
| **RESEARCH ARTICLE**

Examining the Influence of e-Government Procurement Systems on the Performance of Public Entities in Zambia

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| **ABSTRACT**

Many African Countries, including Zambia, have embarked on an electronic procurement implementation journey system (e-GP). But the question that still stands out, even after the introduction of the e-GP and several training sessions conducted by ZPPA, is that many procuring entities across the country still prefer a manual system of tendering and procurement processes. This research study examined the influence of electronic government Procurement systems on the Performance of Public entities in Zambia. The Digitalization of the procurement systems has made it possible to apply a coherent framework that reflects the theory of the technology acceptance model (TAM) and technology cost theory (TCT) in under-researched developing territories. The research study employed a quantitative correlational research design, and primary data were gathered from public entities in Zambia using an online Google questionnaire distributed to 275 organizations countrywide. A total of 264 responses were returned, representing 96.41% response rate. The data was analyzed using SPSS Version 23, and the reliability was assessed using Cronbach's alpha. The findings of the research study revealed positive correlation results, with respect to customer service level and procurement performance at $r\ 0.854^{**}$ and $r\ 0.746^{**}$, respectively. This means that customer service is an integral part of the Centre stage of procurement performance for the public entities. Electronic Order processing is equally positively related to procurement performance at $r\ 0.702^{**}$, implying that the availability of internet functionality for e-government procurement (e-GP) systems is vital, as it is easier, faster, and less expensive to procure goods and services. The study contributes to the body of knowledge by examining specific roles of e-communication, e-order process, customer service level, and procurement cost reduction.

| **KEYWORDS**

Electronic government procurement (e-GP), electronic communication (EC), electronic order processing (EOP), customer service level (CSL)

| **ARTICLE INFORMATION**

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1. Introduction

1.1 Background of the Research Study.

Several organizations in the world today are performing well due to the introduction and implementation of the e-government procurement systems (e-GP). The influence of e-government procurement systems on the performance of public entities around the globe has always remained a highly researched area for deeper examination (Chipeta 2018). The e-government procurement systems have an influence on the creation of open government data (OGD) in Africa (United Nations 2012). This has brought about straightness, transparency, accountability, confidence, and full workmanship engagements. However, the influence of the e-government procurement system on the

performance of the public entities around the globe has always remained under researched area for deeper examination (Chipeta 2018). The study focused on examining the influence of the electronic government procurement (e-GP) system on the performance of the public entities in Zambia.

A full analysis was done to determine readiness to sustain e-services within the procurement and supply chains. E-procurement is the supplier exchange, business-to-business or business-to-consumer, or business-to-government purchase and sale of supplies (Dorcus & Francis, 2015). The process of work and services is conducted through the internet systems, such as electronic data interchange and planning (EDI). The United Nations Electronic Government Development Index (UNEGDI) showed measures of electronic government trends around the globe by the use of three key indicators (Chipeta 2018). Telecommunication infrastructure, online services, and Human capital. Based on the study findings, 29% are opportunities, and 71% are Challenges. Thus, examining the influence of e-government procurement systems on the Performance of Public entities in Zambia was vital.

The general subject area of the study focused on electronic government Procurement Performance on public entities in Zambia. The research finding showed that few studies have been conducted on e-government procurement systems for public entities in Zambia (Chipeta 2018). However, this research study was made to be relevant as a reference point for other research bodies and evidence-based decision-makers in the procurement fraternity, for e-government policymakers as the prime beneficiaries. Therefore, it is imperative to check and test the procurement performance more often within the supply chain function (Farhina Ahmed et al., 2018). As the conception of the procurement function becomes acceptable and more technology-based, organizations find it profitable to provide additional training for staff within e-government procurement Systems.

To clarify more on the technology acceptance model, it is an information system theory that enables users to accept and use the technology (Davies 1989). It describes the user's perception of benefit from the data. Observing the present level of the Performance of Public entities, noticing accomplishments, and analyzing strengths and areas for improvement, is Tam theory. The previous research was conducted in state corporations in Kenya (KRA). It focused on the implementation of electronic strategy and procurement performance for the organization (Dorcus and Francis, 2015). However, aligning with studies conducted in some parts of Zambia, Chipeta (2018), does not fully cover the contextual gap in examining the influence of e-government procurement systems on the performance of public entities in Zambia. For that reason, it showed the Knowledge gap being addressed by the researcher. Another research study, which was conducted in Zambia based on (e-GP), focused on examining e-government procurement system adoption by procuring entities in Zambia (Chabilo and Lesa 2024). However, it did not focus much on procurement performance being influenced by the e-government procurement systems for public entities in Zambia.

Many areas of research studies have been covered by Scholars, but the contextual factor of examining the influence of the electronic government procurement systems on the performance of public entities in Zambia has remained an area of concern. To highlight the existing Knowledge gap, the research study focused on examining the influence of e-government procurement systems on performance for public entities in Zambia. Then, incorporating the technology acceptance model as a theory in the Procurement Performance system is key. Because it is an information system theory that enables users to accept and use technology systems. The technology acceptance model is the theory that describes the user's perception of the benefit of the data and improves the productivity of an organization and its Performance.

Another research study conducted in Zambia focused on factors affecting procurement performance in non-governmental organizations in Zambia (Chipeta 2018). The sources of data collection did not cover the contextual factors of electronic government procurement and its influence on the Performance of public entities in Zambia. The Paper was conducted in Zambia; hence, it has some differences that required adapting to the e-procurement perspective context and creating room for future researchers (Chifita and Kasongo 2020). Many areas of research have been covered by the researchers to highlight the existing knowledge gap. However, this study concentrated on examining the influence of the e-government procurement systems on the performance of public entities in Zambia.

1.2 Problem Statement

According to the Zambia Public Procurement Authority (ZPPA 2020), 33.33% firms currently utilize the electronic government procurement (e-GP) system, while 66.67% have not been migrated to digital platforms. This means the e-government procurement system is not well embraced or utilized, as the percentage of utilization is quite low in Zambia. However, this has come with some challenges because, as a nation, it lacks electronic procurement tools, which can lead to the implementation and integration with other online platforms. The study also showed that a lack of internal staff skills, technology challenges, Network challenges, and resistance to digital migration or e-procurement, including insufficient management support, hurt the full usage of electronic service systems (Chipeta, 2018).

1.3 Research Aim and Objective

The Research aimed at examining the influence of electronic government procurement systems

(e-GP) on the performance of public entities in Zambia. The research objectives were;

- To assess the influence of E-communication
- E- order processing
- Customer service level, and
- Procurement cost reductions on procurement performance for the public entities.

2. Literature Review

2.1 Overview of the electronic government procurement system (e-GP)

Over the past 40 years, while private and public sector organizations have been utilizing information technology systems to streamline and automate their purchasing and other processes. It is only in the past decade that e-procurement systems have attracted attention (Dai and Kauffman, 2001; Koorn, Smith, and Muelle, 2001). In a nutshell, there is no doubt that the use of the internet in the e-government procurement system provides several advantages over the paper-based system for inter- organizational tools. Revealing the facts, it is believed that electronic data interchange has been providing automated purchasing or procuring transactions between the buyer and their suppliers since its launch in the 1960s. The enterprise resource planning (ERP) followed in the 1970s, and then came the commercial use of the internet in the 1980s. It was only in the 1990s that the World Wide Web became widely enabled and provided the essential resource for the automation of procurement (OGC, 2002). However, the adoption of the electronic government procurement system has made the following services easier: e-communication, e- order process, customer service level, and procurement cost reduction.

However, the literature review relied on secondary data sources that have been previously published. These included empirical journal articles, journals, literature books, online publications, government gazetted newsletters, conference proceedings, and other relevant publications. It is the literature review that gives insights into models that will reflect topics for a research study. So, the Literature review aimed to highlight fundamental ideas based on examining the influence of electronic government procurement systems(e-GP) on the performance of public entities in Zambia.

2.2 Factors Influencing the e-government Procurement System of Public Entities on Performance

The e-government procurement system has an influence on public entities based on procurement performance (Dorcas and Francis, 2015). E- procurement, sometimes known as supplier exchange, is the business-to-business, business-to-consumer, or Business-to-government purchase and sale of supplies, Work, and services through the Internet, as well as other information and networking systems, such as Electronic Data Interchange and Planning. Typically, e-procurement websites allow qualified and registered users to look for buyers or sellers of goods and services. Depending on the approach, buyers or sellers may specify costs or invite bids. Transactions can be initiated and completed. Ongoing purchases may qualify customers for volume discounts or special offers. The use of Internet technology to buy goods and services from several known or unknown suppliers through electronic mode plays a significant role in procurement and the supply chains. However, it helps gather and distribute the purchasing information both from and to internal and external parties using Internet technology, for e-market sites.

Fostering the growth and importance of awareness of e-procurement systems on performance, Dorcas and Francis (2015) argue that awareness of e-procurement systems and procurement performance are so intricately connected that they cannot be separated. Thus, for any organization that is doing fine, digitalization applicability results in good performance, to be more precise, in procuring systems for supply Chains.

A study conducted in Germany by Zahid Hasnain et al. (2016) used the transactional cost theory (TCT), and a deductive cross-sectional research design approach was applied to the study. The basic information was gathered or collected from the World Bank Group (WBG) from the period (1990-2014) as full statistics. The findings of the research study showed the possibility of seniority in e-government procurement systems on capacity performance. The research on the literature used in line with the topic showed that e-government procurement systems have a positive influence on procurement performance.

Another study was conducted in Indonesia by Adhi Nugraha and, et.al (2021). The research study was conducted, which focused on the electronic adoption for organizations' performance, as evidenced in the Indonesian manufacturing industry. The descriptive research methodology was used for collecting data, and the Transactional cost theory was incorporated for the research. The questionnaire was administered, and 30 employees were recorded as the respondents. Findings of the research study showed that the adoption of electronic systems in organizations is very important. It also contributes to easy, faster, cost-effective, and leads to the productivity of an organization with great performance.

2.3 Overall critique of the literature Review

Many journal articles have expressed the issues arising, which led to examining the influence of e-government procurement systems on the performance of public entities. The technology acceptance model approach has been used widely by scholars to explain the present level of procurement performance through the application of e-services by noting accomplishments, analyzing strengths, and areas of improvement. The developed countries have conducted studies on the e- government procurement systems in terms of performance compared to the developing nations. This has been evidenced by the researcher based on the empirical journal articles reviewed.

Just a small number of empirical research studies on e-government procurement systems have been successfully conducted in Africa, for example, in Zimbabwe, Malawi, and Ghana. And the few studies that have been conducted in the African continent are concentrated mostly in Kenya. The Zambian context showed that little research has been conducted on e-government procurement systems on performance for public entities. Chipeta (2018) and Chipepo (2020), having undertaken research in some parts of the country, Zambia. Therefore, the study concentrated on examining the influence of e-government procurement systems on the performance of public entities in Zambia. Thus, filling the contextual Knowledge gap.

3. Theoretical and Conceptual Framework

The theoretical framework model is the core of every research undertaking and helps the researcher to develop the constructs and build concepts within the study. The conceptual and theoretical framework gives the focus and plan for the dissertation. This study stands out to elucidate the importance of the framework model and its applicability to the phenomenon. The hypotheses of the study were developed, and also theories based on the conceptual framework model were discussed from the literature review. In this regard, the theory of the technology acceptance model (TAM) and transactional cost theory (TCT) were adopted to examine the problem stated.

3.1 Theoretical Background and Foundations

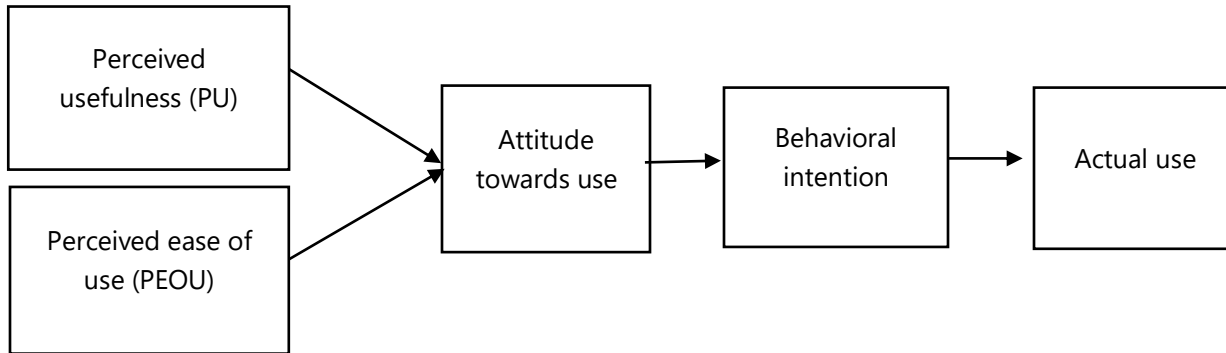
A theoretical framework model serves as a concept that establishes the groundwork for the research study and data analysis promulgated by (Creswell, 2014). However, researchers and scholars develop theories to explain the phenomenon and relationships that make predictions for future studies. In this research, the focus is on the foundations of the Study.

3.2 The Technology Acceptance Theory as Underpinning

The technology acceptance model (TAM) is an information system theory that explains how users come to accept and use the technology. It is the theory that describes the user's perception of benefits from information technology, and the theory was promulgated by Davis (1989). This theory is more practical in the business world

applicability today, because for an organization to expand or grow, it needs people who are technologically driven to meet the targets of the company or an entity throughout the world. The technology acceptance model explains how users can embrace and utilize the technology (ICT). The theory is centered on two perceptions, "Perceived usefulness"(PU). This shows in utilizing specific systems for the enhancement of the output and performance. Also, (PEOU) shows the level at which an individual believes in using a particular system. The theory of the technology acceptance model (TAM) is clearly shown in Figure 3.1 below.

Figure 3.1 Technology acceptance model.



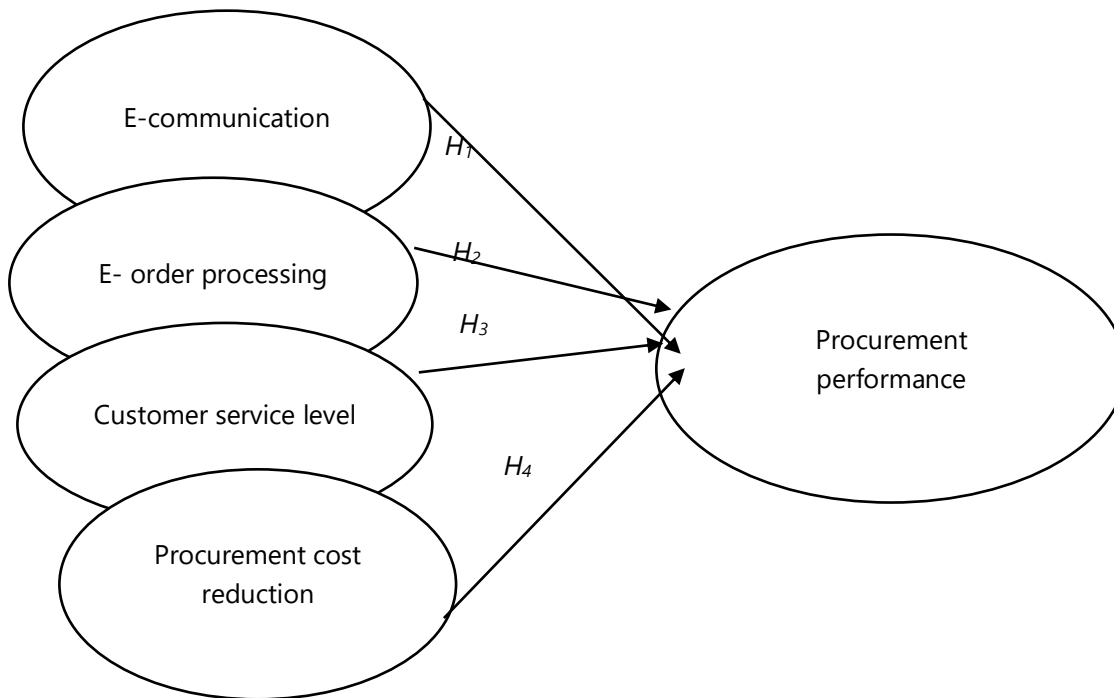
A study conducted in Malaysia by Shiau Wei Chan et al. (2019) focused on the influence of technologies in Malaysian manufacturing firms. A descriptive research design approach was incorporated for data collection. The technology acceptance model was applied to the research study undertaken. A sample of 142 employees was picked as the respondents for the research study. The findings of the research showed public entities in Malaysia have achieved full implementation of electronic procurement, as evidenced by the literature reviewed from various empirical journal articles for the research study.

Another study was conducted in Indonesia by Gunawan and Candra (2017), which focused on the impact of electronic government procurement practices on the Indonesian government. A non-probabilistic sampling technique was used, and the technology acceptance model was incorporated for the research study to determine its influence on e-procurement performance in the electronic service at the Bekasi 24 district in Indonesia. The results showed that respondents were already using e-procurement for at least 5 months. In-depth, longer users of e-procurement were seen through the respondents who have been using the e-service for almost 2 months. People need to be technologically trained for them to discharge work, and many organizations in the world today face a lot of challenges when it comes to performance in e-government procurement (Gunawan and Candra, 2017). Because very few are familiar with the e-procurement system, this triggers a negative perception of e-procurement performance. This will result in a negative impact on the viability of the company or entity. So, the top management within organizations must see employees responding to change. It is evidence-based on the literature reviewed from different empirical journal articles used for the study.

The variables in the conceptual framework were adopted from an empirical journal article from a case of the Kenya Revenue Authority (KRA). The integration insights from (TAM) theory and (TCT) models highlight the importance of their relationship for the research study. The relationship between the technological systems and costs attached in support of e-government procurement systems based on the performance of public entities. It is cardinal for the researcher to ensure that the theories being adopted, adapted, or developed are well-aligned with the research topic (Dorcas and Francis,2019). This paper adopted the two theories aligning with the research study.

The conceptual framework model shows a theoretical basis for understanding factors influencing e-government systems on the performance of public entities. To highlight the relationships among variables, the conceptual framework was developed.

Figure 3.2 Conceptual Model



Source: Adopted from Dorcas and Francis (2015).

The theory of the (TAM) model and transaction cost theory (TCT) was incorporated in this study. Based on the two theories employed in this study, it was evidenced that each theory is described and debated. Furthermore, the conceptual framework model was developed and described following the literature review from the empirical journal articles, where the conceptual model was adopted Dorcas and Francis (2015).

4. Research Methodology

According to Saunders and Tossey (2013), the research onion framework is the best utilized to describe research study methodology. And claim the choice of methodology, time horizon, study design plan, and techniques incorporated for data collection and analysis, which formulates or develops the first layer of the study process. So, the research philosophy elucidates the prime factors associated with the study concentration.

4.1 Research Design, Alternatives, and Justification.

Briefly research philosophy involvement and the development of some assumptions, understanding, and the nature of the study undertaken. The researcher considers philosophical standpoints and social phenomena under examination (Saunders and Tossey, 2012). In the research study, a positivist approach was undertaken. This is because the positivistic approach defines the research topic through the literature reviewed and defines research objectives and hypotheses. The design data was collected using pilot studies, and the analysis of data was done using different software. The research study used SPSS version 23 for analyzing data and interpretation. Findings were undertaken, and a conclusion was made, which showed some Knowledge gaps. And recommendations were made by the researcher. The Data was collected using the Google online questionnaire, and the variables were measured on the Likert scale of 1 to 5, ranging from strongly disagreeing to strongly agreeing on the conceptual question construct. SPSS Version 23 was used for analyzing data, and correlation and regression were executed for data interpretation after the findings in the study.

4.2 Population, Sampling, And External Validation

Therefore, for a research study, the population was targeted within the few Provinces in Zambia, from Zesco, Zambia Revenue Authority (ZRA), Zamtel, and the Local government under the procurement and stores

departments. The study focused on the factors influencing electronic government procurement systems on the performance of public entities in Zambia.

4.3 Data Collection

Primary and secondary collection methods of data were incorporated into the study. The primary data refers to information that is directly gathered from surveys, questionnaires, interviews, and observations. Secondary data is extracted from government (public entities) and non-government organizations or statutory bodies through reports. To justify the decision made, it is cardinal to ensure that research has the background through the extraction from primary and secondary data.

4.4 Data Analysis

According to Bryman and Bell (2003), promulgated analysis of data is primarily the method used for conclusions from obtained information by methodical identification of particular characteristics. Ultimately, the quantitative data analysis considers variables using surveys and then results-tested regression and correlation analysis. In this regard, SPSS version 23 software was used to manipulate the quantitative data extracted from the respondents. The data that was gathered through administering the online Google questionnaire was coded and labelled. Then entered into the computer from Excel format and transposed to the SPSS Version 23 software package.

4.5 Validity of The Research Instrument

Muro (2005) defines validity as the extent to which the research findings reflect the study phenomenon more accurately. The construct validity is the technique for evaluating the validity of instruments meant to gather quantitative data, this is according to Polit and Beck (2014) and De Vos et al. (2016). To ensure the validity of the data collection instrument, several steps were taken. Firstly, the questionnaire was reviewed by experts, including the academic supervisors, to ensure that the questions were clear, relevant, and aligned with the research objectives. Then, feedback from the review was used to refine the questionnaire. Additionally, a pilot study was conducted with a small sample of the respondents to test whether the data collection instrument was effective. This pilot test helps to identify any ambiguities or issues with the questionnaire to allow adjustments in order to validate the questionnaire for data collection.

5. Research Results and Discussions

Highlights the response rate and demographic profile of the respondents for the study.

Table 5.1: Demographic Profile

Variable	Characteristics	Frequency	Percentage
Gender	Male	196	74.24
	Female	68	25.76
	Total	264	100
Age	21-25	20	7.58
	26-35	94	35.61
	36-45	134	50.76
	46 and above	16	6.06
	Total	264	100
Marital Status	Single	79	29.92
	Married	185	70.08
	Total	264	100
Field of study	Procurement	76	28.79
	Accounts	43	16.29
	Marketing	5	1.89
	Human Resources	7	2.65
	Others	133	50.38
	Total	264	100
Institution of stud	University of Zambia	29	10.98
	Copperbelt university	96	36.36
	Mulungushi university	14	5.30
	Evelyn Hone College	42	15.91
	Others	83	31.44
Total	264	100	
Mode of study	Full time	128	48.48
	Evening	18	6.82
	Distance	113	42.80
	Part time	5	1.89
	Total	264	100
Level of education	G12 Certificate	16	6.06
	Diploma	89	33.71
	Degree	108	40.91
	Masters	45	17.05
	PhD	4	1.52
	Others	2	0.76
Total	264	100	
Position at work	Lower Management	94	35.61
	Middle Management	143	54.17
	Top Management	27	10.23
	Total	264	100
Tenure of Service	Less than 2 years	55	20.83
	3-5 years	158	59.85
	6-10 years	24	9.09
	Over 10 years	27	10.23
	Total	264	100

Source: Author (2024)

5.1 Measurement Model and Internal Validation Justifications

The measurement model used in this study, detailing constructs and items, is presented in Table 5.2. To ensure internal validity, items measuring variables were adapted from established studies (Dziri and Triki, 2013; Klaus and Maklan, 2013; Rabby et.al 2021), The questionnaire consisted of distinct sets of items for each construct: electronic communication (5 items), electronic order processing (5 items), customer service level (5 items), procurement cost reduction (4 elements), and procurement performance (5 elements). The feedback for Responses was recorded on a 5-point Likert scale, ranging from 1 for "strongly disagree" to 5 for "strongly agree."

Table 5.2. Measurement Model.

Variable	Item	Source	Cronbach's Alpha
Electronic Communication	EC1: The Organization Provides speed of communication to the suppliers.	Dorcas	0.87
	EC2: The Organization provides real time response to its suppliers.	W Muhia	
	EC3: The Organization provides savings in communication to its suppliers.	&	
	EC4: The organization provides computer refresher training programs for the employees.	Francis O	
	EC5: My Organization adapts to the new technology faster for ease online service operations.	Afande	
Electronic Order processing	EOP1: The Organization Provides fast ordering processing.	Dorcas	0.89
	EOP2: My Organization provides reduced cost of ordering.	W Muhia	
	EOP3: The Organization reduces on time taken to order goods and services.	&	
	EOP4: The Organization conducts online trading processing to the employees.	Francis O	
	EOP5: The Organization provides enough working tools for employees.	Afande	
Customer Service Level	CSL1: My Organization Provides effective supplier relations to the customers.	Dorcas	0.95
	CSL2: My Organization meets customer satisfaction.	W Muhia	
	CSL3: My Organization maintains loyalty to its customers.	&	
	CSL4: My Organization treats the customers equally.	Francis O	
	CSL5: The Organization builds trust and relationships to its customers.	Afande	
Procurement Cost Reduction	PCR1: The organization reduces the cost of service operations.	W Muhia	0.91
	PCR2: The organization reduces time taken to order goods.	&	
	PCR3: The organization reduces the cost of holding inventory or stock.	Francis O	
	PCR4: The organization reduces the lead-time for replenishment of goods.	Afande	
Procurement performance	PP1: The shorter lead-time taken improves procurement performance.	Dorcas	0.96
	PP2: Customer satisfaction promotes procurement performance.	W Muhia	
	PP3: Supplier's partnerships improves procurement performance.	&	
	PP4: Constant stock level of inventory leads to effective procurement performance.	Francis O	
	PP5: High rate of productivity promotes procurement performance.	Afande	

5.2 Preliminary Statistical Analyses

Multicollinearity exists when variable elements are measuring the same thing, and only one of them is necessary. When two or more predictor variables are highly correlated ($r = .80$ and above), multicollinearity exists and does not contribute to a good regression model (Pallant,2020). The current study showed that there were low intercorrelations among the variable elements. Indicating no problems with multicollinearity among the variables (Pallant,2020). Therefore, multiple regression analyses can be undertaken without concerns about biased or inflated estimates of regression and correlation coefficients. The significance level of the association affects the significance level of the correlations in the correlations table, Mwiya et al. (2017). Correlations can be significant at two levels of significance, $p < 0.05$ and $p < 0.01$, which are depicted in the correlation Matrix table.

Table 5.3. Correlation Matrix.

	Mean	Std.D	N	1	2	3	4	5	6	7	8	9
Procurement performance	2.86	1.4147	264	-								
Gender	1.26	0.4381	264	-.048	-							
Age	3.55	0.7224	264	.131*	-.308**	-						
Marital Status	1.70	0.4588	264	.080	-.296**	.386**	-					
Education Level	2.77	0.9093	264	-.036	.009	-.021	.050	-				
Electronic Communication	2.87	1.1395	264	.719**	-.062	.088	.127*	.035	-			
Customer Service Level	2.78	1.3456	264	.854**	-.048	.131*	.120	.014	.779**	-		
Procurement Cost Reduction	2.84	1.2275	264	.746**	-.041	.053	.131*	.046	.788**	.805**	-	
Electronic Order processing	2.87	1.1627	264	.702**	-.043	.102	.064	.039	.847**	.803**	.839**	-

*. Correlation is significant at the 0.05 level (2-tailed).

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

Source: Author (2024)

5.3 Regression Analysis Between Turnover Intention and Its Antecedents

When examining the predictive power of the group of independent variables on a single continuous dependent measure, multiple regression, an extension of correlation, is utilized. The capacity to compare the predictive power of independent variables and identify an ideal combination of variables to predict a dependent variable is made possible by various types of multiple regression (Pallant,2020). The significance of these effects is mapped as ***sig<0.001 (0.1 percent), **sig<0.01 (1 percent), *sig<0.05 (5 percent). The R values show the combined effect of the variables in each model. Additionally, the coefficients table provided information on the variance inflation factor (VIF) and tolerance values. The VIF values were less than 10. These findings indicate the absence of multicollinearity in the data, meaning that the predictor variables, Organization Commitment, Job Embeddedness, and Community Embeddedness, were not strongly correlated with each other.

Table 5.4 Hierarchical Multiple Regression

Variables	Model 1		Model 2		Model 3		Model 4		Model 5		VIF
	Beta 1	SE(1)	Beta 2	SE(2)	Beta 3	SE(3)	Beta	SE(4)	Beta 5	SE(5)	
Control Variables											
Gender	-0.001	0.213	0.012	0.148	-0.005	-0.134	-0.005	0.109	-0.005	0.108	1.153
Age	0.116	0.134	0.084	0.093	0.034	0.956	0.043	0.069	0.052	0.069	1.280
Marital Status	0.037	0.210	-0.038	0.147	-0.039	-1.098	-0.045	0.108	-0.058	0.109	1.283
Education Level	-0.035	0.096	-0.057	0.067	-0.049	-1.537	-0.052	0.049	-0.050	0.049	1.008
Independent variables											
Electronic Communication			0.719**	0.054	0.145	2.853	0.088	0.069	0.157**	0.078	4.064
Customer Service Level					0.742**	14.616	0.672	0.061	0.702**	0.062	3.616
Procurement Cost Reduction							0.141**	0.068	0.202**	0.074	4.286
Electronic Order processing									(-0.165**)	0.087	5.313
F	1.286		57.501***		123.0178***		108.179***		96.896***		
F Change	1.286		276.881***		213.641***		5.685***		5.274***		
R	.140 ^a		.726 ^b		.861 ^c		.864 ^d		.867 ^e		
R Square	0.019		0.527		0.742		0.747		0.752		
R Square Adjusted	0.004		0.518		0.736		0.740		0.745		
R Square Change	0.019		0.508		0.215		0.006		0.005		

*Significant at 5% **significant at 1% ***Significant at 0.1%

Source: Author (2024)

5.4 The Findings of the Study

E-communication has always remained a highly researched area for deeper examination (Dorcas and Francis, 2015). Electronic communication can be done through the sms text, e-mail, WhatsApp text, or any other means of electronic digital mode. Such a communication network through the internal accounts used to reach others is electronically serviced (Chipepo, 2018). There are several kinds of literature relating to e-communication because it is a very crucial perspective for developing nations like Zambia to adopt. For an organization to excel in its greater heights for customer service and retention, e-communication must be embraced.

Findings revealed that electronic communication, customer service level, and electronic order processing have a positive influence on procurement performance, while procurement cost reduction showed a significant yet non-supported influence. Correlation and regression analyses confirmed the importance of these factors, demonstrating how effective communication, customer satisfaction, and efficient electronic order processing enhance procurement performance for public entities.

Information technology (ICT) has made procurement even more efficient for the processes and procedures; it is faster and cheaper to order online. The e-order processing has a perspective that concentrates much on customer service, rather than operational issues. So, electronic order processing has been identified as the best tool to use in most viable organizations. Because it reduces the lead time, hence faster and more reliable when dealing with the suppliers and vendors. The e-order processing, once it is fully implemented, brings about swift operations for an entity. This system empowers the subordinates to make decisions regarding commitments to online e-service. (Aganda, 2014). The process effectively influences and inspires subordinates and colleagues to concentrate on target accomplishment, this is according to (Yakl, 1994).

5.5 Discussion of the Study.

The discussion of the results was arranged according to the research objective.

5.5.1 Influence of E-Communication on Procurement Performance

Research results indicated that electronic communication has a significant and positive influence on procurement performance (B-value = 0.157**, p-value < 0.001). This implies that communication is essential for the selected public entities' internal and external interactions. The use of electronic devices provides a communication process that is both reliable and effective. According to Nickels et al. (2002), support this by stating that effective dialogue with customers helps build trust. Additionally, Baker (1995), highlights that digitalization facilitates easier information exchange, fostering growth at the global level. Each exchange of information incurs a cost, and more exchanges can lead to greater potential for cost savings. By applying this concept, an organization can significantly reduce overall operational costs in the supply management process. The internet system or digitalization enables people to access and operate e-services to speed up e-communication without limitations. Many public entities in Zambia face limitations due to restricted ability, time, and environmental factors.

5.5.2 Influence of Electronic Order Processing on Procurement Performance.

The regression results indicated that EOP (Electronic Order Processing) is negatively but significantly related to procurement performance (B = -0.165**). However, the correlation matrix showed a positive relationship between the two variables. Therefore, the regression results suggest that internet availability negatively impacts procurement performance. These findings contradict those of Francis & Dorcas (2015), whose study found that companies benefited greatly from electronic procurement projects. Benefits included process efficiencies leading to annual savings, the ability to directly integrate with existing systems like ERP, and reductions in lead times within the procure-to-pay cycle, sometimes by as much as 50%. Month-end reconciliation resolves issues for incorrect items being ordered or incorrect prices being offered, as business processes are streamlined and everyone works from the catalog. E-government procurement has made procurement more effective and efficient by making the purchasing of goods and services without difficulties, faster, and less expensive. The purpose of e-procurement is to enable the purchasing function to concentrate on value-adding rather than on operational concerns. These study findings also contradict Arthur Ahimbisibwe et al. (2018), who found that electronic procurement systems significantly transformed previously undervalued traditional functions into a competitive advantage.

5.5.3 Influence of Customer Service Level on Procurement Performance.

Research results further showed the existence of a positive and significant relationship between Customer Service Level and Procurement Performance (B=0.702**, P<0.001). This means that for procurement performance to be a success, it is partly dependent on whether customers are satisfied with the service. The findings were supported by Francis and Dorcas (2015), who concluded that each activity, each person, and each level must work properly together for a common goal achievement because every person and every activity affects and is affected by others (Mazhar Hussain et al. 2022).

Geoffrey Kipngeno & Barrack Okello (2015) indicated that, " Every part of an organization contributes to external customer satisfaction by satisfying its internal customers". From an emanating perspective, this internal customer notion is also well accepted and has contributed to the concept of internal marketing.

5.5.4 Influence of Procurement Cost Reduction on Procurement Performance.

Findings reveal a significant and positive association between Procurement Cost Reduction (PCR) and Procurement Performance (B = 0.202**, P < 0.001). This suggests that PCR positively impacts procurement performance, indicating that cost reductions achieved through e-procurement are substantial compared to the expenses of traditional procurement methods, such as traveling to purchase items. Susan and Murimi Raphael Githinji (2018) emphasize that the financial savings realized through the adoption of e-procurement should not be underestimated by any organization aiming to reduce operational overheads. They further argue that the effective implementation of information technology, combined with comprehensive staff training in system operations, can substantially lower organizational operational costs.

5.6 Contribution to The Body of Knowledge

The study significantly adds value to the existing body of knowledge on e-government procurement systems by providing empirical evidence from public entities in Zambia. One of the key contributions is the affirmation of the positive impact of electronic communication on procurement performance. The study demonstrates that effective

electronic communication is essential for enhancing the efficiency and reliability of procurement processes, as supported by Nickels et al. (2002) and Baker (1995).

6. Conclusion

The study targeted a population within Zambia, including Zesco, Zambia Revenue Authority (ZRA), Zamtel, and Local Government under the procurement and stores departments, to study the influencing factors of e-government systems on performance for public entities. Using a sample of 275 and a simple random probability sampling technique, the study validated its findings through expert reviews and pilot testing, ensuring alignment with research objectives. Data collection incorporated both primary methods (surveys, questionnaires, interviews) and secondary methods (reports from public entities and NGOs). The data was analyzed using SPSS V 23, which showed that electronic communication, customer service levels, and procurement cost reduction positively impacted procurement performance, while electronic order processing showed a significant yet negative relationship.

Ethical considerations were strictly followed, maintaining confidentiality and honesty throughout the study. Demographic profiles were assessed, revealing a predominantly male sample with varied educational backgrounds and employment statuses. Reliability and validity checks, including Cronbach's alpha, confirmed the internal consistency of the measurement tools. Preliminary statistical checks ensured the data met all prerequisites for further analysis. The study's findings supported the hypotheses that electronic communication, customer service levels, and procurement cost reduction positively influence procurement performance, highlighting the importance of efficient electronic government procurement systems in enhancing performance for the public entities in Zambia.

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