



***Determinants of Pharmaceuticals Procurement Performance  
In Jimma University Medical Center***

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**Abstract:** *Public procurement is a key tool to the overall achievements of reducing poverty and providing health, development of infrastructure, education and other services. The purpose of this study was to assess the determinants of pharmaceuticals procurement performance in Jimma University Medical Center. The study adopted a descriptive and explanatory research design to assess determinants relating to the procurement performance for it requires deeper investigation. The study involved 113 employees. Mixed research methods were used. The sample was drawn using stratified sampling method. Primary and secondary source of data were used. The study found out that procurement performance has strong positive correlation and significant associated with the determinants of pharmaceutical procurement. The model depicts that Planning accounts for 16.2% of variations in procurement performance, procurement process accounts for 26.2%, resource allocation accounts for 19% and lastly information technology accounts for 38.2% of variation in procurement performance. Finally it was recommended that pharmaceuticals procurement function at Jimma University Medical Center needs, good culture of developing pharmaceuticals procurement planning and implementations, improving communication and information exchange, Participatory budgeting policies that monitor budget spending and adopting of information technology.*

**Key Words:** *Procurement planning, Procurement process, Resource allocation, Information Communication technology and Procurement performance.*

## **I, Introduction**

Procurement being the way toward getting administrations, supplies, and gear in conformance with material laws and guidelines happens locally, broadly, and globally among various open, private, public, and nearby substances (Antony & Josphat, 2016). In low-income countries, acquirement prepare is frequently obliged by restricted human assets, lacking financing, and nonattendance of data on costs and providers. Other variables incorporate need of mindfulness of government and benefactor directions, covering obtainment frameworks and forms, and unsynchronized or obsolete rules (Kakwezi & Nyeko, 2010).

Procurement performance was characterized by cost/productivity, time or speed, operations flexibility and quality (Wolfe, 2012). To attain procurement performance, firms must consider all assets at its transfer for occurrence through representatives, The organization must consider them as resources and they must be treated with extraordinary consideration so that the workers ended up spurred and profitable (Arney & Yada, 2014). In Kenya, to manage effectively and more efficiently the procurement process, procuring entities through the existing legal framework are required to firstly consolidate departmental procurement plans to provide the entity's corporate procurement plan which before its implementation must get the accounting officer's approval (Japheth, 2013).

Pharmaceutical procurement measure is innately unpredictable in light of the fact that it includes the coordination of MOH offices, financing sources, providers, and producers. (WHO, 2006).WHO advocates obtainment ought to take put against a list of basic medications. The choice of solutions that are accessible for procurement within the open healthcare segment takes put through the National Fundamental Medications List (Bada & Jacqui, 2013).

The Federal Ministry of Health (FMOH) of Ethiopia has been working to ensure an efficient and high performing health care supply chain that ensures an equitable access to affordable medicines for all Ethiopian. Most creating nations are confronting an issue of fast changes in open pharmaceutical procurement (Kakwezi.P & Nyeko, 2010). Measurements from World Procurement show that Retirement Benefit Authority keeps on losing Billions of cash identified with acquisition outrages (World Procurement, 2014). The annual report from Supply chain and pharmaceutical services section of the Jimma University Medical center showed there was delay in procurements of pharmaceuticals. The procurement process for pharmaceuticals was time consuming and labor intensive. In addition, they were time that cancels surgeries due to stock out of pharmaceuticals for surgery and provided insufficient Pharmaceuticals quantities. Therefore, it's not in the position to deliver better health care to patients. As far as the knowledge of the researchers is concerned, no comprehensive research has been conducted to assess the determinants of pharmaceuticals procurement performance. Beside that it varies in settings of socioeconomics, monetary, political and ecological elements and institutional settings than Ethiopian general wellbeing foundations. Therefore, conducting research could fill the gap hence the research aim was to assess the determinants of pharmaceuticals procurement performance in JUMC.

## **II, Literature Review**

### **Theoretical Review**

Procurement it characterized as “the acquisition of property, plant or equipment, goods, works or administrations through buy, contract, rent, rental or exchange” and is taken to incorporate all activities from arranging and estimating, recognizable proof of needs, sourcing and requesting of offers, assessment of offers, audit and grant of contracts, contracting and all stages of contract organization until conveyance of the merchandise, the conclusion of a contract, or the valuable life of an resource (UN, 2006).

## **Public Procurement**

In a perfect world, public procurement ought to meet the essential standards of great administration: straightforwardness, responsibility, and besides, ought to guarantee esteem for cash (Wittig, 2003). The fundamental principle of open acquirement is contained in what are portrayed as the “five rights”: the proper item or service of the proper quality and right cost, and the correct amount, at the correct place and time (Bailey, 1994).

## **Procurement Performance**

The main objectives of performance measurement are to improve efficiency and effectiveness so, improving the ability of the firm to deliver goods or services and retain customer satisfaction (Lin, 2011). This may be think or sheer numbness on the esteem the supply chain work might contribute to any organization (Thomas & Neeson, 2014). Transparency provides the procurement processes are fair and accurately documented.

## **Procurement Planning**

The commitment of procurement planning in encouraging an proficient and successful benefit conveyance in open segment organizations is by and large undisputed in both developed and developing countries (Kavua & Ngugi, 2014). The appropriation of key procurement planning exercises is to improve the operational forms, organizational culture and frameworks so as to achieve positive alter (Kakwezi & Nyeko, 2010). Procurement plans serve as road maps and their main goal should be to efficiently use of available resources (Rotich, 2011).

## **Procurement Process**

Pharmaceutical procurement process is inalienably complex since it includes the coordination of MOH offices, subsidizing sources, providers, and producers. In this setting, product security cannot be reinforced unless procurement capacities are made more successful (DELIVER project, 2006). The procurement prepared was one of a few basic, interrelated components of the open division health-care supply framework. These components incorporate item fabricating, item choice, item evaluation, financing, administrative control, quality confirmation, conveyance and benefit arrangement (DELIVER project, 2005).

## **Resource Allocation**

Resource assignment is the method of determining perfect way to utilize available resources or resources within the execution of a given extent (Shantanu et al., 2012).

To implement any strategy, necessary adequate resources must be available whether financial, physical, human or technological (Thompson & Strickland, 2007). Procurement performance was influenced by resource assignment additionally have a critical impact on procurement performance, the organization ought to improve resource assignment frameworks in arrange improve the execution (Antony & Josphat, 2016).

## **Information Technology**

IT offers smoother and quicker handle stream, productive dispersion of data, decentralization of errands and choices, expanded straightforwardness and superior control (Mburu & Njeru, 2014). ICT gives way better approaches to store, handle, disseminate and exchange key data with clients and suppliers inside the entire acquirement system (Simatupang & Sridharan, 2005).

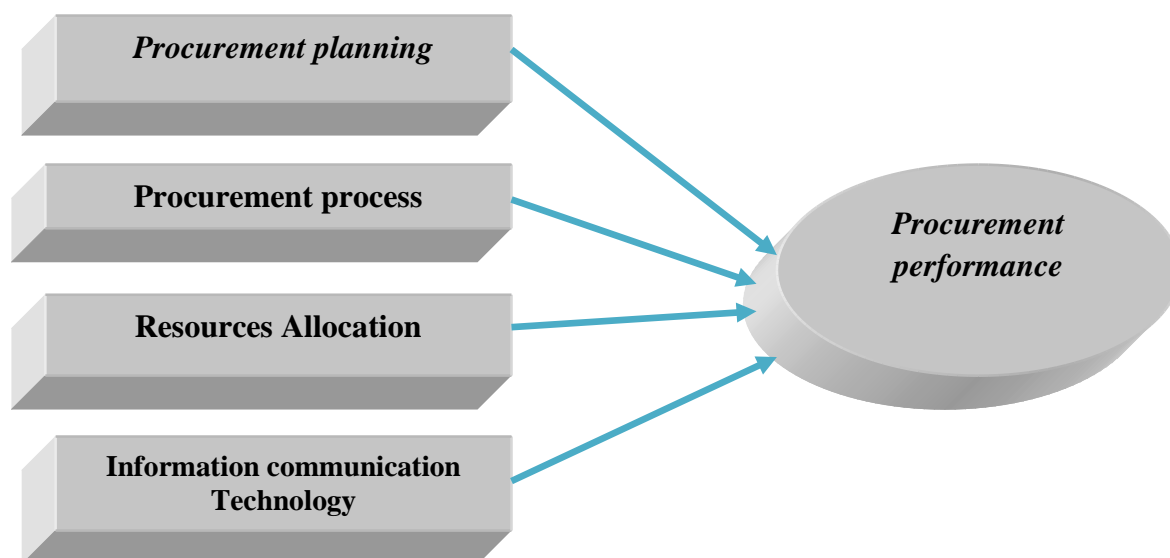
## Empirical Review

Mamiro (2010) in his findings underscores these facts and concludes that one of the major setbacks in public procurement is poor procurement planning and management of the procurement process which include needs that are not well identified and estimated, unrealistic budgets and inadequacy of skills of procurement staff responsible for procurement. Japheth (2013) too appears in his finding planning have emphatically impacts on procurement performance to a huge degree. Oyamo and Mburu (2014) establishing that in his finding procurement planning influences conveyance of pharmaceutical sedate to awesome degree. The study established that planning enhance availability of drugs in public hospitals. It was too uncovered that stock costs are decreased through procurement planning. Evans (2016) support in his finding procurement planning secures the provision of right services to clients and reduces disputes during various purchasing evaluation phases, fraud hampers optimal performance of the procurement department, and aggregation of procurement influences the performance of procurement functions. Teresa and Dr. Makori (2017) based on their findings the procurement performance among pharmaceutical manufacturing firms was influenced by obtaining handle and budgetary capacity, the major factors that for the foremost portion impacted procurement performance among pharmaceutical manufacturing firms in Kenya.

Biruk (2006) the finding shows that quality of grain is inferable to the reality that no specialized points of interest are given to buyers and unfaithful act of suppliers and the study recommended developing a clear purchasing procedure for speedy purchasing process. Mark and Mike (2015) their finding strengthen that Procurement prepares influences proficiency of supply chain of drugs in their health facility and clarify obtainment handle influences productivity of supply chain of drugs in their health facility. Japheth (2013) his finding support that, the resource allocated to the departments for procurement was largely inadequate with the rest 13% indicating that they were not adequate by indicated that resource allocation for procurement influence procurement performance to a large extent. Antony and Josphat (2016) their finding appears that budgetary allotments were executed entirely and without outside impedances which tenders were granted based on resource accessibility. Advance, in the event that the resources were not apportioned on time in this manner did not improve procurement performance. Julius (2016) Resource affirmation and resource assignment makes a difference, make obtainment compelling when carried out fittingly. Open teach have to be receive a culture of straightforwardness and reasonableness so as to decrease debasement and reestablish open certainty.

Senait et.al, (2016) Resource allotment figure was measured in terms of adequateness of assets, versatility of budget task to fit changes inside the monetary environment. The study appeared that a unit increase of asset assignment would lead to an increase by 0.634 on the procurement performance. Boniface et al., (2014) ICT empowers frameworks integration, advances straightforwardness, responsibility, unwavering quality and improvement of relationship administration. Sylvia and Willy (2015) showed in finding, utilize of IT in obtainment was promotion and decrease in requesting time. Willy and Stella (2015) They conclude that ICT adoption affected procurement

process by greater extent and educating the worker for ICT system on procurement have positive outcomes.



**Figure 1: Conceptual frame work Developed**

### III, Methodology

The research was adopted both descriptive and explanatory research design to analyze and explain the determinants of pharmaceuticals procurement performance. In this study, both primary and secondary data sources were employed to obtain reliable information. The study involved 113 employees.

Based on specific relevance of the study, targeted population was categorized in to four strata.

**Table 1: Total Population among the category /Strata**

S.no	Categories /Strata	Total Population	Sample population
1	General Administration- Strata	16	3
2	Supply chain of pharmaceutical and procurement - Strata	22	4
3	Functional units /Departmental - Strata	81	15
4	Service delivery units/sections- Strata	506	91
Total		625	<b>113</b>

### Inferential Analysis

#### Correlation

According to Leedy and Ormond (2010) correlation is the statistical process which discovers whether two or more variables are associated with one another.

According to table: 2 There was a significant association to procurement performance with determinants which mean ( $p=0.000$ ) and there was strong positive correlation

with Procurement planning, procurement process, resource allocation and information technology (0.792, 0.860, 0.890, 0.889) respectively.

**Table 2: Correlation Analysis of the Model**

		Procurement Planning	Procurement Process	Resource Allocation	Information Technology	Procurement Performance
Procurement Planning	Pearson Correlation	1	.673**	.726**	.700**	.792**
	Sig. (2-tailed)		.000	.000	.000	.000
Procurement Process	Pearson Correlation		1	.852**	.766**	.860**
	Sig. (2-tailed)			.000	.000	.000
Resource Allocation	Pearson Correlation			1	.851**	.890**
	Sig. (2-tailed)				.000	.000
Information Technology	Pearson Correlation				1	.889**
	Sig. (2-tailed)					.000
Procurement Performance	Pearson Correlation					1
	Sig. (2-tailed)					

**Regression Result**

From the result of summary on table 3 indicated by the adjusted R Square 90% of variance or changes in procurement performance at JUMC of Pharmaceutical were explained in terms of independent variables.

**Table 3: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.949 <sup>a</sup>	.900	.896	.10892

a. Predictors: (Constant), Procurement Planning, Process, Resource allocation and ICT.

b. Dependent Variable: Procurement Performance

**ANOVA Analysis**

Analysis of variance results in table 4 show that the model is significant for predicting procurement performance  $F= 228.969, p \leq 0.05$

**Table 4: ANOVA**

ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10.865	4	2.716	228.969	.000 <sup>b</sup>
	Residual	1.210	102	.012		
	Total	12.075	106			

a. Dependent Variable: Procurement Performance

From the regression equation established, taking all determinants (Procurement Planning, procurement process, resource allocation and information communication technology) constant at zero, the procurement performance at Jimma University Medical center would be 0.120. The results on table 5 shows  $Y= 0.120 + 0.162 X_1 + 0.262X_2 + 0.190X_3 + 0.382 X_4 + \epsilon$

These finding revealed that at constant all the value of independent variables were zero the procurement performance of JUMC was 0.120. A unit increment in procurement

planning increasing procurement performance by 0.162 times and 0.262, 0.190 and 0.382 respectively by procurement processing, Resource allocation and Information technology which all of them showed statistically significant.

**Table 5: Coefficient of Determination**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.120	.099		1.210	.229
	Procurement Process	.262	.058	.274	4.503	.000
	Procurement Planning	.162	.040	.212	4.492	.000
	Resource Allocation	.190	.078	.184	2.426	.017
	Information Technology	.382	.063	.374	6.050	.000

a. Dependent Variable: Procurement Performance.

#### IV, Conclusion

The research analyzed determinants of the pharmaceutical procurement performance of in Jimma University Medical Center. From the correlation and regression output, it can be concluded that all the predictors have a positive and strong correlation with the procurement performance. For that reason the independent variables which are studied in this research are strongly determinants for pharmaceutical procurement performance in the study area. All independent variables are significant with p value of < 0.05 at 95% confident level. The finding indicate that the factors studied in this study affect procurement performance up to 90 % as indicated by the adjusted R Square. The regression model shows, Procurement planning accounts for 16.2 % of variations in pharmaceutical procurement performance and procurement process accounts for 26.2% variations in procurement performance at JUMC. Resource allocations accounts for 19.0 % of variations in procurement performance. ICT enables systems integration, promotes transparency, accountability, reliability and enhancement of relationship management. The finding shows a unit Increase in ICT usage will lead to 0.382 increases in procurement performance. It has greater impact which implies that ICT accounts for 38.2 % of variations in procurement performance

#### Recommendations

The study recommends strengthen the procurement plan through preparing short term training program how to prepare procurement planning for pharmaceuticals and developing the culture of monitoring and updating by involving all the stakeholders of procurement plan for pharmaceuticals regularly.

Regards to procurement process, to support timely procurement of pharmaceuticals the study recommend that reduces internal red tapes through improving communication and information exchange to contribute efficient procurement practice because of the process involves verification and approval at different levels and this will take time.

Procurement regulations that refer to paper document and processes need to be modernized. Procedures and procurement regulations must recognize by information communication technology.

The study recommend that the department should strengthen Culture of budget policies that monitor budget spending through Participatory budgeting. The pharmaceutical procurement staffs should be involved in budget preparation while user departments should prepare acquisition plans in advance in Jimma University Medical Center since resource allocation have significant influence on procurement performance.

The medical Center should automate for a purpose of enhancing efficiency; effectiveness and transparency by adopt using electronic systems to manage internal operations such as inventory management and control, since procurement systems were still largely manual for they should strengthen Information Communication Technology systems.

### **Further research**

This study looked at four independent variables that contribute to large extent in procurement performance at JUMC. Determinants reviewed by this study were internal in nature and did not test external determinants such as market, legal environment, political environment, organizational environment and other environmental factors. To this end further study should be carried out to establish the external determinants of pharmaceutical procurement performance.

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