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Original Article

### Electronic Tender Advertisement System on Operational Performance of Small & Medium Enterprises in Kenya

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#### Date Published: ABSTRACT

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#### Keywords:

*Electronic tender advertisement system, Operational performance, Small and Medium Enterprises*

The aim of the study was to evaluate how the electronic tender advertisement system affects the the operational performance of SMEs in Kenya. Schumpeter's theory of entrepreneurship has been applied to ground the study. A descriptive study design was adopted. The target population for the study included 2500 SMEs operating in Murang'a County. The Yamane sample formula was used to determine a sample size of 189 SMEs. Drop and pick method was used in administering questionnaires with a response of 88%. The data collected was cleaned before being processed by use of SPSS version 23. Multiple regression analysis was used to test the hypotheses. R<sup>2</sup> of 0.671 postulated that 67.1% of the operational performance of SMEs can be attributed to e-tender advertisement. It was concluded that there is a significant effect between E-tender advertisement and SMEs' operational performance. The study recommended that for easier visibility on upcoming tender contracts, firms should opt advertising tender on the most visited or accessible media platform.

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## INTRODUCTION

E-tender advertisement refers to the process of publicizing a tender opportunity using electronic means, such as email, online portals, and social media platforms (Ibem & Laryea, 2017). E-tender advertisement enables organizations to reach a wider pool of potential suppliers and contractors in a more cost-effective and efficient manner compared to traditional print media advertising. It also allows for more transparency and fairness in the tendering process, as all interested parties have equal access to the tender documents and requirements. It is conceptualized that an E-tender advertisement is a crucial step in the procurement process as it initiates the competition among potential suppliers and sets the stage for the submission and evaluation of tenders. Public entities (PEs) are authorized for direct advertisement (Ibem & Laryea, 2017). PEs are involved in the preparation of Invitation Tenders and, in some cases, for Tender Notice with the help of online templates provided through the secure dashboard. The documents contain descriptions of goods, services, schedules, works, and terms.

Most bidders and inviters call for cooperation to prospective opportunities arising from the various tendering platform, where interested inviters and bidders desire to use tendering documents to exchange bidding requirements. According to (Dello & Yoshida, 2017), e-tender documents are encrypted in various digitized-tender platforms based on Request for proposal (RFP), Request for quotation (RFQ), Expression of interest (EOI), Request for tender (RFT), Advanced tender notice (AND), Request for Information (RFI), and Sale tender (ST). The exchange of documents is usually

heterogeneous and requires a manual process. First, some documents cannot be supported by an automated tender due to inflexibility and the computer’s inability to interpret them precisely. For instance, electronic mail attached to Microsoft Word, drawings, and scanned PDFs is only effective for comprehension by humans. Secondly, tendering documents are available from various sources that are not consistently significant in concept as they are developed in various contexts on the basis of the nature and size of the company. Further, they are only familiar, helpful, and well-understood in their specific company's automated tender platform.

The system is considered to originate from Europe, where it enjoys significant popularity amongst European countries. According to Joarder & Rahman (2015), the South Korean government implemented an online tendering system in 1997 exceeding 430,000 products. The automated-tender platform modified the traditional tender system, which was considered complicated, encouraged corruption, lacked accountability, and disregarded transparency. The system's initial setup injection was US\$ 27 million, has been accruing benefits through savings of approximately US\$ 45 billion yearly, and is considered among the most successful e-tendering systems globally (Joarder & Rahman, 2015). This system has boosted public trust, enhanced transparency, and allows cross-organization comparison in the tendering process.

### Small and Medium Enterprises

There is not a certified specific globalized definition of SMEs yet. However, various authors have defined SMEs based on their understanding. SMEs are also defined differently based on the nature and type of legislation embraced across different

countries, as measurements and dimensions of SME entities are relative to the level, size, and nature of the domestic economy. Berisha and Pula (2015) referred to SMEs as an entity with less than 250 employees, which are categorized as follows: small 1-49 and medium 50-250. Furthermore, it creates bases for comparability given differing data collection practices across countries, considering that some countries adopt different convention techniques.

E-tender advertisement is gradually gaining popularity in Kenya. It is embedded in an electronic tender management system where business people can discover tender opportunities, be guided on responding, and amicably create winning tender responses (Rotich & Okello, 2015). This system has been entirely digitized to enable accessibility from anywhere at any time. The system is designed to assist SMEs in minimizing errors associated with bidding that normally occurs in manual tendering processes, minimizing the total cost of finding business opportunities and shortening the time taken to prepare tender responses (Rotich, Bernard & Waruguru, 2015).

### Statement of the Problem

Despite the fact that SMEs play a vital role in the attainment of Kenya's social-economic growth, they are marred with various hindrances which have negatively impacted their performance forcing a number of them to close down their businesses prematurely. Based on the report tabled by KNBS (2017), the rate at which businesses owned by SMEs in Kenya are being closed down is worsening and this situation is considered a compromising factor to the attainment of the long-run contribution of the vision 2030. Additionally, the Kenya National Bureau of Statistics (2017) asserts that about 1.5 million SMEs are registered in the country. Out of the registered number, 46.3% of businesses owned by SMEs closed during their first year of operation, 11.2% of them survived to the 10<sup>th</sup> year after formation, and about 3.9% of businesses closed down between 11 and 15 years.

The main reason for the closure of business by SMEs based on findings was the inaccessibility of tenders on the website, lack of timely notification of any specification change, and time-consuming accessing and responding to tenders and distance. Subsequently, the Government of Kenya, in its attempt to boost equal participation of SMEs in the public procurement process, has enacted some of the initiatives which have uncovered a range of challenges not limited to administrative issues with e-procurement systems, exclusive contract conditions and cancelled tenders. *Vision 2030*, the country's development blueprint, has clearly disclosed the importance of supporting SMEs who are estimated to contribute 20% gross domestic product (GDP) of the Country (GOK, 2011). Further, the Ministry of Trade in Kenya, under whose SMEs are registered, has been entrusted with the task of advocacy support to SMEs. However, the SMEs have continued to experience discrimination while participating in public procurement on the ground of their levels of production, qualifications, and sizes. Though SMEs greatly contribute to the economic growth and development of the country, limited supplementary studies have been carried out to assess the operational performance of SMEs in their businesses after the integration of the e-tendering advertisement process. This study therefore intends to investigate the effect of the e-tender advertisement system on the operational performance of SMEs in Kenya, specifically focusing on Murang'a County.

### General Objective

To evaluate the effect of the e-tender advertisement system on the operational performance of SMEs in Murang'a County.

### Specific Objectives

- To evaluate the effect of accessing tenders on a website on the operational performance of SMEs in Murang'a County

- To evaluate the effect of easy notification of any specification change on the operational performance of SMEs in Murang'a County
- To evaluate the effect of shortening the time of accessing and responding to tender on the operational performance of SMEs in Murang'a County
- To evaluate the effect of distance elimination on the operational performance of SMEs in Murang'a County

### Hypotheses

$H_01$ : There is no statistically significant effect of accessing tenders on websites on the operational performance of SMEs in Murang'a County.

$H_02$ : There is no statistically significant effect of easy notification of any specification change on the operational performance of SMEs in Murang'a County.

$H_03$ : There is no statistically significant effect of shortening the time of accessing and responding to tender on the operational performance of SMEs in Murang'a County.

$H_04$ : There is no statistically significant effect of distance elimination on the operational performance of SMEs in Murang'a County

### LITERATURE REVIEW

#### Schumpeter's Theory of Entrepreneurship

Schumpeter's Entrepreneurship Theory was developed by Schumpeter in the year 1911. This theory is based on an assertion that creativeness and innovativeness form the critical components of entrepreneurship (Schumpeter, 1942). The theorist alludes that entrepreneurship helps organizations to grow and succeed, but also, being innovative leads to more profitable outcomes and provides the firm with a competitive edge. In this entrepreneurship theory, the theorist considers a capitalist closed economy within a static equilibrium. Moreover, Schumpeter states that every entrepreneur prefers

the state of equilibrium in the presence of innovation and creativity, which assists the economy in achieving higher levels of development. In this context, innovation may be presented in various forms, including innovating new products and services, types of productions, innovation in management criteria, and different critical forms of innovation. Schumpeter's entrepreneurship theory is suitable for this study due to its accentuating ability of e-tendering on the functioning of SMEs. Following this theory, SMEs incorporate an e-tender advertisement system as one of their innovative ventures to elevate them above their competitors and boost their performance. The SMEs in Murang'a have come up with various e-tender advertisement techniques to enhance the efficiency and effectiveness of their operations. Therefore, Schumpeter's Entrepreneurship Theory provided a blueprint for understanding the different technologies in the areas of e-tender advertisement and performance from a broader perspective.

Joseph Schumpeter's theory of entrepreneurship emphasizes the role of innovation in economic development. According to Schumpeter, entrepreneurs are the driving force behind economic growth and development through their ability to create new products, processes, and markets. When it comes to the operational performance of SMEs in Kenya, Schumpeter's theory of entrepreneurship suggests that SMEs that are able to innovate and introduce new products or processes are likely to perform better than those that do not. This is because innovation can lead to a competitive advantage in the marketplace, allowing SMEs to increase their market share and profitability (Muriithi, 2017). Furthermore, Schumpeter argues that entrepreneurship is a dynamic process that involves constant innovation and change. Therefore, SMEs in Kenya that are able to adapt to changing market conditions and customer needs are more likely to succeed than those that remain stagnant. In practical terms, SMEs in Kenya can apply Schumpeter's theory of entrepreneurship by investing in research and development, seeking out

new markets and customers, and continually improving their products and services. By doing so, they can increase their operational performance and achieve long-term success in the marketplace.

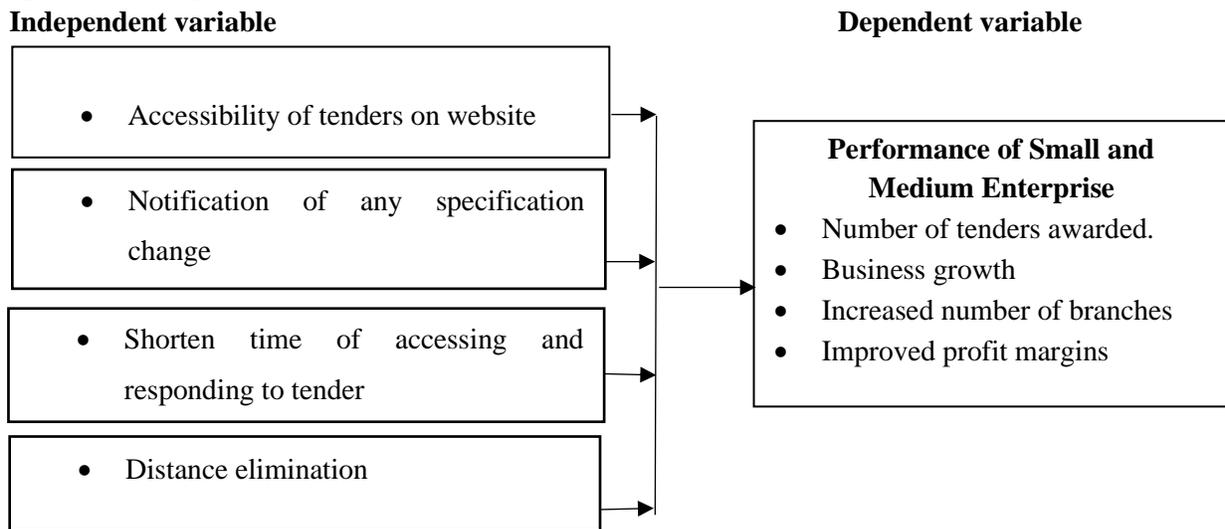
According to Chatterjee & Kar (2020), digital technologies enable SMEs to improve their market knowledge, attain scale and penetrate the global market and network without extra costs. Technological advancement helps SMEs emerge by offering new chances for them to increase their competitive power internally and externally by innovating and enhancing their performance. Similarly, digital transition promotes start-ups that

use the internet to carry out their activities successfully at relatively cheaper costs. Moreover, Big Data and Data Analytics application offers a new dynamic for SMEs, helping them understand various operations in the organizations, the significance of customers and partners, and their entire environment.

**Conceptual Framework**

The conceptual framework explains the relationship between the dependent variable operational performance of SMEs and the independent variable electronic tendering advertisement in the study.

**Figure 1: Conceptual Framework**



***E-Tender Advertisement***

For this research, E-tender advertisement refers to the process of publicizing a tender opportunity using electronic means, such as email, online portals, and social media platforms. E-tender advertisement enables organizations to reach a wider pool of potential suppliers and contractors in a more cost-effective and efficient manner compared to traditional print media advertising. It also allows for more transparency and fairness in the tendering process, as all interested parties have equal access to the tender documents and requirements. It is conceptualized that an e-tender

advertisement is a crucial step in the procurement process as it initiates competition among potential suppliers and sets the stage for the submission and evaluation of tenders. Public entities (PE) are authorized for direct advertisement (PPR 2008). PEs are involved in the preparation of Invitation Tenders and, in some cases, for Tender Notice with the help of online templates provided through the secure dashboard. The documents contain descriptions of goods, services, schedules, works, and terms.

***Operational Performance of SMEs***

In this study context, the operational performance of SMEs (Small and Medium Enterprises) indicates how well SMEs are able to carry out their day-to-day activities and processes to achieve their goals and objectives efficiently and effectively. These include factors such as productivity, quality of output, cost-effectiveness, customer satisfaction, employee satisfaction, and overall profitability. Operational performance is critical to the success of SMEs, as it directly impacts their ability to compete in the market and sustain their business over time. Efficient and effective operations allow SMEs to deliver products or services at a lower cost, meet customer demands and expectations, and improve their overall financial performance. Many SMEs who have bid for tenders confirmed that they had lost opportunities due to the manual and error-prone tendering process, limited information about upcoming bids, time constraints in preparing their proposals, not getting feedback after evaluation to know what went wrong in failed bids, lack of bid preparation skills and the complex nature of procurement procedures (Chatterjee & Kar, 2020). E-tendering system is aimed at offering a solution that is accessible online from anywhere and at any time. The system has been well structured to shorten the time taken by SMEs when preparing tender responses through the reduction of paperwork, minimization of bidding errors associated with the manual tendering process, and reduce the total cost of accessing business opportunities (Berisha & Pula, 2015). Further, the system comes with an expansive knowledge base that provides information and tips on how SMEs can continuously improve their business skills and tendering capacity as they utilize the platform.

## **Empirical Review**

### ***E-tender Advertisement and Operational Performance***

Public entities (PE) are authorized for direct advertisement (PPR 2008). PEs are involved in the preparation of Invitation Tenders and, in some cases, for Tender Notice with the help of online

templates provided through the secure dashboard. The documents contain descriptions of goods, services, schedules, works, and terms. The Tender Notice is provided to those requiring it at the e-GP system as part of procurement opportunities. Also, it gives room for anyone searching or reading the e-advert. The Tender Invitation is published at the portal of e-GP through the authorization of a PE, while the Tender Notice is provided over dailies like newspapers and commercial portals per ICT policy action (Uwadede, 2016).

Vaidya and Campbell (2016), Studied the need to adopt an efficient E-tender advertisement management system on performance. The study revealed that the adoption of an efficient E-tender advertisement management system stimulates the excellent performance of the procurement department, globally wise and at the national level. It also assists those entrusted with policy-making and formulation responsibility to understand how different policy objectives interrelate and their influence on the general performance of electronic-advertisement management systems. Further, it permits the government and parliament to upgrade the quality. The decision was reached to embrace valuable long-term acts aimed at enhancing effectiveness in creating public electronic-advertisement management systems.

In addition, develop a more substantial inducement aimed at improving the policy of electronic-advertisement management systems. It will assist them in setting appropriate priorities and reforms in E-tender advertisement, provide relevant information regarding appraisal of the public expenditure system and monitor the progress of set goals. The study, however, focused on the adoption of an efficient E-tender advertisement system and not the factors to be considered by an entity before the adoption of the E-tender advertisement system. Muriithi (2017), Studied the characteristic that enables SMEs to rely on E-tender advertisements as means of accessing prospective tenders. According to Muriithi, SMEs have key characteristics of being

dynamic and evolving. They vary in composition according to their environment and can thrive and influence the automated economy. Globally, micro-enterprises are dominant in the market, with an estimated 70%-90% of all organizations. However, the key differences between them over various countries depend on their value and their contribution to job creation. For example, in Greece, the employment share is about 60%, while countries like Germany and Denmark have 20%. On the other perspective, Luxembourg and Switzerland's microenterprises have value share added ranging from 45% and 15%, respectively. The study focused on the characteristics of SMEs but failed to acknowledge SMEs' individual differences that trigger the approach of similar things in a different way.

## METHODOLOGY

The study used a survey of all seven constituencies within Murang'a County. The County was well endowed with competent small and medium enterprises wishing and ready to give any relevant information as and when required to conduct the study successfully. The E-advertisement system has gained significant acceptance among small and medium enterprises in the area. The descriptive study design was adopted in the study as it gives an explanation of the state of affairs as it exists. The target population included 2500 SMEs operating in Murang'a County. Yamane sample formula to calculate sample sizes was used to get a sample size of 189 SMEs.  $n = N / [(1 + N(e)^2)]$ , When this formula is applied to the population of 2500, we get Equation,  $n = 2500 / [1 + 2500(0.07)^2] = 189$ . Drop and pick method was used in administering questionnaires to the selected sample of 189 SMEs which were completed by the owners of SMEs. The collected data was inserted and coded in the Statistical Package for Social Studies software version 23, after which descriptives were obtained. Further, on data collection and analysis, a five-point Likert scale comprising four items was used. The scale rating ranged from 1 - 5, with 1 denoting Very

high extent, 2 for high extent, 3 representing moderate extent, 4 for less extent and 5 for small extents. 3 was the midpoint of the score scale. Regression analysis assisted in assessing the effect of electronic tender advertisement on the operational performance of SMEs in Murang'a County. The regression analysis model formula was as follows;  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$  whereby:  $Y$  = Performance,  $\beta_0$  = Constant of the model,  $X_1, X_2, X_3, X_4$  = E-tender advertisement variables,  $\beta_1, \beta_2, \beta_3, \beta_4$  = Coefficients for the determination and  $\varepsilon$  = Error term.

## FINDINGS AND DISCUSSIONS

### Effect of E-tender Advertisement on the Operational Performance of SMEs

The objective of the study was to evaluate the effect of E-tender advertisements on the operational performance of SMEs in Murang'a County. As shown in *Table 1*, the mean scores obtained by the respondents on the scale measuring E-tender advertisement ranged from 2.77 to 2.99. The highest-ranked items were; "Notification of any change's specification (2.99)" and "Reduction of time to access and respond to tenders (2.83)". The lowest-ranked items were; "Accessibility of tenders on the website (2.77)" and "Distance elimination (2.77)". From the study findings, all scores had a mean below 3, denoting that the majority of the respondents were firmly in agreement that E-tender advertisement had a significant contribution to E-tender in boosting the operational performance of SMEs. This clearly indicated that E-tender advertisements played a significant role in improving the operational performance of SME businesses.

This study concurs with that by Hajir (2021), which found that the adoption of e-payment, e-tendering and e-sourcing practices were significant predictors of the operational performance of the supermarkets. This study further concurs with Sunmola & Shehu (2021), who showed how e-tendering technologies

are associated with improved managerial control, integrity, and compliance with regulations. The study also agrees with Oteki *et al.* (2018) that e-tendering practice reduces tender processing time, eliminates postal, printing and storage costs, suppliers are able to access tenders/quotations/requests anytime, anywhere in the world, alteration of tender documents is impossible or easy to detect, neither party can deny sending or receiving documents, provides fairness to all regardless of the geographic location of a supplier and it improves audit trails to a large extent. While other respondents indicated that tender documents could not be accessed by unauthorized persons, the ability to eliminate non-compliant bids

automatically reduces corruption and Computer/network malfunctions can affect bid submission to a moderate extent. Jayawardhena & Jayaratne (2019), in their study, associated e-procurement adoption with reduced reverse logistics costs, reduced paperwork and paperwork-associated costs, and lead time reduction. The analysis also showed significant investment in electronic mailing practices and that the supermarkets utilized digital services during tender awarding and selection processes, thus reducing communication costs and costs associated with dubious tendering practices, as suggested in the study by Hajir (2021).

**Table 1: E-tender advertisement**

E-tender advertisement	N	Mean	Std. Dev
Accessibility of tenders on the website	166	2.77	1.50
Distance elimination	166	2.78	1.36
Reduction of time to access and respond to tenders	166	2.83	1.29
Notification of any changes to specifications	166	2.99	1.44

**Operational Performance of SMEs**

Respondents were asked their opinion on whether e-tender management enhances the operational performance of SMEs. The majority above 50%, were of the view that E-tender management enhances the operational performance of SMEs, while a few had a contrary view. As shown in *Table 2*, Respondents were asked to respond on the operational performance of SMEs statements, and the findings indicate that the respondents agreed to a large extent that the application of e-tender management enhanced business growth, as indicated by a mean score of 2.66. Further, it was their view that e-tender management increased the number of tender contracts awarded with a mean of

2.44. It resulted in further expansion of the businesses by increasing the number of branches with a mean score of 2.49. It resulted in an improvement in profit margin (mean 2.56). The study findings concur with the following previous studies, such as; Panduranga (2016) in his, study demonstrated how electronic tender advertising, evaluation and selection streamlined the tendering process and improved firm communication with suppliers. Also, the study by Mafini, Dhurup & Madzimure (2020) revealed that electronic procurement practices such as e-sourcing were instrumental in influencing the relationship between a firm and its supply chain, allowing for better inventory control.

**Table 2: Operational Performance**

Operational performance	N	Mean	Std. Dev
Enhanced business growth	166	2.66	1.09
Increased number of tender contracts awarded	166	2.44	1.16
Increased number of branches	166	2.49	1.11
Profit margins have improved	166	2.56	1.19

**Model Summary Electronic Advertisement**

Multiple regression analysis was used to determine whether independent variables, easy notification of any changes (X1), reduction of time (X2), distance elimination (X3) and accessibility of tenders (X4), simultaneously affect the dependent variable Y, which operational performance. The sub-section examines whether the multiple regression equation can be used to explain the hypothesis of the influence of e-tender management in enhancing the operational performance of SMEs in Kenya. The model of operational performance with the coefficient  $R^2 = 0.696$  at 0.05 significant level.

The results indicate that there is a significant effect between the dependent variable (Operational performance) and the independent variables (notification of any changes, reduction of time, distance elimination, accessibility of tenders). The result R Square of 0.696 postulates that 69.6% of the operational performance of SMEs can be attributed to the e-tender advertisement drivers SMEs have adopted in their tendering processes as explained by the combined effort of independent variables of the study, which comprise of notification of any changes, reduction of time, distance elimination, accessibility of tenders. The results of the model summary are represented in *Table 3*.

**Table 3: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.834 <sup>a</sup>	.696	.689	.561

*Predictors: (Constant), notification of any changes, reduction of time, distance elimination, accessibility of tenders.*

ANOVA results are also presented in *Table 4* below. From the results, a value of  $F = 92.276$  at a 0.05 level of significance was observed. Since a p-value of 0.000 was observed, which is less than

0.05, the study concluded that the set of independent variables.  $X_1 - X_4$  significantly affect the operational performance of SMEs in Kenya. The results are shown in *Table 4*.

**Table 4: ANOVA**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	116.107	4	29.027	92.276	.000
Residual	50.645	161	.315		
Total	166.752	165			

*a. Dependent Variable: Operational Performance*  
*b. Predictors: (Constant), notification of any changes, reduction of time, distance elimination, accessibility of tenders*

*Table 5* shows that the regression model for electronic advertisement and operational performance of SMEs is  $Y = 0.875 + 0.389X_1 + 0.155X_2 + 0.093X_3 - .020X_4$ . The regression equation has established that SME operational performance is 0.875 when notification of any changes, reduction of time, distance elimination, and accessibility of tenders equal zero. The findings presented also show SMEs' operational performance is predicated on improving by 38.9% when the accessibility of tenders' variable goes up by one, 15.5% when distance elimination goes up by one, 9.3% when reduction of time goes up by one and decrease by

2% when notification of any changes go up by one. The negative results for notification of any changes in SMEs' operational performance can be justified by the inability of SMEs to timely respond to the changes suggested; therefore, additional of any bidder not engaging in e-tender advertisement lowers SMEs' operational performance due to delayed response to changes. At a 5% level of significance and 95% level of confidence, accessibility of tenders, distance elimination, reduction of time and notification of any changes had a 0.000, 0.006, 0.103 and 0.750, respectively, level of significance, showing that the independent

variables accessibility of tenders and distance elimination are significant ( $p < 0.05$ ) while reduction of time and notification of any changes

are not significant ( $p > 0.05$ ). The results are shown in *Table 5*.

**Table 5: Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.875	.114		7.675	.000
Accessibility of tenders	.389	.067	.584	5.789	.000
Distance elimination	.155	.055	.209	2.795	.006
Reduction of time	.093	.057	.119	1.639	.103
Notification of any changes	-.020	.062	-.028	-.319	.750

*a. Dependent Variable: Operational Performance*

$H_01$ : There is no statistically significant effect of accessing tenders on the websites on the operational performance of SMEs in Murang’a County. The results of multiple regressions revealed that accessing tenders on the website has a beta value of  $p = .000$ . Since the p-value is less than 0.05, the null hypothesis was rejected. It was then concluded that there is a significant effect on accessing tenders on websites and SMEs' operational performance.

$H_02$ : There is no statistically significant effect of easy notification of any specification change on the operational performance of SMEs in Murang’a County. The results of multiple regressions revealed that easy notification of any specification change has a beta value of  $p = .006$ . Since the p-value is less than 0.05, the null hypothesis was rejected. It was then concluded that there is a significant effect on easy notification of any specification change and SMEs' operational performance.

$H_03$ : There is no statistically significant effect of shortening the time of accessing and responding to tender on the operational performance of SMEs in Murang’a County. The results of multiple regressions revealed that the shortening time of accessing and responding to tender has a beta value of  $p = .103$ . Since the p-value is greater than 0.05, the null hypothesis was accepted. It was then concluded that there is no significant effect on

shortening the time of accessing and responding to tender and SMEs' operational performance.

$H_04$ : There is no statistically significant effect of distance elimination on the operational performance of SMEs in Murang’a County. The results of multiple regressions revealed that distance elimination has a beta value of  $p = .750$ . Since the p-value is greater than 0.05, the null hypothesis was accepted. It was then concluded that there is no significant effect on distance elimination and SMEs' operational performance.

**SUMMARY, CONCLUSION AND RECOMMENDATION**

**Summary**

The objective of the study was to evaluate the effect of E-tender advertisements on the operational performance of SMEs in Murang’a County. To address this objective, a five-point Likert scale comprising four items was used. Any score below denoted that respondents were firmly in agreement with the item. The highest-ranked items were; “Notification of any change’s specification (2.99)” and “Reduction of time to access and respond to tenders (2.83)”. The lowest-ranked items were; “Accessibility of tenders on the website (2.77)” and “Distance elimination (2.77)”. From the study findings, all scores had a mean above 2.5, denoting that the majority of the respondents were firmly in

agreement that E-tender advertisement had a significant contribution to e-tender in boosting the operational performance of SMEs.

### Conclusion

E-tender advertisement has a  $p = .000$ . Since the  $p$ -value is less than 0.05, the null hypothesis was rejected. It was then concluded that there is a significant relationship between E-tender advertisement and SMEs' operational performance. Clearly, e-tender advertisement has an effect on the operational performance of SMEs by guaranteeing; notification of any change's specification, reduction of time to access and respond to tenders, accessibility of tenders on the website and distance elimination.

### Recommendation

The recommendation is that for easier visibility on upcoming tender contracts, firms should opt advertising tender on the most visited or accessible media platform. For tender contracts that are limited to counties, the nature of the platform selected should be one able to pass the message to the inhabitant.

### REFERENCES

- Berisha, G., & Pula, J. S. (2015). Defining Small and Medium Enterprises: a critical review. *Academic Journal of Business, Administration, Law, and Social Sciences*, 1(1), 17-28.
- Chatterjee, S., & Kar, A. K. (2020). Why do small and medium enterprises use social media marketing and what is the impact: Empirical insights from India. *International Journal of Information Management*, 53, 102103.
- Dello, A., & Yoshida, C. (2017, June). Online tendering and evaluation for public procurement in Tanzania. In *2017 18th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing (SNPD)* (pp. 137-144). IEEE.
- Government of Kenya. (2011). *Economic recovery strategy for wealth and employment creation*. Nairobi: Government Printer.
- Hajir, H. M. (2021). *Impact of e-procurement practices on the operational performance of retail supermarkets in Nairobi City County, Kenya* [Thesis, Strathmore University]. <http://hdl.handle.net/11071/12830>
- Ibem, E. O., & Laryea, S. (2017). E-tendering in the South African construction industry. *International Journal of Construction Management*, 17(4), 310-328.
- Isimbi Uwadede, D. (2016). *Adoption of e-procurement and implementation of basic principles of public procurement in Rwanda* (Doctoral dissertation, University of Rwanda).
- Jayawardhena, M. U., & Jayaratne, P. (2019). Evaluation Of Adopting E-Procurement And Its Impact On Performance In Apparel Supply Chain In Sri Lanka. *9th International Conference on Operations and Supply Chain Management*.
- Joarder, M., & Rahman, S. (2015). *Assessment of e-Tendering (e-GP) process in LGED: a case study for selected offices* (Doctoral dissertation, BRAC University).
- Kenya National Bureau of Statistics (2017). *Economic Survey 2017*. Nairobi: KNBS. Retrieved Kenya: A case of Murang'a county government. *International Academic Journal of Procurement*.
- Mafini, C., Dhurup, M., & Madzimure, J. (2020). E-procurement, supplier integration and supply chain performance in small and medium enterprises in South Africa. *South African Journal of Business Management*, 51(1), 1-12.

- Muriithi, S. (2017). *African small and medium enterprises (SMEs) contributions, challenges, and solutions*. Nairobi County. Eldoret-56.
- Oteki E., Namusonge G., Sakwa M. & Ngeno J. (2018). *Influence of electronic tendering practice on supply chain performance of sugar processing firms in Kenya*. <https://www.ijssit.com/main/wp-content/uploads/2018/01>.
- Panduranga, V. (2016). Transparency in public procurement through e-procurement in India. *Journal of Internet Banking and Commerce*, 21(3), 1.
- Rotich, G. K., & Okello, B. (2015). Analysis of the use of e-procurement on the performance of the procurement functions of county governments in Kenya. *International Journal of Economics, Commerce and Management*, 3(6), 1381-1398.
- Rotich, G., Benard, M., & Waruguru, E. (2015). Relationship between E-tendering and procurement performance among County Governments in Kenya. *Science Innovation*, 3(5), 46.
- Schumpeter, J. A. (1942). *Capitalism, Socialism, and Democracy*. Harper & Brothers Publishers.
- Sunmola, F. T., & Shehu, Y. U. (2020). A case study on performance features of electronic tendering systems. *Procedia Manufacturing*, 51, 1586-1591.
- Vaidya, K., & Campbell, J. (2016). A multidisciplinary approach to defining public e-procurement and evaluating its impact on procurement efficiency. *Information Systems Frontiers*, 18(2), 3
- Yamane., & Taro. 1967. *Statistics, An Introductory Analysis*, 2nd Ed. New York: Harper and Row