

Factors Affecting the Effective Functioning of Public Procurement in Public Universities of Ethiopia

Tiruaalem Awoke, Amanpreet Singh



Abstract: *Ethiopian Universities are fully dependent on government's budget and procurement budget comes from tax payers. However, there is misappropriation of procurement budgets. Recently, procurement budget deficit has been observed in Public Universities of Ethiopia and 10 to 100 million Ethiopian birr have been wasted through non-transparent procurement systems. Employees also have been complaining about the quality of goods and services in every meetings held. Delays, poor qualified products and services, over pricing compared to the actual market price are the basic problems observed in procurement functions. Hence, this study aimed at identification of the basic factors that affect the proper functioning of public procurement practice in Public Universities. Analysis was made based on 351 selected respondents from 9 of the public Universities. Those employees who have direct relationship with public procurement were selected from top, middle and lower levels. Specifically, procurement workers, procurement and audit committee and internal auditors were participated. Multiple regression was employed and data was run by SPSS version 20. Tables were used for ease of interpretation. The regression results revealed that, public procurement policy, legal environment, organizational structure, employee ethics, ICT and management of suppliers have positive significant effect on the effective functioning of public procurement practice. However, budgetary allocation has insignificant and negative effect on the effective functioning of public procurement practice. Amending existing procurement guideline, open discussion with the nearby suppliers, continual ethics training for procurement workers and installing ICT platforms were found to be the possible recommendations.*

Key words: *Public procurement Function, Procurement Policy, Legal environment, Organizational Structure, Employee Ethics, ICT, Supplier Management, Budgetary Allocations.*

I. INTRODUCTION

Procurement is a powerful driver of development of a nation. In contemporary times, it has been seen as value-adding and solution providing business function which aids organizations as a means of profitability, corporate growth and competitive advantage [13].

It is the process of acquisition by means of contractual arrangements after the public competition of goods and services, works and other supplies by the public entity [5]. For most people, public procurement is solely buying.

However, as [27] confirmed, procurement is not simple exchange of goods and services but it passes through very significant and important functions; it raises issues of trade, ICT, wellbeing of users, management of the possible risks, laws etc. Overall, procurement is an important and expensive business activity for organizations [21].

In developing countries, the current attention of government in collaboration with institutions is achieving millennium development goals particularly poverty reduction, improvement of health, education and infrastructure development and others. Hence, all these can be achieved through effective public procurement function [1]. Effective procurement process should be efficient, transparent and accountable to achieve its objective [28]. Recent studies in public procurement revealed that public procurement effectiveness leads efficient management of public money which is obtained from tax payers. This totally enhances the overall public sector effectiveness [1]. African countries spent 70% of their annual budget for procurement of goods, services and works for institutional uses [1]. The main source of procurement budget in public organizations is mainly tax payers [37]. Ethiopian Higher educational institutions obtain the total procurement budget from government [39]. According to [14], 40% of the total education budget goes to Public Universities of Ethiopia; they have lion shares in this regard. However, Universities procurement has been problematic.

Even though higher education institutions in Ethiopia absorb huge amount of funds, they are highly characterized by poor quality of education, weak in research outputs and inflexibility in management [38]. It is also reported that most University procurement process was problematic. Recently, procurement budget deficit has been observed in Public Universities of Ethiopia. Employees also have been complaining about the quality of procured goods and services in every meetings held in Universities. The purchased items are below the quality specification; hence, it has been creating an adverse impact service delivery. Public Universities in Ethiopia have three basic common goals; providing quality education, conducting problem solving researches and delivering community services. In achieving of all these goals, they were found to be weak. Effective public procurement practice is one among other strategies that assists for the goal achievement of Universities. Hence, it was found out that research on public procurement practice was needed.

Manuscript received on February 10, 2020.
Revised Manuscript received on February 20, 2020.
Manuscript published on March 30, 2020.

* Correspondence Author

Tiruaalem Awoke*, Development Cooperation from South Korea, Ewha Womens University.

Dr. Amanpreet Singh, Assistant Professor, Punjabi University, School of Management

© The Authors. Published by Blue Eyes Intelligence Engineering and Sciences Publication (BEIESP). This is an [open access](http://creativecommons.org/licenses/by-nc-nd/4.0/) article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

Local studies on public procurement was conducted by [9] on Assessment of Factors Influencing Good Pharmaceuticals Procurement Practice Employees' Perception, The Case Of Pharmaceuticals Fund And Supply Agency of Ethiopia; [20] on public procurement practices and challenges in Ethiopia, evidence from selected public organizations; [3], [10], [16], [34], and [39]. However, none of them adequately addressed the procurement issues the basic impediments public procurement functioning in public Universities of Ethiopia. [10] also suggested that to achieve best procurement performance, researches in the area are highly critical. [4] also stated that the challenges of procurement function are increasing these days due to the huge investment of governments and donors. So, it is necessary to profile factors that influence procurement functions.

II. STATEMENT OF THE PROBLEM

In many African countries, attention to effective management of public resources was not given enough attention [7]. World Bank (WB) usually recommends developing nations to improve their procurement systems [23]. However, failure to implement the recommended procurement practices resulted in poor procurement performance. High operation costs, poor inventory control, unacceptable supplier appraisals, and standards, are the hurdles in public procurement functioning.

As reports show, the procurement budget in many countries is huge. For example, in developing countries like Kenya, it is 234 billion Kenyan shilling and it reaches 60 - 70% of the country's GDP every year in Ethiopia and among this, 40% of it goes to public Universities of Ethiopia. In many institutions, however, there is no effective implementation of public procurement practice. It has been reported that 10 to 100 million Ethiopian birr has been lost every year in Public Universities due to non-transparent procurement systems. Tender awarding prices are also three fold of the actual market price. This has been affecting the three major goals of Public Universities specifically by weakening the quality of education, the quality of the output of researches and limited community services. These totally hamper the overall development of a nation. By considering these unethical practices in public procurement, it has been considered as a best way of corruption among government officials and unethical suppliers [40].

Empirical studies have shown that inefficient procurement practice has been seen both in developing and developed nations. Since public procurement is highly exposed to corruption, recent studies have been given attention to it. [35] reported that lack of experience in procurement workers has been leading countries for huge loss of money. As an example, USA had lost huge amount of money in auctions due to unskilled procurement officials. As [28] also indicates the prices of most procured goods in public institutions is more than 60% of the market price. Kenya also lost 4.2 Kenyan shillings in 2010. In most institutions, the procured goods and services are not as standardized and employees have been facing problems during their daily duties.

In many public institutions, as [28] stated, inefficient utilization of public money, non-agreement with procurement policies, non-transparency and lack of

accountability, poor quality goods and services and the absence of effective cost minimization of procurement expenditures have been observed. The trend of most public institutions is just focusing on the symptoms, finding the root causes of these problems are at the early stage. As previous studies shows, effectiveness of public procurement is highly tied with the procurement policy of the country and the institutions, the advancement of infrastructure specifically information communication technology, the ethics of procurers, the extent of application of the legal frame work, the organizational structure, the availability and relationship with suppliers and the adequate allocation of procurement budgets.

In most African countries, the procurement policy is more of one size fits all strategy and lacks revision [28]. This has been creating delays and opens a door to corruption. In countries where flexibility and most frequently revised procurement policy facilitates effective procurement. The unnecessary procurement processes that the procurement policy requires make it boring and have huge impact on the service delivery and performance of public institutions [24]. In most public institutions, the legal framework/environment delays the procurement process due to its bureaucratic and its suitability for corruption [19]. On the other hand, the procuring party may not have good understanding about the legal framework and do not apply it accordingly. Employee ethics has a big role for the smooth flow of work in the procurement process. What matters is, the existence of conflict of interest, misuse of employees' position, on time audit, accountability, fair and equitable decision which is more of based on rules and regulations and the time taken to evaluate tendering [27]. The procurement staffs should be professionals and more of experienced in the area because as reports and studies show it is due poor ethics that most institutions have been losing huge amount of procurement budget. Hiring competent procurement staff, giving professional training to the procurement staff, the motivation to procurement staff, their negotiation skills and experience can bring effective procurement practice ([28]; [19]; [6].

Recently, information communication technology becomes a basic tool for the success of institutions. However, in most public institutions, the unavailability of ICT infrastructure, the absence of ICT training, the cost of ICT, the lack of awareness of relevance of ICT highly affects the process of procurement ([28]; [27]; [19]; [6]; [24]. As it is confirmed in the works of [28] and [22], suppliers have a strong influence on the procurement process. However, their availability, relationship and trust, appraising and developing systems and strategies, highly matters the effective implementation of public procurement. In most institutions, procurement is not seen as a separate unit. Even those organizations that have a separate procurement unit, the organizational structure affects the effectiveness of procurement. If the organization structure is flexible, smooth decision making, team spirit, transparent appraisal system it highly assists the procurement process [6]. In most poor nations, procurement budget allocation is a basic impediment for its effectiveness. Adequate and on time allocation of procurement budget has its own impact.

Based on the assessment of the existing literature, it was found out that not only in procurement practices, but also in academic researchers, gaps are highly observed. Recently public procurement has also been researched in some African countries by academicians and most of them are highly concentrated in Kenya in health institutions, training institutions, government offices, in projects, primary and secondary schools, banks etc. However, studies on Universities are very limited. The findings of extant studies have shown that effective procurement practice can be affected by procurement policy, procurement legal framework, information communication technology, ethics, organizational structure, buyer supplier relationships, budgetary resource allocations and etc.

As the investigation of the researcher, among all the variables there is no enough research on the effect of procurement legal framework/environment (a gap left by [28]) and organization structure on the effective procurement practice in public organizations. In Ethiopia, the number of studies on procurement of Public Universities are almost negligible and even the existing ones have limitations besides their strengths. For instance, a study by [10] the variables used is limited in number and policy related factors were not seen. They did not also see the effect of those variables in public Universities in Ethiopia too. Similarly a local study by [8] done in one of Public Universities shows that data was taken from only one University. So, the findings cannot be generalized to all other Universities in Ethiopia. Further, the authors did not find out the procurement practice of Public Universities. As it is discussed above, academic researches as well as working papers did not give appropriate emphasis to procurement practice in public Universities in Ethiopia. So, the researcher found it very critical to conduct research on this area. Ethiopia has been progressing in terms of economic development, women and children rights, equal distribution of higher institutions throughout the country; infrastructures like roads and ICT, however, much is not done to improve the proper function of procurement function. Hence, research is needed to discover the basic factors that affect effective functioning of procurement in higher educational institutions of Ethiopia.

III. REVIEW OF RELATED LITERATURE

Public procurement is not a recent issue; it was practicable by Egyptians while constructing the popularly known pyramids. Recently managers recognize that it is a basic means of competitive edge. Several policy as well as non-policy factors have been distressing the effective functioning of procurement practice in public organization. Some of these factors are the procurement policy of the country, the legal environment, the structure of the organization, the ethics of employees, ICT, the way institutions manage suppliers and the allocation of procurement budgets.

A. Procurement Policy

Procurement policies are the preliminary and mandatory instruments that guide procurement specialists for the fulfilment of organizational needs [29]. Procurement by its nature is a very complex function that must have a comprehensive procurement policy manual that guides procurement staffs, the agency staffs and all the concerned

bodies including stakeholders to follow the proper procedures and rules. A procurement policy helps concerned staffs by providing clear and consistent understanding of the required regulations. In the absence of such procurement guidance, a lack of consistency in how procurement work is carried out becomes worse. If inconsistency appears, frustration will happen both inside and outside the organization; this again results in arbitrary and unfair procurement actions. It is therefore critical for public procurement to have a comprehensive procurement policy manual.

In most public institutions, the existence inadequate compliance of procurement regulations, existence of of meagre procurement policies, using poor procurement procedures, and absence of efficient policy making process are empirical evidences that threatens the functioning of procurement practice. Procurement policies are important not only for effective procurement agenda but also for development perspective [2]. Lack of compliance with procurement regulations usually results in asymmetrical procurement functions in organization that create huge gap for the misuse of public resources. Ensuring accountability, honesty, transparency and efficient utilization of public money are the basic targets of procurement function [15]. Properly made procurement policies serve the public as best procurement guidelines [28]. To do so, procurement policies should be exposed to continual reforms since procurement capital is becoming scarce. [30] also stated good governance is usually the outcome of efficient procurement policies. However, as [30] clearly sets due to several other intervening issues like the magnitude of the organizations, the accessibility of suppliers, the system of payment and the credit system of buyers becomes challenging to design correct method to establish a procurement policy since all these factors affect the procurement process.

B. Legal Environment

Much is not known about the effect of legal environment of the effective implementation of public procurement practice and literature is in adequate in this spectrum. Legal environment mainly concerned with rules and regulations that dealt with the production of safe and healthy products, regulations dealing about manufacturing processes that basically dealt about creation of safe and healthy work environments including pollution issues for employees, financial regulations dealing about confession of financial issues to the concerned public, marketing regulations dealing with misleading promotions, dissemination of product features, and regulations regarding personnel which basically concerned with equal participation of women and minorities [35]. Developing countries have not yet go far in implementing all these legal environment issue in public procurement systems. Hence, enforcement of all these issues is essential.

C. Organizational Structure

The way functional groups arranged has an effect on the goal of organizations. An effective organizational structure creates conducive working environment by creating easy working relationships among different organizational units. [6], [24] stated that excellent organizational structure highly helps for the efficient functioning of procurement function in organizations.

A study by [24] on Red Cross in Kenya found out that organizational structure has insignificant effect on the performance of procurement in Kenya. However, descriptive results revealed that procurement department is highly recognized in the institutions. The considerable attention to procurement workers in decision making and the existence of team works in the organization has been playing the biggest role towards ensuring efficiency in the procurement process.

D. Information Communication Technology (ICT)

Information communication technology (ICT) is a part of technological issues in which most companies are now using it widely. It helps to give excellent service and easy access of information. [32] in their study on the factors affecting donor funding, they found out that technology has a significant effect on the procurement process. Technology usually needs huge investment. However, it makes procurement processes less time taking, cost effective, reduces quality problems and minimizes the chance of corruption [19]. Using ICT in public organizations specifically in procurement department also affects its implementation [26]. Recently ICT has a big role in facilitating procurement; it helps to get adequate information, lowers cost for buyers, and avoids distance barriers to receive products and to get service [17].

E. Employee Ethics

Public money and public scrutiny can be achieved through effective ethical processes [27]. Further, employee ethics makes the procurement process more accountable and transparent. This in turn provides confidence for suppliers to actively partake in each and every bidding offered by buying institutions. Ethics can also reduce cost of purchasing by minimizing the chance of deception, robbery and bribery. It also builds high confidence on employees by the public administrator. Empirical evidence by [33] in Kenya public sectors indicates that ethics highly affects procurement practice by making the procuring party more compliance with the procurement rules and regulations.

F. Supplier Management

Suppliers play a critical role for the success of any institution for any function. Supplier management was defined by [29] and [36] as it is the process of choosing effective vendors and can negotiate with best prices. Procurement and supply are inseparable issues in public purchasing. That is the reason why [12] defined procurement as acquiring resources from outside suppliers. Any good procurement practice must incorporate competitive supply unless. However, if there are convincing reasons taking materials from one supplier, there must be equal treatment of all bidders irrespective of race, nationality or political affiliation [25], [36], [29], [25], [11], [4]. [19] stated that any good procurement practice must however incorporate the basic principles of accountability and competitive supply if not there are compelling reasons for sourcing from one supplier. This totally means that no discrimination regarding race, nationality or political affiliation should be there while purchasing of goods and services.

G. Budgetary Allocation

Budget is a primary concern in managing organizations. Public expenditure policy and the way in which public

expenditure is managed highly affects the implementation of budgets in public institutions [32]. To foster any strategy in institutions, adequate allocation of resources like financial, physical, human or technological must be available. Committed management allocates the annual budgets based on goals. Lack of adequate budgets trickle down the entire organization and impeaches the implementation process [18]. Adequate budgets must be allocated for the proper implementation of goals as well as the motivation towards employees. Committed management usually allocates budgets towards the achievement of organizational goals. Lack of adequate budgets threatens organizational goals and it is an indication of the existence of low commitment of managers. Strategy implementations usually fail due to inadequate budget allocation; this also highly affects the motive and effort of employees towards the fulfilment of the designed strategies. Adequate allocation of budgets helps to gain purchasing power in supply scarce markets. This provides firms to gain from competitive advantage [18].

IV. OBJECTIVE OF THE STUDY

The aim of this study is;

1. To assess the effect of procurement policy on the effective implementation of public procurement practice.
2. To determine the effect of legal environment on the effective implementation of public procurement practice.
3. To find out the effect of organizational structure on the effective implementation of public procurement practice.
4. To establish the effect of employee ethics on the effective implementation of public procurement practice.
5. To determine the effect of Information Communication Technology (ICT) on the effective implementation of public procurement practice.
6. To find out the effect of supplier management on the effective implementation of public procurement practice.
7. To find out the effect of budgetary allocation on the effective implementation of public procurement practice.

V. METHODOLOGY

Explanatory type of research was carried out to achieve the objective of this study. Primary data was collected and used for analysis. The data was obtained by administering structured questionnaire survey which was adopted from previous similar studies on public procurement. A questionnaire survey was disseminated to those purposively selected informants that have a direct in touch with public procurement. Employees at the three levels were participated. Among the total 400 questionnaires distributed to respondents, 351 were properly filled and returned; which is 87.75% rate of return.

Likert's 5-point rating scale was also used to rate each item in the data collection instrument.

Reliability (the internal consistency and stability) and Content validity (measuring it is supposed to measure) was checked before the data was analyzed. Cronbach alpha reliability coefficient was used to check the reliability of each item. To insure the validity of the collected data experts in the field was participated and evaluated it. Besides the four basic regression assumptions were tested.

Multiple regression was employed to assess the effect of each variable on the effective functioning of public procurement. The regression equation is;

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + \epsilon$$

Where;

Y = Effective Implementation of Procurement Practice (Dependent Variable)

B₀ = Constant/intercept

B₁, B₂, B₃, B₄, B₅ and B₆ = Coefficients

X₁, X₂, X₃, X₄, X₅ & X₆ = Predictor variables

X₁ = Procurement Guideline (IV) (Pgl)

X₂ = Legal Environment (IV) (Plf)

X₃ = Organizational Structure (IV) (OS)

X₄ = Employee Ethics (IV) (Etc)

X₅ = Information Communication Technology (IV) (Ict)

X₆ = Supplier Management (IV) (Smgmt)

ε = Epsilon (random error term)

VI. DATA ANALYSIS

Regression Analysis

A. Regression Model Summary

Coefficient of determination (r²) explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable [25]. As it is observed in the table 6.2 below, R value of 0.919 (91.9%) shows, there exist a high positive relationship between predictor and outcome variables. This suggests that 84.5% (R-square value) of the variation of the model is explained by the variables already incorporated in to the model. This implies that 15.5% are the rest factors which were not studied in this research work. It is clear that, the six factors included in this model contribute to functioning of public procurement practice in this particular case study.

Table I. Model Summary
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.919 ^a	.845	.842	.29159	1.657

a. Predictors: (Constant), Legal Environment, Information Communication Technology, Supplier Management, Budgetary Resource, Organizational Structure, procurement policy, Employees Ethics

b. Dependent Variable: Procurement Practice

B. Results of Anova/Model Fit

Two way ANOVA was carried out where the statistics to test the fitness of the model in estimating the effects of all the seven independent variables on effective functioning of public procurement practice in higher educational institutions of Ethiopia. The results are (F=36.245, P, value=<0.01) (See Anova table II). This implies that, the

model was significantly fit to be used in predicting the effects of independent variables such as procurement guideline, procurement legal environment, organizational structure, employee ethics, supplier management, ICT and budgetary allocations on the effective implementation of public procurement practice.

Table II. ANOVA table for model fit
ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	98.090	7	14.013	36.245	.000 ^b
	Residual	132.607	343	.387		
	Total	230.696	350			

a. Dependent Variable: Procurement Practice

b. Predictors: (Constant), Budgetary allocations, Information Communication Technology, Supplier Management, procurement guideline, Organizational Structure, Procurement Legal Framework, Employees Ethics

C. Coefficient of Determination

The regression output in the below table 6.4 (Coefficient of determination) output revealed, the results of the coefficient of determination of the regression analysis. The result of the regression is used to specify the strength and the direction of the relationship between the

dependent variable (Effective Implementation of Public Procurement Practice) and independent variables notably (budgetary allocations, Information Communication Technology, Supplier Management,

procurement guideline, Organizational Structure, Procurement Legal Framework, Employees Ethics).

The coefficient of determination of procurement guideline is $\beta = 0.134$, with statistical significant p-value of $p=0.001$ which is less than $p<0.05$, and value of $t=3.424$. The regression results found that procurement guideline have positive significant effect on the effective implementation of public procurement practice. This finding is in lined with the findings of [28] and [27]. The coefficient of determination of Procurement legal environment is $\beta=0.174$, with a statistical significant p-value of $p=0.002$ which is less than $p<0.05$, and value of $t=3.069$. This regression result reveals that legal environment have positive significant effect on the effective implementation of public procurement practice. This finding is supported by [15] on Environmental Factors in Case of Uasin Gishu County. The coefficient of determination of Organizational structure $\beta=0.065$, with a statistical significant p-value of $p=0.023$ which is less than $p<0.05$, and value of $t=2.277$. These regression results imply that organizational structure has a positive significant effect on the effective implementation of public procurement practice. This finding is steady with [32] in educational institution and inconsistent with the study by [24] in Humanitarian Organization.

The coefficient of determination of Employees ethics $\beta=0.094$, with a statistical significant p-value of $p=0.000$ which is less than $p<0.05$, and value of $t=3.612$. The

regression results found out that employee ethics has a positive significant effect on the effective implementation of public procurement practice. This finding is also supported by [41] a study conducted on technical training institutions. The coefficient of determination of Information Communication Technology $\beta=0.060$, with a statistical significant p-value of $p=0.021$ which is less than $p<0.05$, and value of $t=2.313$. The regression result found out that information communication technology has a positive significant effect on the effective implementation of public procurement practice. This finding is identical with the study conducted by [19] in national hospital case. The coefficient of determination of Supplier Management $\beta=0.066$, with a statistical significant p-value of $p=0.00$ which is less than $p<0.05$, and value of $t=3.728$. This regression output reveals that supplier management has a positive significant effect on the effective implementation of public procurement practice. The finding of this study is identical with the research works of [28] and [33]. The coefficient of determination of Budgetary allocations $\beta=-0.066$, with a non-statistical significant p-value of $p=0.960$ which is $p>0.05$, $t=-.050$. This regression output revealed that budgetary allocation has a negative relationship and no significant effect on the effective implementation of public procurement practice. This finding is inconsistent with the research work of [32].

Table III. Model Coefficients Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.680	.142		4.784	.000		
Procurement Guideline	.134	.039	.190	3.424	.001	.543	1.843
Procurement Legal Framework	.174	.057	.165	3.069	.002	.581	1.720
Organizational Structure	.065	.029	.118	2.277	.023	.620	1.614
Employees Ethics	.178	.049	.208	3.612	.000	.507	1.971
ICT	.060	.026	.102	2.313	.021	.869	1.151
Supplier Management	.094	.025	.173	3.728	.000	.782	1.279
Budgetary Resource	-.002	.038	-.003	-.050	.960	.620	1.613

D. The Multiple Regression Model

Based on the outputs obtained in table III above, the regression equation of this study is provided as follows:

$$Y = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + B_6 X_6 + \epsilon$$

Where;

Y = Effective Implementation of Procurement Practice (Dependent Variable)

B₀ = Constant/intercept

B₁, B₂, B₃, B₄, B₅ and B₆ = Coefficients

X₁, X₂, X₃, X₄, X₅ & X₆ = Predictor variables

X₁ = Procurement Guideline (IV) (Pgl)

X₂ = Legal Environment (IV) (Plf)

X₃ = Organizational Structure (IV) (OS)

X₄ = Employee Ethics (IV) (Etc)

X₅ = Information Communication Technology (IV) (Ict)

X₆ = Supplier Management (IV) (Sgmt)

ε = Epsilon (random error term)

Hence, the model in this study is expressed as,

$$Y = 0.680 + 0.190(Pgl) + 0.165(Plf) + 0.118(OS) + 0.208(Etc) + 0.102(Ict) + 0.173(Sgmt) + 0.142$$

This regression model implies that, a unit change in procurement guideline can bring 0.190 change in effectiveness in public procurement practice, a unit change in procurement legal environment can bring a 0.165 change in the effective implementation of public procurement practice, a unit change in organizational structure changes the effective implementation of public procurement practice by 0.118, a unit change in Employees ethics can change the effective implementation of public procurement practice by 0.208, a unit change in information communication technology changes the effective implementation of public procurement practice by 0.102 and a unit change in supplier management can change the effective implementation of public procurement practice by 0.173.



Hence, it is possible to conclude that improvement in the six variables such as procurement guideline, procurement legal environment, organizational structure, ICT, employee ethics and supplier management can improve the effective implementation of public procurement practice.

VII. CONCLUSION

The study basically carried out to discover the basic factor that affect the procurement function in Public Universities of Ethiopia. The findings in the regression analysis indicated that public procurement practice has been positively affected by the existing procurement guideline, the legal framework, the structure of the organization, ICT, employee ethics, supplier management and all these predictor variables have highly correlated with the dependent variable called effective implementation of public procurement functioning and all these variables has significant effect on the effective implementation of public procurement practice. However, budgetary allocation has a non-significant effect on the effective implementation of public procurement practices and it has a minimal impact on the effective implementation of public procurement practice. This implies that amending the existing procurement policy, considering the legal environment during purchasing of goods, services and works, amending the existing organizational structure, installing and implementing ICT from need identification and removal, proper management of suppliers can improve the existing procurement function in public Universities of Ethiopia.

VIII. RECOMMENDATION

Frequent revision of the procurement guideline, appropriate implementation of the legal framework, discussion and training of the nearby suppliers by each University and investing on ICT infrastructure on each step procurement function are the possible recommendations.

IX. ACKNOWLEDGEMENT

The authors wish to thank target respondents for their valuable and important information for the success of this study.

REFERENCES

1. Abebe, G., "Efficiency, Accountability and Transparency In Public Procurement: The Level of Compliance in Africa (Ethiopian Case)." 5th International Public Procurement Conference. 2012.
2. Agbesi, K., "Compliance Assessment of the Public Procurement act, 2003 (act663)–Case Study of Selected Government Institution in the Eastern Region". Diss. 2009.
3. Ambaw, B. A., and Jan T., "The Practice of Performance-Based Contracting in Developing Countries' Public Procurement: the Case of Ethiopia." Journal of Public Procurement (2017).
4. Amemba, C.S., et al. "Challenges affecting public procurement performance process in Kenya." International Journal of Research in Management, Vol.3. no. 4, pp 41-55, (2013):
5. Getahun, A., "Assessment on Procurement Planning and Implementation Effectiveness in Ethiopia: The Case of Ministry of Urban Development, Housing and Construction". Diss. Addis Ababa University, Ethiopia, 2015.

6. Barsemoi, H., Patrick M., and Benard O. A., "Factors Influencing Procurement Performance in Private Sector in Kenya." International Journal of Innovation and Applied Studies, Vol. 9 no. 2, pp 632, 2014.
7. Basheka, B. C. "Procurement Planning and Local Governance in Uganda: A Factor Analysis Approach." International Journal of Procurement Management, Vol. 2 no .2, pp 191, 2009.
8. Bekele, Z., "Factors Affecting Procurement Performance of Public Higher Education Institutions: The Case of Jimma University". Diss. Jimma University, Ethiopia, 2015.
9. Berhie, S., "Assessment Of Factors Influencing Good Pharmaceuticals Procurement Practice Employees" Perception", The Case Of Pharmaceuticals Fund And Supply Agency Of Ethiopia. Diss. Addis Ababa University, Ethiopia, 2017.
10. Chekol, G. A., and Tilahun A. T., "Public Procurement Reform in Ethiopia: Factors Leading to Effective Public Procurement Implementation: The case of Amhara Region." European Journal of Business and Management, Vol 6 no. 23, pp 153-158, 2014.
11. Cheruiyot, N., "Factors Affecting the Performance of Procurement Practice in Higher Learning Institution in Kenya.(A Survey of Public Universities in Mombasa County)." The International Journal of Business & Management, Vol. 3 no .10, pp 493, 2015.
12. Choi, J-W., "A Study of the Role of Public Procurement—Can Public Procurement make Society Better." The International Public Procurement Conference, Seoul, South Korea. 2010.
13. Cosmas-Gonzalves, B., "Developing a Strategic Procurement Process for the Ghanaian Construction Industry". Diss. 2017.
14. Dea, M., "The Prospectus, Challenges and Causes of Gender Disparity and Its Implication for Ethiopia's Development: Qualitative Inquiry." Journal of Education and Practice, Vol. 7 no.4 pp 24-37, 2016.
15. Ekung, S., Adeniran L., and Ogochukwu A., "Assessment of Procedural Parameters for Improving Public Procurement Practice in Nigeria." (2015).
16. Getahun, A., "Assessment on Procurement Planning and Implementation Effectiveness in Ethiopia: The Case of Ministry of Urban Development, Housing and Construction." Diss. Addis Ababa University, Ethiopia, 2015.
17. Kingori, W. P., and Ngugi K., "Determinant of Procurement Performance at Retirement Benefit Authority in Kenya." European Journal of Business Management, Vol. 1 no.11, pp 361-377, 2014.
18. Kirai, A. K. & Kwasira, J., "Assessment of Determinants of Procurement Performance at Kenya Pipeline Company, Kenya IMPACT: International Journal of Research in Business Management". Vol. 4, Issue 4, pp 43- 54, 2016.
19. Kirui, E. K., and D. A. N. I. E. L. Wanyoike. "Factors Influencing Procurement Efficiency at the National Hospital Insurance Fund in Kenya." IMPACT: International Journal of Research in Business Management (IMPACT: IJRBM) ISSN (E) (2015).
20. Legesse, R., Public Procurement Practices and Challenges in Ethiopia: Evidence from Selected Public Organizations. Diss. Addis Ababa University, Ethiopia, 2017.
21. Makabira, D. K., and Ester Waiganjo. "Role of Procurement Practices on the Performance of Corporate Organizations in Kenya: A Case Study of Kenya National Police Service". International Journal of Academic Research in Business and Social Sciences, Vol. 4 no.10, pp 369, 2014.
22. Mokogi, W. N., Christopher M., and Kepha O., "Effects of Procurement Practices on the Performance of Commercial State Owned Enterprises in Nairobi County." International Journal of Scientific and Research Publications, Vol. 5 no. 6, pp 2250-3153, 2015.
23. Mwangi, L. N., and Moronge M., "Influence of Purchasing Management Practices on Performance of Commercial Banks in Nairobi County, Kenya." The Strategic Journal of Business & Change Management, Vol. 6 no.2, pp 387-403, 2019.
24. Mwanjuma, G., and Simba, T.F., "Factors Influencing Procurement Performance in Humanitarian Relief Organisation a Case of International Committee of the Red Cross in Kenya." International Journal of Scientific and Research Publications, Vol. 5 no.9, pp 1-9, 2015.
25. Mwikali, R., and Stanley K., "Factors Affecting the Selection of Optimal Suppliers in Procurement Management." International Journal of Humanities and Social Science, Vol. 2 no.14, pp 189-193, 2012.

26. Ngatara, I. W., and Carolyne A., "Factors Affecting the Implementation of Procurement best Practices in Kenya: a Survey of Public Secondary Schools in KILIFI County." *The International Journal of Business & Management*, Vol. 4 no.4, pp 233, 2016.
27. Ngugi, J. K., and Hildah W. M., "Internal Factors Affecting Procurement Process of Supplies in the Public Sector; a Survey of Kenya Government Ministries." 5th International Public Procurement Conference was Held on August 17th. 2012.
28. Njeru, S. E. "Factors Affecting Effective Implementation of Procurement Practices in Tertiary Public Training Institutions in Kenya". Diss. 2015.
29. Njeru, Silas E., et al. "Influence of Supplier Management on the Implementation of Effective Procurement Practices in Tertiary Public Training Institutions in Kenya." (2014).
30. Njogu, G. G., and L. Gichinga. "Factors Influencing Procurement Performance in State Corporations in Kenya-A Case Study of Kenya Ports Authority." *International Journal of Innovative Research & Development*, Vol 3, pp 4-14, 2016.
31. Nolan, M. "The History of Procurement: Past, Present and Future." Retrieved Vol. 6 no.12, 2017.
32. Nyambura, M. T., and Mwangi W. "Factors Affecting Public Procurement in the Public Institutions in Kenya: A Case Study of Kenya Institute of Education." *European Journal of Business and Social Sciences*, Vol. 4 no.04, pp 52-63, 2015.
33. Onchwari, N. N., and Muturi W., "Determinants of Compliance in Public Procurement Regulations in the Public Sector: A case Study of Kisii Country." *Kenya International Journal of Economics, Commerce and Management*, Vol 3 no.10, pp 749-758, 2015.
34. Tesfahun, Y., "Public Procurement Reforms in Ethiopia: Policy and Institutional Challenges and Prospects". Diss. Addis Ababa University, Ethiopia, 2011.
35. Thai, K. V. "Public Procurement Re-examined." *Journal of Public Procurement*, Vol.1 no.1, pp 9-50, 2001.
36. Toroitich, E. K. & Iravo M. "Factors Influencing Effective Procurement Management in Organizations; a Study of National Hospital Insurance Funds, Eldoret Branch". *International Journal of Innovative Research and Development*, Vol 4, no. 12, pp 19-25, 2015.
37. Walker, H., & Brammer, S. "Sustainable Procurement in the United Kingdom Public Sector. Supply Chain Management", *An International Journal*, Vol. 14 no. 2, pp 128-137, 2009.
38. Yemer, M., "Internal Controlling System, Revenue Diversification Strategies and Internal Revenue Generation of Public Universities: Theoretical and Empirical Article Review". *World* 8.11 (2017).
39. Yizengaw, T., "Transformations in Higher Education: Experiences with Reform and Expansion in Ethiopian Higher Education System". Keynote Address to "A Training Conference on Improving Tertiary Education in Sub-Saharan Africa: Things That Work. 2003.
40. Mchopa, A., "Integrating Contract Management Practices into the Achievement of Value for Money in Tanzania Public Procurement: Evidence from Selected Procuring Entities in Moshi Municipality." *Journal of Public Procurement*, Vol. 15 no.2, 2015.
41. Wanyonyi, S. C., and W. M., "Factors Affecting Performance of Procurement Function Among Public Technical Training Institutions in Kisumu County, Kenya". *International Journal of Economics, Commerce and Management*, Vol. 3 no.5, pp 325-337, 2015.

Analysis, Research Methodology, Marketing Research, Business Statistics, and International Business. He teaches in the field of International Business and Research Methodology. He has different publications in areas of marketing, management, human resource and related areas for the last ten years. Moreover, he has PHD graduates under his supervision and currently he has more than five PHD student conducting research under his supervision.

AUTHORS PROFILE



Tirualem Awoke is a Ph.D candidate at Punjabi University, Patiala, India. She had completed her second degree by Development Cooperation from South Korea, Ewha Womens University. She is now working is Debre Markos University, Ethiopia. She has 9 years of teaching experience in University. She has been given different management courses like

Leadership and Change Management, Entrepreneurship and Business Management, Principle of Marketing, Strategic Management, International Marketing, Organizational Behaviour, Risk Management and Statistics courses. Besides she has been delivering Leadership and Assertiveness trainings for both female academic staff and students.



Dr. Amanpreet Singh is Assistant Professor in Punjabi University, School of Management Studies since March 06, 2009. He is doctorate in International Business. He has eight years of industry experience. He teaches MBA and PhD program. His areas of interests are Data