

# Users' Perception Regarding the Effect of E-Procurement Practice on Customer Satisfaction in Public Procurement in Tanzania

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**How to cite this paper:** Maagi, B., & Mwakalobo, A. (2023). Users' Perception Regarding the Effect of E-Procurement Practice on Customer Satisfaction in Public Procurement in Tanzania. *Open Journal of Business and Management*, 11, 570-584. <https://doi.org/10.4236/ojbm.2023.112030>

**Received:** December 19, 2022

**Accepted:** March 14, 2023

**Published:** March 17, 2023

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## Abstract

E-procurement is a technological system that was introduced for the purpose of increasing efficiency in procurement. Following emergent of this new technology people within the organization (users) had some expectations regarding performance improvement in procurement as compared to the old manual procurement system. In this view, this study aimed at examining users' perception on the effect of e-procurement practice on customer satisfaction in public procurement. The study adopted explanatory sequential mixed method involving both quantitative and qualitative data that were collected in two different phases. The population of study included user staff working in five selected procuring entities whereby questionnaires were used to collect quantitative data from respondents who were approached by using simple random sampling technique. Also, interview guide was used to collect qualitative data from Heads of Departments whereby the obtained data were analyzed by using content analysis. In order to determine user's satisfaction on procurement service delivery, data were analyzed in two steps: first, the mean difference between perception and expectation of customers was computed (P-E). The obtained value was divided by total number of items to get index score for each service quality dimension. Then, the index score was divided by the five service quality dimensions to get the overall index score. Second, Binary Logistics Regression Model was applied to estimate the effect of independent variable (Tangibility, Responsiveness, Reliability, Empathy and Assurance) on dependent variable (customer satisfaction). The study concluded that there is a significant relationship between use of e-procurement and increase in customer satisfaction in procurement. Therefore, it is recommended that chief executive officers in public organizations should take e-procurement as a solution to improve service delivery to their customers.

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## Keywords

Users' Perception, E-Procurement, Customer Satisfaction

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## 1. Introduction

This article is organized as follows: first it starts with an abstract that gives a short summary of the whole study then it presents the background of the problem followed by literature review, research methodology, results, discussion of the results and implication of the study. Finally, the article presents conclusion, suggests areas for future research and provides various references used in the study.

## Background of the Problem

E-procurement is a system that involves automation of procurement activities so as to enable an organization increase efficiency in the procurement process. On user's perspective, procurement functions involve delivery of goods and services to staff working within the organization for the purpose of enabling them perform various operations that are focused to achieve organizational goal. In developing countries, public procurement contributes to twenty percent of the GDP (World Bank, 2017). Tanzania in particular, public procurement consumes 70% of the total budget (URT, 2018). This indicates that public procurement is an important area that needs to give significant effect on meeting customer satisfaction in the organization. It is in this context that many governments including Tanzania have decided to adopt e-procurement technology as a lever that can improve efficiency and thus being able to meet customer expectations. Although several studies have examined e-procurement in relation to procurement performance, in developing countries including Tanzania there is lack of clear understanding if, for real, e-procurement contributes to customer satisfaction from the user/customer perspective. This follows the report from previous studies which indicate customer dissatisfaction in service delivery in public organizations (Kobero & Swallehe, 2022). Customer dissatisfaction has got consequences such as increased complains, misunderstanding among employees, reputation damage, loss of best employees, loss of revenues, defections and increased stress level among employees (Malik et al., 2010). Dissatisfaction is an unwanted feeling of an individual after evaluating a certain service offered to him (Reeves et al., 2017). The need to pay close attention to customers is essential because when customers are being offered with high quality services at the right time it will prevent complains and thus increasing customer satisfaction in the organization (Chandra et al., 2018). According to Parasuraman et al. (1988), assessment of service quality and determining customer satisfaction can be measured by using Servqual tool which contains five dimensions namely Tangi-

bility, Responsiveness, Reliability, Assurance and Empathy. In addition, [Kundi et al. \(2014\)](#) concluded that there is a noteworthy relationship between these service quality dimensions and customer satisfaction because customers consider them as necessary for their development. This means that in service delivery, customers expect high quality services at the right time with a high degree of care and fairness in solving their requirements or problems. According to [Twum and Peprah \(2020\)](#), customer satisfaction can be 100% regarded by dimensions of service quality ie Tangibility, Responsiveness, Reliability, Assurance and Empathy and that, customer needs and problems must be attended with a close attention and assistance. E-procurement is a tool that transforms the traditional non-value adding activities into more value-adding activities thus giving perception of improved service delivery from the internal user staff and the public at large. This indicates that the continuing use of e-procurement provides opportunities for improved business processes by linking the parties in the network hence ensuring efficient and responsive service delivery to customers. This is also supported by [Nawi et al. \(2016\)](#) who argue that the use of e-procurement can enable an organization become more efficient and effective in service delivery to customers.

Despite of much benefits of e-procurement in service delivery as reported by scholars from different countries, In Tanzania there is lack of clear understanding on the effect of e-procurement in service delivery particularly on part of user staff as beneficiaries of goods and services procured in the organization. This creates a question that remain unanswered in the world of literature, therefore, this study is an attempt to get an answer on this aspect by examining user' perception on the effect of e-procurement on customer satisfaction in public procurement in Tanzania.

## 2. Literature Review

### 2.1. Value Creation under E-Procurement

The use of e-procurement can improve efficiency and effectiveness in the procurement process in a number of ways such as improved control of vendor relationships, increased accuracy, better negotiations with suppliers, reduced transaction cost and increased speed in service delivery ([Rozario et al., 2022](#)). The use of e-procurement enables supplier networking whereby different suppliers are integrated together worldwide which makes it easy to identify potential suppliers in the market. Such networking increases visibility in supply chain thus eliminating possibilities of biasness and corruption in the procurement process ([TI, 2015](#)). The value created by e-procurement has been reported by several scholars including [Suleiman \(2015\)](#) who argue that e-procurement improves efficiency in terms of reducing paper works, reducing administrative cost, reducing maverick buying and reducing procurement cycle time. According to [Costa et al. \(2013\)](#), E-procurement improves service quality by shortening the whole purchasing

process through eliminating authorization stages, reduction in administrative costs and ensuring a better collaborative mechanism between buyer and supply chain partners. Lemo (2012) states that by using e-procurement an organization can minimize forgeries and theft when making payments through use of digital cards that recognize only the holder of a secret password to perform the online transaction. Therefore, the use of e-procurement can bring more efficiency in terms of convenience, simplification, timeliness and security than using the traditional procurement system.

## 2.2. Disconfirmation Theory

This theory postulates that customer satisfaction is measured by comparing between expectations and perceptions of the people in relation to services offered to them. Expectations are predictions of the customer on a certain activity that is going to occur which is performed by someone who provide services to customers while perception is the judgement of the customer with regard to the service quality offered to him. In other words, perception is reflection of feelings from the customer which signals how the product or service has fulfilled the desire of the customer. When the value of perception exceeds the value of expectation it signals that the customer is satisfied with service quality but if the value of perception is less than the value of expectation it signals poor service quality which leads to customer dissatisfaction (Kobero & Swallehe, 2022).

## 2.3. Impact of E-Procurement on Customer Satisfaction

Customer relationship under e-procurement involves any means of communicating with customers by instilling more quality services to meet customers' needs and expectations. Under e-procurement, this is achieved by promoting healthy lines of communication that eliminates waste in time and cost through getting the customers' requirements in time and sending quick feedback on customers' orders in an economical manner (Quesada et al., 2010). That is, e-procurement enables better contact between procurement personnel and user staff through use of computers thus creating high service quality that meets expectations of internal users within the organization (Kaula, 2018). In this case, service quality improvement in procurement is a prerequisite if an organization wants to achieve customer satisfaction. Service quality has been identified as one of the key driving forces for organizational survival and sustainability. Service quality is an assessment done on a particular activity so as to determine performance as well as determining perception of customers in relation to the activity performed (Kobero & Swallehe, 2022). Service quality is assessed base on five service quality dimensions which include tangibility, reliability, responsiveness, empathy and assurance. Tangibility involves physical appearance and capability of staff in performing their duties diligently and perfectly when serving customers. It also involves the use of facilities and equipment such as computers that in one way or another makes customers be impressed and create trust on services

offered to them (Alajhar et al., 2022).

With regard to reliability, this is whereby an organization provides service delivery to customers perfectly and accurately thus making customers create trust and continual to demand repeated services from the organization. On part of responsiveness, this is the ability of the organization to act promptly on customer needs by ensuring that any request or complain is dealt and feedback given to the customer at the right time. Fast speed in handling customer request and complains improves service delivery and thus leading into customer satisfaction. Empathy is the situation whereby an organization exercises high degree of caring, listening, acting ethically and paying attention to customers. When customers realize that they are cared and treated ethically even customer complain will be minimized in the organization. Assurance is the situation whereby customers are inspired with services offered thus making them create trust and confidence in using services offered in a sustainable way (Dominici & Guzzo, 2010). In order to determine customer satisfaction in service delivery, assessment between expectation and perception of the customer must be compared. In other words, when it happens that perception of the customer is higher than expectation it will signal a better service quality to the customer (Alajhar et al., 2022). In procurement perspective, studies have addressed the effect of e-procurement on customer satisfaction in a number of ways. For example, Kiragu (2012), reported that the use of e-procurement enables an organization to manage whole life cost of materials hence making an organization achieve value for money in the procurement process. An organization can create value to the customers by providing reliable services and demonstrating high level of responsiveness that guarantee timely services to customers. Service quality and customer satisfaction are two philosophies that are important in dealing with customers. When an organization provides high quality services to customer this will help to retained them and thus making the organization stay in a better position of achieving competitive advantage. Service delivery in procurement should ensure that customer needs are met in time and in a precise manner as this will make customers create trust with the service provider and thus increase their satisfaction (Kobero & Swallehe, 2022). Following views from scholars on relationships between e-procurement and customer satisfaction, the following research hypotheses were formulated:

( $H_{a1}$ ): Tangibles under e-procurement have significant effect on customer satisfaction in public procurement

( $H_{a2}$ ): Responsive services under e-procurement have significant effect on customer satisfaction in public procurement.

( $H_{a3}$ ): Reliable services under e-procurement have significant effect on customer satisfaction in public procurement.

( $H_{a4}$ ): Empathetic services under e-procurement have significant effect on customer satisfaction in public procurement.

( $H_{a5}$ ): Assured services under e-procurement have significant effect on cus-

tomers' satisfaction in public procurement.

#### 2.4. Research Gap

The available literature on e-procurement shows that many studies address issues of public electronic usage in a general perspective (Masumo-Gwebente & Phiri, 2022). Although some studies went further to study use of e-procurement in relation to performance improvement, most of them do not give a detailed analytical approach of assessing e-procurement by using service quality dimensions (Tangibility, Responsiveness, Reliability, Empathy and Assurance) as important variables of determining customer satisfaction. Such lack of information from the literature makes it difficult to get clear understanding on the beneficial effect of e-procurement in service delivery particularly on part of user staff as beneficiaries of goods and services procured in the organization. Therefore, this study is an attempt to provide an empirical information regarding effect of e-procurement on customer satisfaction by using the adopted service quality dimensions.

### 3. Research Methodology

This study has employed explanatory sequential mixed method which is an ideal method for ensuring validity and reliability in research studies (Creswell, 2014). In the first phase, quantitative data were collected by using structured questionnaires and then analyzed to give interpretation on effect of e-procurement on customer satisfaction. In the second phase after two weeks' period the researcher went again in the field to collect qualitative data from key informants by using interview method so as to seek supportive information on some important issues that emanated in the quantitative data. The questionnaires were scaled to 5-point Likert scale (1 strongly disagree; 5 strongly agree) and contained 19 items relating to five service quality dimensions. The dimensions included tangibility, responsiveness, reliability, empathy and assurance as independent variables that were regressed on customer satisfaction (dependent variable) that contained Yes and No responses. From the population, a sample size of 350 respondents were calculated through using Yamane (1967) formula, these respondents were selected randomly from five selected public entities that were registered as highest users of e-procurement in Tanzania (URT, 2019). A total of 350 questionnaires were distributed to respondents but due to unavoidable circumstances 290 questionnaires were properly filled and returned making a response rate of 82.86% which is academically acceptable as adopted by other scholars including (Nkandu & Phiri, 2022). Quantitative data were analyzed by using binary regression model to test and identify if there is significant effect on customer satisfaction under e-procurement. After processing the quantitative data then qualitative data were also collected from key informants involving the Head of Departments from each selected entity so as to get supportive information and clarifications on some issues of quantitative data. The Heads of Departments were considered

appropriate for involvement in the interview because as senior officers they are more informed on issues of customer satisfaction under e-procurement. The contact of key informants from each entity were obtained from Human Resource officers and appointments for the day of interview was sought one week earlier through telephone communication after confirming their availability and appropriate time for the interview. In determining customer satisfaction, data were analyzed in two steps: in the first step, the researcher computed the mean score for expectation (E) as well as the mean score for perception (P) for each service quality dimension then their difference was established (P-E). Then, the sum of (P-E) was divided by total number of items which led to getting the index score for each service quality dimension. Then, the total of all service quality dimensions' index score were divided by the five service quality dimensions to get the overall index score. Finally, Binary Logistic Regression Model (BLRM) was used to estimate the effect of independent variables (service quality dimensions) on customers' satisfaction (dependent variable). On part of the qualitative data, data were analyzed by using content analysis technique which requires data to remain in their natural setting. In this case, data were assigned to their related themes and categories and then categories were subdivided into key concepts that were coded to aid in computation of data. In addition, Statistical Package for Social Sciences (SPSS) version 23 was used as a tool to aid in computation of data. At the end, both quantitative and qualitative results were interpreted to give a clear understanding on users' perception regarding the effect of e-procurement practice on customer satisfaction. The BLRM was represented as follows:

$$y_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \dots + \varepsilon_i$$

$y_i$  = Customer Satisfaction (dependent variable),

$\beta_0$  = Constant,

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$  = Regression coefficients,

$x_1$  = Tangibility,  $x_2$  = Reliability,  $x_3$  = Responsiveness,  $x_4$  = Empathy,  $x_5$  = Assurance,

$\varepsilon_i$  = Estimated error.

## 4. Results

### 4.1. Reliability Test

For the purpose of ensuring reliability of data, it was considered necessary to test internal consistency of data and determine whether the data gives true and meaningful contribution in the world of literature. Therefore, the study tested reliability by using Cronbach's alpha technique which measures how well a set of items measures a single, one-dimensional latent aspect of individuals. According to Lawson (2014), the alpha values above 0.7 is acceptable to reflect internal consistency of data. The results in Table 1 shows that Cronbach's alpha values for the items used in this study ranged from 0.752 to 0.965 thus indicating that the data used in this study are valid and reliable.

**Table 1.** Cronbach's alpha values per dimension.

SQ Dimensions	Number of Items	Perception Cronbach's Alpha	Expectation Cronbach Alpha
Tangibles	4	0.716	0.759
Reliabilities	4	0.914	0.862
Responsiveness	4	0.941	0.830
Empathy	3	0.965	0.877
Assurance	4	0.943	0.865

Source: Field Data, 2019.

## 4.2. Inferential Statistics Results

### 4.2.1. Overall Service Quality Index

This part compares results on average mean scores, mean differences and overall index on each of the service quality dimensions as indicated in the (Table 2). The results indicate that all service quality dimensions and the overall index have positive scores (MD = 0.38) implying that customers' perceptions on service quality are higher than what it was expected. The overall positive score suggests that customers among the public entities are satisfied with service delivery offered under e-procurement.

### 4.2.2. Results on Binary Logistics Regression Model

#### 1) Testing for BLRM assumptions

Before analyzing the data, assumptions of Binary Logistics Regression Model was checked by considering outliers, multi co-linearity and goodness of-fit test.

#### 2) Testing of Outliers

With regard to outliers, this was tested by using normalized residuals which were performed in the SPSS. Anderson (1982) recommends that data which are free from outliers are those with normalized residual values between -3 and 3. In this study, all normalized residuals were less than -3 and 3 hence indicating fitness of the data in the model.

#### 3) Test of Multi Co-linearity

Multi co-linearity was measured by using standard error (SE). The results in Table 3 indicate that standard error was less than 2.0 which means that there was no multi co-linearity in the data.

#### 4) Goodness of-fit Test

Furthermore, data were measured to test the goodness-of-fit by using Hosmer and Lemeshow test. The results in Table 3 show that  $p$ -value is 0.698 (not significant), which suggests a good fit of the data into the model. Pallant (2011), states that a significant value less than 0.05 indicates poor fit of the data in the model.

Table 3 presents results of the binary logistics regression analysis whereby it shows that the overall model fit was statistically significant ( $p < 0.05$ ) which suggests that the model was able to predict that e-procurement cause significant



**Table 2.** Overall index.

Dimension	Mean of Expectation	Mean of Perception	Mean Difference
Empathy	0.07	0.74	0.66
Responsiveness	0.54	0.96	0.42
Reliability	0.43	0.79	0.36
Tangibility	0.41	0.62	0.21
Assurance	0.57	0.80	0.23
<b>Overall mean</b>	<b>0.40</b>	<b>0.78</b>	<b>0.38</b>

Source: Field Data, 2019.

**Table 3.** Binary logistic regression results.

Variables	B	S.E.	Wald	Sig.	EXP (B)
Reliability	0.900	0.275	10.694	0.001	2.407*
Responsiveness	0.323	0.316	1.048	0.003	1.382*
Tangibility	0.095	0.283	0.113	0.737	1.099
Empathy	0.558	0.205	7.433	0.006	0.573*
Assurance	0.190	0.295	0.417	0.047	1.210*
Constant	-2.649	0.464	32.571	0.000	0.071
Hosmer & Lemeshow Test	$P = 0.698$				
Chi-square	5.544			0.000	
Cox & Snell R Square	0.069				
Nagelkerke R Square	0.171				
-2 Log likelihood	129.886				

\*Significant at 5% level. Source: Field Data, 2019.

improvement on customer satisfaction. Furthermore, the Nagelkerke R square was 0.171 meaning that independent variable explained 17.1% of variance in customer satisfaction. The value of the Nagelkerke R square provides a level of variation in the dependent variable explained in the model. The results on five service quality dimensions indicate that the element of tangibility has a beta coefficient of 0.095, odd ratio of 1.099 and a  $p$ -value of 0.737 which shows insignificant relationships. With regard to reliability, the beta coefficient is positive (0.9) and  $p$ -value = 0.001 ( $p < 0.05$ ), suggesting that a unit increase in reliability will cause 900% increase in customers' satisfaction. This also has been shown by the odd ratio of 2.407 implying that the likelihood of reliability to change the customer satisfaction is 2.4 times. On responsiveness the beta coefficient is 0.323,  $p$ -value is 0.003 and odd ratio is 1.382. Since the coefficient value of responsiveness is positive it indicates that any unit increase in responsiveness will result into an increase of 32.3% in customer satisfaction. Also by giving odd ratio of 1.382 it means that the likelihood of responsiveness to change customer satis-

fraction is 1.382 times. On the part of empathy, the results show that the beta coefficient is positive (0.558);  $p$ -value is 0.006 and odd ratio is 0.573 meaning that any unit increase in empathy will result into 55.8% increase in customer satisfaction and the likelihood of empathy to meet customer satisfaction is 0.573 times. With regard to assurance, the results show that the beta coefficient is positive (0.19),  $p$ -value is 0.047 meaning that any unit increase in assurance will result into an increase in customer satisfaction by 19%. This has also been shown by the odd ratio of 1.21 meaning that the likelihood of assurance to change customer satisfaction is 1.2 times.

## 5. Discussion of the Results

### 5.1. Satisfaction on Tangibility

With regard to tangibility, the results in **Table 3** indicates that the element has a beta coefficient value of 0.095, and odd ratio of 1.099 meaning that the element has an influential positive effect on improving customer satisfaction in the procurement process.

In a similar view, key informant AD stated that;

*“Infrastructures such as computers, internet, electricity, skilled staff in IT motivates people in their area of work and thus get satisfied”*

Implementation of e-procurement needs some basic resources such as hardware and software computer facilities, skilled human resources, adequate financial resources, office rooms, reliable internet and stable power supply. Therefore, procuring entities should provide adequate resources in terms of computers, internet facilities, software and skilled staff because such resources enable efficient and effective performance of procurement activities hence meeting customer satisfaction. The results from this study concur with the study of [Huang et al. \(2022\)](#) who reported that the more government support in terms of investment in resources, the higher the efficiency in performing activities under electronic and communication technology.

### 5.2. Satisfaction on Reliability

The results on reliability in **Table 3** indicate that there is a significant relationship between reliability of e-procurement services and customer satisfaction. Following these results, an alternative hypothesis was accepted with a view that reliable services under e-procurement have significant effect on customer satisfaction in public procurement. In support of the results, key informant TR from one of the public entity added that;

*“The use of e-procurement has enhanced fast and reliable communication between user staff and procurement department”*

This shows that by using e-procurement, speed in service delivery is fast and more reliable thus meeting expectations of the customers as compared to the old manual practices. That is, under e-procurement, there is reliable follow-up me-

chanism of orders from suppliers; tender advertisement is done timely; fast speed in preparing bidding documents; procurements are approved in time and there is reliable communication system. Also, goods and services are procured from reliable suppliers due to use of e-catalogues which enable buyers to solicit potential bidders across the world through online. Also, under e-procurement system there is reliable security system of stocks, reliable system of awarding tenders to bidders, reliable accurate information in the procurement process and reliable mechanism of preparing annual procurement plans. This indicates that the use of e-procurement system has made service delivery in public procurement to become more reliable than the traditional system thus increasing trust on part of customers. In a similar view, [Kobero and Swallehe \(2022\)](#) stated that when customers receive the best services they will be satisfied with the service provider. In order to maintain the organization's positive image, it is important to know the type of services needed and most valued by customers in the organization.

### 5.3. Satisfaction on Responsiveness

The results in [Table 3](#) indicate that responsiveness under e-procurement has significant relationship with customer satisfaction in public procurement. Similarly, key informant AY who is Head of Department from one of the entity supported that;

*“E-procurement has enabled quick feedbacks to customers regarding progress of their orders”*

In a similar view, key informant DB from another entity added that;

*“Under e-procurement, customer complaints are communicated timely and feedback sent promptly to the one complaining”*

Following the results, an alternative hypothesis was accepted in the sense that responsive services under e-procurement have significant effect on service improvement and thus meeting customer satisfaction. Normally, in public procurement context, users/customers are interested in getting their requirements of goods and services at the right time so as to proceed with their operations as scheduled, Under e-procurement, services can be delivered faster than the manual practices; that is, e-procurement ensures quick processing of customer requests; quick giving of feedbacks to customers; quick handling of customer complaints; quick issuing of goods to customers; quick clearance of audit queries, quick communication with customers and other stakeholders ([Zamil & Sham-mot, 2011](#)). Therefore, by delivering procurement services under e-procurement, users get their requirements promptly hence making them satisfied with the service delivery.

### 5.4. Satisfaction on Empathy

On part of empathy, the results indicate that there is a significant relationship between empathy and customer satisfaction when using e-procurement. The re-

sults agree with the opinion from key informant PJ who argued that;

*“The use of e-procurement has prevented unethical practices such as corruption and biasness in the public procurement process”*

Following the results, an alternative hypothesis was accepted with a view that empathetic services under e-procurement have significant effect on increasing customer's satisfaction. This means that the use of e-procurement in public procurement improves issues of customer care; prevents corruption; prevents frauds and ensures transparency. In other words, by using e-procurement, unethical practices in public procurement such as taking bribes from suppliers, biasness, conflict of interest, favoritism, etc are prevented. Under the traditional system, such challenges were common because the system allowed face to face physical interaction between buyer and seller whereby some unfaithful staff used such opportunity to engage in corruption (TI, 2015). E-procurement enhances better visibility in the procurement process by connecting many participants that can communicate and perform transactions by using established tender's portals/forums such as e-informing, e-tendering, e-catalogues etc. Therefore, e-procurement as a technology is an important resource that should be used by procuring entities to improve service delivery in terms of preventing unethical practices that have confronted public image and thus making customers get dissatisfaction.

### 5.5. Satisfaction on Assurance

Lastly, the results on assurance in **Table 3** indicate that there is a significant relationship between assured services and customer satisfaction. Following the results, an alternative hypothesis was accepted in the sense that assured services under e-procurement has significant effect on customer satisfaction in public procurement which implies that the use of e-procurement has significant contribution in ensuring good services to customers. In other words, it indicates that customers are more assured on getting better services in the public procurement process under e-procurement. The results from this study are in harmony with the study of Vaart and Donk (2010) who assert that e-procurement has a relevant role in the collaboration between procurement department and the customers due to an integrated system that assures customers to be given feedback. In a similar view, Croom and Johnston (2013) report that, an automation of procurement processes is one of the vital factors for increasing process efficiency and thus ensuring customers on getting better services. In addition, the results are in harmony with the study of Jaas (2022) on e-marketing who argued that since e-marketing strategies combine planning and the use of communication technology, this complementary relationship can help organizations monitor potential problems and threats, while providing them with opportunities to achieve excellence and gain a strategic position in the market. Therefore, based on the obtained results from this study, it is concluded that the use of e-procurement has an effect on improving customer satisfaction in the pro-

curement process. E-procurement as a technology is an important resource that should be used by procuring entities to improve service delivery in terms of responding to customer needs in time, providing accurate and reliable information to customers, preventing unethical practices and minimizing procurement costs which in its totality, improves service delivery to customers thus making achievement of customer satisfaction in the organization.

## 6. Implication of the Study

The results from this study indicate that there is significant relationship between using e-procurement and customer satisfaction. In other words, e-procurement has an important role in improving service delivery to customers. With this understanding, chief executive officers managing public organizations should develop relevant policies, procedures and deploy more resources for effective use of e-procurement as a strategy to improve service delivery as well as to increase customer satisfaction.

## 7. Conclusion

The study assessed users' perception on the effect of e-procurement on customer satisfaction and concluded that there is significant relationship between using e-procurement and increasing customer satisfaction in the procurement process. This is due to the fact that four service quality elements out of five have shown significant relationship on meeting customer satisfaction under e-procurement. Among these four significant elements, empathy was the leading element in meeting customer satisfaction as compared to other elements. In general, the study concludes that the use of e-procurement has significant contribution in improving service delivery in public procurement and thus facilitating achievement of customer satisfaction in the organization.

## Future Research

Since this study was limited to user staff working within the procuring entity (internal people), this study suggests further studies be conducted involving outside customers (beneficiaries) who receive various services from the procuring entity such as patients in health sector and students in education sector.

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

## References

- Alajhar, N. A., Almiqbel, E., Alamoudi, L., Mashat, R., & Husain, K. (2022). Implementing Quality Management Tools to Improve Customer's Journey at Café. *Open Journal of Business and Management*, 10, 2045-2090.  
<https://doi.org/10.4236/ojbm.2022.104105>

- Anderson, J. A. (1982). Logistic Discrimination. In P. R. Krishnaiah, & L. N. Kanal (Eds.), *Handbook of Statistics* (Vol. 2, pp. 169-191). North-Holland.  
[https://doi.org/10.1016/S0169-7161\(82\)02010-0](https://doi.org/10.1016/S0169-7161(82)02010-0)
- Chandra, T., Ng, M., Chandra, S., & Priyono, P. (2018). The Effect of Service Quality on Student Satisfaction and Student Loyalty: An Empirical Study. *Journal of Social Studies Education Research, 9*, 109-131.
- Costa, A. A., Arantes, A., & Tavares, L. V. (2013). Evidence of the Impacts of Public E-Procurement: The Portuguese Experience. *Journal of Purchasing and Supply Management, 19*, 238-246. <https://doi.org/10.1016/j.pursup.2013.07.004>
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). SAGE Publications.
- Croom, S., & Johnston, R. (2013). E-Service: Enhancing Internal Customer Service through E-Procurement. *International Journal of Service Industry Management, 14*, 539-555. <https://doi.org/10.1108/09564230310500219>
- Dominici, G., & Guzzo, R. (2010). Customer Satisfaction in the Hotel Industry: A Case Study from Sicily. *Journal of Marketing Studies, 2*, 3-12.  
<https://doi.org/10.5539/ijms.v2n2p3>
- Huang, K., Li, Y., Zhang, J., & Wei, Z. (2022). Study on Measurement of Collaborative Innovation Development of Electronic and Communication Equipment Manufacturing Industry and Its Influencing Factors in Yangtze River Delta. *Open Journal of Business and Management, 10*, 1245-1273. <https://doi.org/10.4236/ojbm.2022.103068>
- Jaas, A. (2022). E-Marketing and Its Strategies: Digital Opportunities and Challenges. *Open Journal of Business and Management, 10*, 822-845.  
<https://doi.org/10.4236/ojbm.2022.102046>
- Kaula, S. (2018). *Assessment on the Factors Hindering Performance Procurement: A Case of Mbeya Tanzania*.
- Kiragu, R. W. (2012). *Information Technology and Procurement Process in Kenya*. MSc. Thesis, University of Nairobi.
- Kobero, W., & Swallehe, O. (2022). The Effects of Service Quality on Customer Satisfaction in Higher Learning Institutions in Tanzania. *Open Journal of Business and Management, 10*, 1373-1391. <https://doi.org/10.4236/ojbm.2022.103074>
- Kundi, G. M., Qureshi, Q. A., Khan, Y., & Akhtar, R. (2014). Impact of Service Quality on Customer Satisfaction in Higher Education Institutions. *International Institute for Science, Technology and Education, 4*, 23-28.
- Lawson, M. (2014). *The Impact of Risk Propensity on Corporate Entrepreneurship*. Ph.D. Thesis, Pretoria University.
- Lemo, T. (2012). *Lessons from Nigeria's Cashless Society Campaign*.
- Malik, M. E., Danish, R. Q., & Usman, A. (2010). The Impact of Service Quality on Students' Satisfaction in Higher Education Institutes of Punjab. *Journal of Management Research, 2*, 1-11. <https://doi.org/10.5296/jmr.v2i2.418>
- Masumo-Gwebente, D., & Phiri, J. (2022). Factors Affecting the Uptake of E-Government Services on the Government Services Bus (GSB) in Developing Countries. A Case Study of Ministry of Lands and Natural Resources in Zambia. *Open Journal of Business and Management, 10*, 3100-3113. <https://doi.org/10.4236/ojbm.2022.106154>
- Nawi, M. N. M., Roslan, S., Salleh, N. A., Zulhumadi, F., & Harun, A. N. (2016). The Benefits and Challenges of E-Procurement Implementation: A Case Study of Malaysian Company. *International Journal of Economics and Financial Issues, 6*, 329-332.  
<https://www.econjournals.com/>

- Nkandu, P., & Phiri, J. (2022). Assessing the Effect of ICTs on Agriculture Productivity Based on the UTAUT Model in Developing Countries. Case Study of Southern Province in Zambia. *Open Journal of Business and Management*, 10, 3436-3454. <https://doi.org/10.4236/ojbm.2022.106169>
- Pallant, J. (2011). *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS for Windows* (4th ed.). Open University Press.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*, 64, 12-40.
- Quesada, G., González, M. E., Mueller, J., & Mueller, R. (2010). Impact of E-Procurement on Procurement Practices and Performance. *Benchmarking: An International Journal*, 17, 516-538. <https://doi.org/10.1108/14635771011060576>
- Reeves, P. M., Pun, W. H., & Chung, K. S. (2017). Influence of Teacher Collaboration on Job Satisfaction and Student Achievement. *Teaching and Teacher Education*, 67, 227-236. <https://doi.org/10.1016/j.tate.2017.06.016>
- Rozario, Y., Hossain, M. S., Moutusi, S., & Afreen, S. (2022). Online Information Disclosure, Social Media Strategies and Company Characteristics—The Case of Bangladesh. *Open Journal of Business and Management*, 10, 2304-2324. <https://doi.org/10.4236/ojbm.2022.105115>
- Suleiman, M. (2015). Adoption of E-Procurement and Value Addition: Tanzanian Context. *European Journal of Business and Management*, 7, 145-153. <https://www.iiste.org/>
- Transparency International (TI) (2015). *Transparency Perception Index Report*.
- Twum, F. O., & Peprah, W. K. (2020). The Impact of Service Quality on Students' Satisfaction. *International Journal of Academic Research in Business and Social Sciences*, 10, 169-181. <https://doi.org/10.6007/IJARBS/v10-i10/7923>
- United Republic of Tanzania (URT) (2018). *Performance Audit on Management of Procurement of ICT Equipment in Public Sector*. United Republic of Tanzania.
- United Republic of Tanzania (URT) (2019). *Public Procurement Regulatory Authority Compliance Audit Report*. United Republic of Tanzania.
- Vaart, A., & Donk, D. P. (2010). Corporate Transparency and Green Management. *Journal of Business Ethics*, 95, 487-506. <https://doi.org/10.1007/s10551-010-0435-z>
- World Bank (2017) *World Bank Annual Report 2017 (English)*. World Bank Group. <http://documents.worldbank.org/curated/en/143021506909711004/World-Bank-Annual-Report-2017>
- Yamane, T. (1967). *Statistics: An Introductory Analysis* (2nd ed.). Harper & Row.
- Zamil, A. M., & Shammot, M. M. (2011). Role of Measuring Customer Satisfaction in Improving the Performance in the Public Sector Organization. *Journal of Business Studies Quarterly*, 2, 32-41.