiveness of public procurement practice.

5. Major Findings

- ✓ The 1st factor affecting effectiveness of public procurement were staff competency (beta=0.28) followed by operational procedures (beta=0.236) and implementation of procurement plan (beta= 0.232) respectively and the 4th and 5th factor are organizational culture (0.22) and ICT adoption (0.054). All of these factors have positive effect on effectiveness of public procurement practice and except ICT adaption all are significance effect on effectiveness of public procurement practice and using ICT in procurement reduce ordering time, enhance effective tendering through advertisement and provide excellent service in transparent manner, implementing annual procurement plan reduce bulky purchase at the end of budget year, products purchased with better quality and price, that lead increase the satisfaction of customers. Good operational procedure/management reduces the processing time, and increase efficiency and better staff competency is the base for procurement activity that needs knowledge, skillful, empowered, and motivated workers required and organizational culture plays important role for coordination and cooperation, creating good ethical standards and developing good attitude between organization employees.
- ✓ In DMU organizational culture somewhat, the presence of better management accessibility and the management promote cooperation between departments, whereas weak controlling for unethical practice, poor transparency and accountability, no regular meeting about public procurement with internal and external customers and extremely poor cooperation between procurement unites with other departments and other departments showed negative attitude to procurement department and after need request, all works left for procurement department rather than working in cooperation.
- ✓ The University tries to improve ICT adoption but still poor in using ICTfor procurement department like automation, e-procurement and modern file system.
- ✓ Inefficient and ineffective use of allocated budget due to miss match between departments need and asking a lot of need at the end of budget year and also the budget is approved by MOFED that much amount of budget is allocated at the end of budget year which lead materials purchased with poor (quality, quantity, source with the right time with economic value of money). The contract is managed with assigned responsible person but not managed properly because the assigned person lake skills, and experience and also poor file management system due to: the presence of bulky files, office discomfort for filling, poor post purchasing evaluation process.

- ✓ In the DMU, Poor implementation of procurement annual plan is due to:
 - Unplanned requisition from departments
 - Procurement unites focus on retune activities rather than planned activities.
 - Flirty of bid announcement in different times
 - Suppliers stock out items
 - Poor preparation of specification
 - Not having participatory procurement planning
 - Variation of department needs in different time and forcing to changing the plan,
 - poor knowhow about procurement rules and regulations from departments
- ✓ The finding reveled that there was Lack of familiarity of rules and regulations' regarding public procurement in middle managers, lower managers and within procurement unites. So, most Procurement experts lake skill, less motivated, less empowered, and low competent due to lack of training, high frustration and anxiety, lack of confidence, lack trust between procurement experts.
- ✓ There was Poor organizational culture in the University in holding regular meeting with internal and external customers, poor follow up in preventing unethical issues and developing ethical principles and standards from higher officials, Lack of coordination and communication between store and procurement departments and from other departments that leads bulky purchase with unwanted materials which lead obsolescence, and also according to interviewers, customer attitude towards procurement department is negative and considering the procurement activities left only for procurement department since procurement needs high cooperation with manager, employees and suppliers.
- ✓ From the finding DMU was poor in ICT infrastructure development which given less attention to automat procurement process and in using e – procurement system. Since,ICT adoption improves transparency and accountability since, insignificance in effect on effectiveness of public procurement in DMU.
- ✓ From the finding there were problem in operational procedures in which most of the time at the end of budget year much amount of budget spent for procurement due to poor implementation of purchasing activities and much amount of money allocated at the end of budget year. Finding records and files from procurement department is the difficult task and it takes long time and also the long way procedure PPPA agency procurement directives and manuals is one of the factors that affect public procurement effectiveness. According to the

interviewers there were some reasons for delay in acquiring materials with the right time, right place, right quality, right quantity and the right place which were supplier fill list price without market analysis, the procurement unites strictly following the purchasing process rather than flexible, out of stock items, poor specification of items, quoting price with time limit, quoting price without specification considering the room for cheating which leads ineffective operational procedures/managements system.

- ✓ From the correlation analysis result it can be concluded that the predictor variable are highly correlated with the outcome variable and the correlation result $r = 0.85$.
- ✓ Furthermore the regression analysis it is concluded that the predictor variable explains r^2 value 73.6% of the outcome variable.
- ✓ Finally, it can be conclude customers were not satisfied by procurement department and the procurement units have no customer assessment mechanisms to improve procurement system and the research conducted in this study found that effectiveness of public procurement affected by factors affecting public procurement practice.

6. Recommendations

In light of the findings the researcher forwards the following suggestions for the concerned body:

For higher officials and managers:

- As the finding reveled that there was poor staff competency due to familiarity, empowerment and motivation as a result, Staff competency can be improved by providing continuous training for procurement staffs by inviting professional expertise in procurement, motivate and empowered employees and also should train and create awareness about procurement directives, manuals and procedures, provide the access for rules and regulation for internal customers and also higher officials enhancing the purchasing professionalism by improving technical knowledge and adhering to the highest ethical standards since, it is an important element to improve procurement effectiveness.
- Form the finding the researcher concluded that the presence of poor organizational culture in people orientation, cooperativeness and ethical practice. As a result, the University higher officials should develop comfortable culture among procurement teams and departments by creating awareness about procurement standards and develop the means and the way to prevent unethical behaviors by giving all responsibilities and building a culture of trust and give necessary incentives like salary improvement for procurement experts.

- ICT adoption is one of the problems for the effectiveness of public procurement practice in DMU so, higher officials strive to ICT adoption by benchmarking others which have better ICT infrastructure development hence, it improves transparency and accountability as well as reduces time, cost and advanced record management system to procure materials and improve customer satisfaction and procurement effectiveness.
- In the Operational procedure efficiency or economic value of money was one the challenge for effectiveness of public procurement practice since, the University spent much amount of money at end of budget year and become difficult to go in line with annual procurement plan so, Minister of finance and development should approve the annual procurement Budget in advance and federal procurement agency should announce which materials are bought centrally and which are not and communicate each stage with the University procurement unite and also bureaucratic procedures is another challenge for operational procedure as a result the PPPA agency should improve procurement directives and manuals by discussing with procurement practitioners.

For procurement unit:

- As the finding reveled that there were poor in implementations of annual procurement plan as a result, Procurement department should go in line with procurement plan and need strict follow up to implement procurement plan within specified procurement plan and procurement method by assigning skill full and experienced persons in achieving the procurement plan.
- As the finding showed procurement staffs were less motivated, less experienced and lacks skill so, to fill the gap Procurement staff should develop confidence rather than frustration on their work by reading public procurement manual and directives, empowered themselves and distributing the workload among the experts accordingly in order to reduce risks and increase accuracy of the work.
- There was poor organizational culture in coordination with departments so; there should be a means of clear communication between procurement and property administration department, to reduce the purchase of redundant and unwanted need requests, creating good coordination between internal and external customers by holding regular meeting and discussion in solving problems about procurement activities of the department.
- Operational procedure were on the challenge in record management, contract management, buyer-supplier relationship and post purchase evolution system as a result, Procurement

department should develop adequate record of files which is easily accessible to any users, good Contract administration by assigning skillful contract personal which needs strict follow up and control, Creating good buyer supplier relationship with 1st Sample quality check before materials transported and received from supplies since it reduces the cost of suppliers and increase customer satisfaction and improves future cooperation between buyers and suppliers and also Post purchase evaluation system should be developed in their purchasing process because it helps to learn from the past and to strengthen the future purchase.

For internal users:

- As much as possible reduce un planned purchasing request and also should request their needs in accordance with annual budget and whenever the work plan changes departments should communicating with procurement department.
- The internal users should know the type of materials that requested and the existence of them in the market.

Finally, the researchers recommend, effectiveness of public procurement can be enhanced by reducing the factors affecting public procurement practice.

Area of further research

This study directly focuses on internal factors affecting effectiveness of public procurement practice. However, the external factors affecting the effectiveness of public procurement is not studied. Future research will also made to investigate the other factors affecting the effectiveness of public procurement practice such as Resource allocation, job rotation, and external factors like political, legal, economic, cultural, and technological factors.

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