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Electronic Procurement and Performance of the Hospitality Industry in Homabay Town, Kenya

Roseline Adhiambo Oyuga*, Dr. Dennis Juma
Jomo Kenyatta University of Agriculture and Technology

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ABSTRACT

Purpose: This study sought to examine the effect of e-procurement on the performance of the hospitality industry in Kenya, focusing specifically on hotels in Homa Bay town. The study investigated key components of e-procurement, including e-tendering, e-awarding, e-ordering and e-invoicing, and how they influence operational efficiency, cost reduction, service delivery, and overall organizational performance.

Methodology: The research adopted a descriptive research design and targeted procurement officers, hotel managers, and finance staff as key respondents. Data was collected using structured questionnaires and analyzed using both descriptive and inferential statistics.

Findings: The findings revealed that all four e-procurement practices positively impact hotel performance. E-tendering improves the transparency of procurement processes and reduces cycle times, contributing to cost savings. E-awarding enhances fairness, accountability, and efficiency in the supplier selection process. E-ordering has the most significant impact, streamlining the ordering process, reducing errors, and ensuring timely deliveries. E-invoicing, while having a smaller impact compared to other practices, improves the accuracy of billing, reduces paperwork, and speeds up payment processing. E-procurement practices lead to enhanced operational efficiency, cost reductions, and improved supplier relationships, all of which contribute to better hotel performance.

Unique Contribution to Theory, Policy and Practice: This study advances procurement theory by integrating electronic procurement's role in service sector efficiency, specifically within hospitality. It informs policy by providing empirical evidence for digital procurement adoption to enhance transparency and cost-effectiveness in Homabay's hospitality industry. Practically, the research offers actionable insights for managers to optimize procurement processes, improve supplier relationships, and boost operational performance, fostering competitiveness and sustainable growth in the local hospitality sector.

Keywords: *E-Awarding, E-Invoicing, E-Ordering, E-Procurement, E-Tendering, Hospitality Industry, Performance of Hotels*

INTRODUCTION

Background of the Study

Globally, the adoption of e-procurement systems has significantly transformed operations within the hospitality industry. E-procurement refers to the use of digital tools and internet-based technologies to manage purchasing processes such as requisitioning, tendering, ordering, invoicing, and payments. Its impact on organizational performance has been widely recognized across various regions (Abdel-Aziz & Fathy, 2023).

One of the most notable benefits of e-procurement is its ability to reduce operational costs and enhance efficiency. According to a recent report by HospitalityNet (2023), hospitality businesses that have embraced e-procurement platforms have experienced notable cost savings, with compliance rates improving by over 80%, productivity gains ranging from 10% to 20%, and significant reductions in approval times from several days to just minutes. These efficiency gains are largely attributed to the automation of repetitive tasks and improved procurement transparency.

In Egypt, a study focusing on the hospitality sector revealed that the use of e-procurement systems had a positive influence on supply chain management, cost and time reduction, and overall service quality. The study indicated that many hotels were able to achieve a return on investment in their e-procurement systems within one to two years of implementation (Abdel-Aziz & Fathy, 2023). These findings underscore the potential of e-procurement to enhance both operational efficiency and customer satisfaction in the hotel industry.

E-Tendering is the utilization of internet technology to send requests for information and prices to suppliers and receive their answer. E-tendering streamlines the tendering process by minimizing the need for manual form filling and data re-entry. This reduces the effort required for communication and administration, leading to increased accuracy. Additionally, e-tendering lowers costs for both purchasers and vendors, including advertisement costs and expenses associated with obtaining detailed cost analysis and markup information (Doherty, *et al*, 2013; Croom & Brandon, 2005).

E-Awarding is an electronic procurement process that involves the secure opening, review, and awarding of tenders to the most favorable offer. (McConnell, 2009; Moon, 2005).These tasks are supported using an e-awarding tool. This module includes a feature that allows electronic assessment of accepted offers, using the awarding criteria and evaluation formula specified by the purchasing entity. The module also offers a platform that enables the execution of electronic auctions for all the cases where the market opportunity's awarding method permits it (Doherty, et al., 2013; Hsao & Teo, 2005).

E-ordering refers to the utilization of the Internet to streamline the operational purchasing process. This includes activities such as requisitioning, order processing, order approval, and the transmission and acceptance of orders by suppliers (Croom & Brandon, 2005). Initially, e-

procurement technology solutions prioritized this feature of e-procurement, as it was believed to have the greatest potential for improving efficiency (Henry, 2000; Neef, 2001; Heywood et al., 2002).

E-Invoicing is the act of receiving invoices electronically from suppliers, handling them, and sending electronic payments to suppliers through a Bank Automated Clearing System (BACs) (Doherty, et al., 2013; McConnell, 2009; Hsao & Teo, 2005). Electronic invoicing has the capacity to significantly enhance buyer-supplier relationships. With the ability for both parties to watch invoice processing instantly, it becomes simpler to track the current stage of approval for each specific invoice (Akibate, 2015; Orina, 2013; Moon, 2005).

Hotel establishments are undoubtedly the most prominent and representative element of the hospitality industry. Consequently, it has emerged as a crucial component in destination management. The Ministry of Planning and National Development in Kenya has reported that hotels and restaurants contributed 34 percent, equivalent to 13.483 billion Kenya shillings, to the country's tourism revenues in 2005. This highlights the importance of hotels and restaurants in Kenya's tourism business. The lodging and dining component has consistently been a significant element of the all-inclusive tour offering, and this feature of the tour is undoubtedly a crucial factor in customers' assessment of the overall travel experience quality (Amit & Zott, 2011).

Statement of the Problem

The hospitality industry in Kenya has grown notably, with international visitors rising by 35.4% from 1.54 million in 2022 to 2.09 million in 2023 (KNBS, 2023). This growth demands efficient procurement processes, prompting interest in electronic procurement (e-procurement) systems like e-tendering and e-invoicing to improve efficiency and transparency. However, adoption in regions such as Homa Bay remains low due to challenges including inadequate technology infrastructure, limited staff training, and resistance to change (Onsongo & Moronge, 2020). These constraints hinder the full realization of e-procurement benefits in the local hospitality sector.

Electronic procurement (e-procurement) has been adopted to streamline procurement processes, enhance supplier relationships, and improve organizational performance. According to the World Bank (2021), e-procurement can reduce procurement cycle times by up to 30% and costs by 10–20% in the public and private sectors. In Kenya, the Public Procurement Regulatory Authority (PPRA) introduced the e-Procurement module under the Integrated Financial Management Information System (IFMIS) to promote efficiency and transparency. While its impact in the public sector is being studied, little empirical evidence exists regarding its adoption and effect in the hospitality industry, especially among privately-owned hotels in rural and semi-urban areas like Homa Bay Town.

Studies by Odhiambo and Kamau (2019) and Mutua (2021) highlight positive impacts of e-procurement on firm performance and inventory management in Nairobi and coastal hotels,

respectively. However, research on e-procurement's effect in inland towns like Homa Bay is limited, presenting a significant gap. Hotels in Homa Bay have faced challenges such as high procurement costs, delayed deliveries, quality concerns, and stock shortages. To address delivery delays, some hotels adopted electronic procurement systems to enable advance purchasing and prevent stockouts. While this improved operational efficiency, it introduced new challenges, including higher storage costs and spoilage of perishables. E-procurement thus requires a balanced approach to optimize procurement processes. This study aims to examine how e-procurement influences operational efficiency, cost management, and overall performance in Homa Bay's hospitality industry, providing insights for stakeholders to enhance competitiveness and service quality.

General Objective of the Study

The study majorly focused on establishing the relationship of e- procurement on performance of the hospitality industry in Kenya with reference to hotels in Homabay town.

Specific Objectives of the Study

i. To determine the relationship of e-tendering and performance of hotels in Homabay town.
ii. To assess the relationship of e-awarding and performance of Hotels in Homabay town.
iii. To establish the relationship of e-ordering and performance of Hotels in Homabay town.
iv. To explore the relationship of effect e-invoicing and performance of Hotels in Homabay town.

LITERATURE REVIEW

Theoretical Review

Transaction Cost Theory (TCT)

This theory is anchored on the premise that the relationship between human and environmental factors is the reason why transaction costs increase in the economic system (hart, 2006).The interdependence of factors contributing to transaction costs can contribute to their increase or decrease. Thus, efforts to reduce transaction costs should not aim at reducing the effect of a single factor but the effects of the interdependence between factors (Ghoshal, 2008). As such, in the procurement of goods and services for state corporations, transactional cost can be reduced by automating procurement processes. During tender evaluation and award stages in an open tendering in the hospitality industry, financial evaluation is normally carried out to decide on the winning bidder. As such, the analysis of the amount quoted by various bidders in terms of cost and overheads is normally conducted to determine the actual price chargeable that can be negotiated. Since one of the major objectives of e-procurement adoption is to enhance cost reduction by

eliminating transaction cost, TCT remains the best model to be used in answering all questions pertaining to e-awarding on performance of hospitality industry.

Technology Acceptance Model (TAM)

Davis (1986; 1989; 1993) developed and validated the technology acceptance model (TAM) to explain the mechanisms that influence and shape users' acceptance of new information technology. According to TAM, there are two specific variables that are fundamental determinants of users' attitude toward using information technology and actual use of the system: perceived usefulness and perceived ease of use relative to new information system design features. Usefulness is defined as the degree to which someone believes that using a system will enhance his performance; and ease of use is defined as the degree to which user believes that benefits of systems' use are outweighed by the efforts for using it (Davis, 1993).

E-procurement adoption entails changes that include reengineering the existing system within the organization that will ultimately impact on the way tasks are conducted (Kaliannan *et al*, 2008). Major procurement operations carried out within the hospitality industry that can be greatly changed as a result of e-procurement adoption include the ordering process which involves tasks like: order preparation, order approval and order transmission to the supplier. As such, the perception of employees and suppliers on the usefulness and ease of use of e-procurement system is very critical in realizing full benefits of e-procurement adoption; especially in the implementation of e-ordering. Thus, this model was employed in answering all research questions pertaining to the effect of e-ordering on performance of hospitality industry.

Diffusion of Innovation (DOI)

Theory Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. Rogers (2010) explains that DOI is a theory of how, why, and at what rate new ideas and technology spread through cultures, operating at the individual and firm level. DOI theory is basically based on two factors, the perception of the characteristics of the technology, and the user's perception of the system. Thus, the main concern of this model is about how innovations are adopted as well as the reasons behind different rates of innovation adoption.

Makau (2014) revealed that the rate of e-procurement adoption is very slow among the Kenyan state corporations. To identify the reason behind this, Rogers (2010) discovered the main elements influencing the spread of a new technology, which include: the innovation itself, communication channels, time, and a social system. These elements have direct impact on e-tendering adoption success among both buyers and bidders since it requires the following activities to be conducted: electronic advertisement of tender, electronic transmission of bid documents to tenderers for filling in and electronic submissions of bid documents by tenderers. Since DOI is based on the perception of the characteristics of the technology and the user's perception of the system, it thus influences

e-tendering adoption by both buyers and tenderers. As such, this model was employed in answering all research questions pertaining to the role of e-tendering on performance of hospitality industry.

Institutional Theory

Institutional theory emphasizes the importance of institutional environment in shaping organizational structure and actions. As such, Scott identifies three pillars of institutions, which include: regulatory, normative and cultural cognitive. The regulatory pillar emphasizes the use of rules, laws and sanctions as an enforcement mechanism with a view of ensuring compliance. As the basis of compliance, normative pillar defines the norms and things that should be done; values (preferred or desirable) that should be adhered to; and social responsibilities. Finally, cultural-cognitive pillar rests on common beliefs, symbols and perceptions that together bolster shared understanding (Scott, 2005).

Studies reveal that the performance of hospitality industry has become a prominent lens through which organizational processes are interpreted and understood (Makau, 2014). With the adoption of e-procurement by performance of hospitality industry, it is imperative to have the performance of hospitality industry interest at heart when conducting e-procurement activities. These activities include: specification development, tender advert, bid transmission and response submission; tender opening, bid evaluation, contract award and agreement signing; order preparation, order approval, order transmission and acceptance (McConnell, 2009).Thus, this theory is preferred since it focuses on the deeper and more resilient aspects of social structure which is important in performance of hospitality industry. As such, this theory was relevant in this study since it reveals the importance of institutional environment and actions that are impacting on the role of e-procurement adoption on performance of hospitality industry.

Conceptual Framework

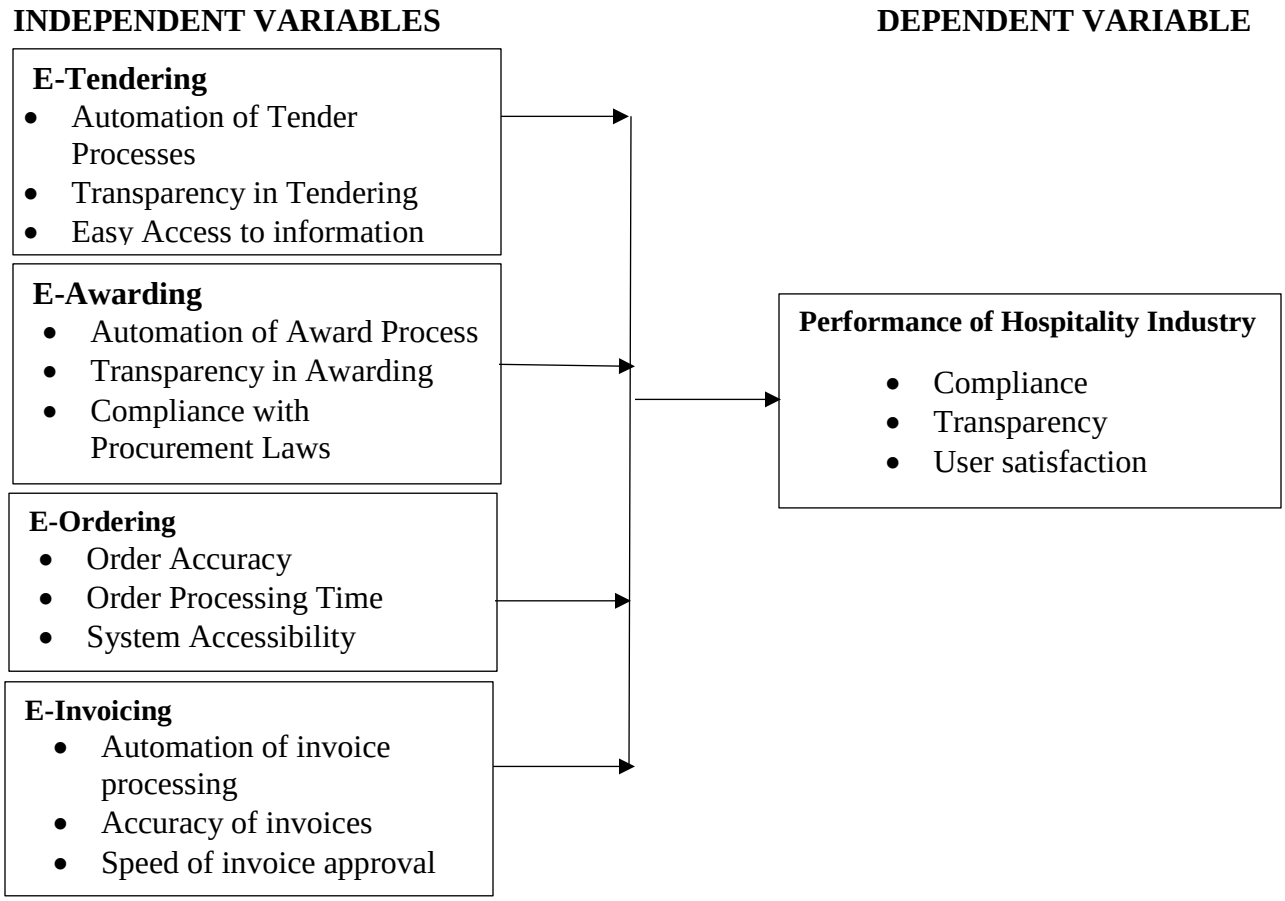

Figure 1: Conceptual Framework

Critique of the Existing Literature Review

The existing body of literature on e-procurement and its influence on organizational performance presents a strong foundation for understanding the relationship between digital procurement systems and business efficiency. Numerous scholars have highlighted the potential of e-procurement in enhancing transparency, reducing procurement costs, and streamlining supply chain operations. For example, Mutua and Mwangi (2023) found that e-procurement adoption significantly improves procurement cycle times and accountability in Kenyan county governments. However, while such studies offer useful insights, they predominantly focus on the public sector, leaving a gap in understanding the application of e-procurement in private service industries such as hospitality.

Moreover, studies such as Omondi et al. (2022) and Kimani (2021**)** examined e-procurement practices in large organizations and urban-based firms, with limited contextual focus on rural or semi-rural hospitality establishments. As a result, their findings may not fully reflect the unique

infrastructural, technological, and operational challenges faced by hotels in counties like Homa Bay, which may lack robust ICT infrastructure or skilled personnel to implement and maintain e-procurement systems.

Additionally, most existing studies have adopted quantitative approaches, emphasizing statistical relationships over contextual and experiential insights. As Wambua and Otieno (2023) argue, a mixed-methods approach would better capture both the numerical impact and the practical challenges of implementing e-procurement, especially in resource-constrained environments like those in rural Kenya.

Furthermore, there is a paucity of research exploring the organizational culture and leadership readiness required for successful e-procurement implementation in the hospitality industry. The few studies that do touch on these soft factors, such as Kibe et al. (2021), are either outdated or not tailored to the current post-COVID-19 business environment, where digital transformation has become not just a competitive advantage but a necessity for survival. Lastly, very little literature exists on customer-facing implications of e-procurement in hospitality, how faster ordering, better inventory control, and supplier reliability ultimately enhance customer satisfaction and loyalty. This aspect is particularly critical in the hospitality sector where service quality is a key performance indicator. The gap offers a significant opportunity for this study to contribute to the theoretical and practical discourse on e-procurement. While existing literature provides valuable insights into the benefits and general principles of e-procurement, it lacks the specificity, contextual sensitivity, and multidimensional analysis needed to fully understand its effect on hotel performance in counties like Homa Bay. This study therefore sought to bridge these gaps by providing empirical data and contextual analysis focused on the hospitality sector in a less-studied region.

RESEARCH METHODOLOGY

This study adopted a descriptive research design. The target population for this study comprised of 45 employees working in the procurement and supply chain departments of hotels in Homa Bay Town. This study applied stratified random sampling and purposeful sampling. Yamane's formula was used to obtain a sample of 40 respondents. The study employed structured questionnaires as the primary data collection instrument. Before embarking on full-scale data collection, a pilot test was conducted to assess the reliability and validity of the research instrument. The pilot study involved a sample of 10 respondents, selected from hotels with similar characteristics to those in the main study but located outside Homa Bay County, specifically in Kisumu County. In this study, both descriptive and inferential statistical techniques were used to analyze the data collected through structured questionnaires. Descriptive statistics such as means, standard deviations, frequencies, and percentages were used to summarize respondents' demographic information and responses to the study variables. Inferential statistics, specifically correlation and regression analysis, were employed to test the relationships between the independent variables (e-

procurement practices) and the dependent variable (procurement performance). The Statistical Package for the Social Sciences (SPSS) version 26 was used to conduct data analysis. The results of the analyzed data were presented using tables for ease of interpretation and visualization.

DATA ANALYSIS AND DISCUSSION

Response Rate

The targeted population of the study was 40 respondents but only 32 filled in the questionnaire. This means the response rate was 80.0%. According to Best & Khan (2007), a response rate of 50 % is considered adequate, 60 % good and above 70 % very good. Therefore, in view of this, the response rate was considered very good and exceeded the threshold as postulated by Best and Khan (2007).

Descriptive Statistics

Descriptive statistics are a set of brief descriptive coefficients that summarize a given data set, which can either be a representation of the entire population or a sample.

Descriptive Statistics for E-Tendering

This section presents the descriptive statistics for the responses regarding e-tendering in the hotels surveyed in Homabay County. The responses were measured using a Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Table 1: Descriptive Statistics for E-Tendering

Statement	1	2	3	4	5	Mean	Std Dev
The hotel uses an electronic tendering system to source suppliers.	2 (6.25%)	3 (9.38%)	5 (15.63%)	12 (37.5%)	10 (31.25%)	4.0	1.1
E-tendering has improved the transparency of the procurement process.	1 (3.13%)	2 (6.25%)	4 (12.5%)	13 (40.63%)	12 (37.5%)	4.1	0.9
E-tendering helps reduce procurement cycle time.	1 (3.13%)	3 (9.38%)	6 (18.75%)	14 (43.75%)	8 (25%)	4.0	1.0
E-tendering has led to cost savings in procurement.	2 (6.25%)	4 (12.5%)	7 (21.88%)	11 (34.38%)	8 (25%)	3.9	1.0
The hotel staff are adequately trained to use the e-tendering system.	3 (9.38%)	5 (15.63%)	6 (18.75%)	9 (28.13%)	9 (28.13%)	3.7	1.1

The survey indicates widespread adoption of e-tendering in hotels, with strong agreement on its use (Mean=4.0, SD=1.1) and its role in enhancing procurement transparency (Mean=4.1, SD=0.9). Respondents also perceive e-tendering as reducing procurement cycle time (Mean=4.0, SD=1.0) and generating cost savings (Mean=3.9, SD=1.0), though perceptions on cost benefits are somewhat mixed. Staff training on the e-tendering system shows varied opinions (Mean=3.7, SD=1.1), highlighting a need for improved capacity building. These findings align with previous research on e-procurement benefits and implementation challenges (Dada & Voss, 2018; De Boer et al., 2019; Ojo, 2019).

Descriptive Statistics for E-Awarding

This section presents the descriptive statistics for the responses regarding e-awarding and its impact on the performance of the hospitality industry. The responses were measured using a Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Table 2: Descriptive Statistics for E-Awarding

Statement	1	2	3	4	5	Mean	Std Dev
The hotel uses an electronic system to award tenders/contracts.	2 (6.25%)	4 (12.5%)	6 (18.75%)	12 (37.5%)	8 (25%)	4.0	1.0
E-awarding ensures fairness in the supplier selection process.	1 (3.13%)	3 (9.38%)	7 (21.88%)	12 (37.5%)	9 (28.13%)	4.0	0.9
E-awarding has improved accountability in procurement decisions.	2 (6.25%)	5 (15.63%)	6 (18.75%)	10 (31.25%)	9 (28.13%)	3.9	1.0
The e-awarding process is efficient and reduces human bias.	3 (9.38%)	4 (12.5%)	5 (15.63%)	10 (31.25%)	10 (31.25%)	4.0	1.1
E-awarding contributes to timely supplier engagement.	2 (6.25%)	4 (12.5%)	6 (18.75%)	11 (34.38%)	9 (28.13%)	4.0	1.0

The survey reveals strong adoption of e-awarding systems in hotels, with mean scores around 4.0 and most respondents agreeing on their benefits. Respondents perceive e-awarding as promoting fairness (65.63%), accountability (59.38%), efficiency, reduced human bias (62.5%), and timely supplier engagement (62.5%). Standard deviations between 0.9 and 1.1 indicate moderate consensus but some variation in experiences. These findings align with industry research (KPMG, 2020; Dada & Voss, 2018; De Boer et al., 2019) highlighting how digital procurement enhances transparency, fairness, accountability, and efficiency in awarding contracts.

Descriptive Statistics for E-Ordering

This section provides a summary of the descriptive statistics for responses regarding e-ordering and its impact on the performance of the hospitality industry. The responses are based on a Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Table 3: Descriptive Statistics for E-Ordering

Statement	1	2	3	4	5	Mean	Std Dev
The hotel places most of the supply orders through an electronic system.	2 (6.25%)	3 (9.38%)	5 (15.63%)	12 (37.5%)	10 (31.25%)	4.0	1.1
E-ordering has simplified the ordering process.	1 (3.13%)	4 (12.5%)	6 (18.75%)	10 (31.25%)	11 (34.38%)	4.0	1.0
The e-ordering system minimizes errors in order placement.	2 (6.25%)	4 (12.5%)	6 (18.75%)	12 (37.5%)	8 (25%)	4.0	1.0
E-ordering contributes to timely delivery of goods/services.	3 (9.38%)	4 (12.5%)	6 (18.75%)	10 (31.25%)	9 (28.13%)	4.0	1.1
E-ordering supports real-time tracking of order status.	2 (6.25%)	4 (12.5%)	5 (15.63%)	11 (34.38%)	10 (31.25%)	4.0	1.0

Respondents largely agree that e-ordering is widely used in hotels, simplifying the ordering process (Mean=4.0) and minimizing errors, with over 60% affirming these benefits despite some disagreement. E-ordering is also seen to contribute to timely delivery and enables real-time order tracking, with around 60–65% agreement. Moderate standard deviations (around 1.0–1.1) indicate some variability in adoption and effectiveness across hotels. These findings align with studies by PwC (2018), De Boer et al. (2019), and KPMG (2020), highlighting e-ordering's role in streamlining procurement, reducing errors, and enhancing delivery and monitoring.

Descriptive Statistics for E-Invoicing

This section examines the responses regarding the use of e-invoicing systems and their impact on the performance of the hospitality industry. The responses were collected using a Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Table 4: Descriptive Statistics for E-Invoicing

Statements	1	2	3	4	5	Mean	Std Dev
The hotel uses an electronic invoicing system to process payments.	3 (9.38%)	5 (15.63%)	7 (21.88%)	10 (31.25%)	7 (21.88%)	4.0	1.1
E-invoicing enhances accuracy in billing and payments.	2 (6.25%)	4 (12.5%)	8 (25%)	10 (31.25%)	8 (25%)	4.0	1.0
E-invoicing reduces paperwork and administrative workload.	3 (9.38%)	5 (15.63%)	6 (18.75%)	10 (31.25%)	8 (25%)	4.0	1.0
E-invoicing leads to faster processing of supplier payments.	2 (6.25%)	4 (12.5%)	7 (21.88%)	10 (31.25%)	9 (28.13%)	4.0	1.1
The e-invoicing system integrates well with other procurement processes.	3 (9.38%)	4 (12.5%)	8 (25%)	9 (28.13%)	8 (25%)	4.0	1.0

The study found that e-invoicing is widely used in hotels, with a mean score of 4.0 across key indicators and moderate variation (Std Dev ~1.0–1.1). Over half of respondents agreed that e-invoicing improves billing accuracy, reduces paperwork, speeds up supplier payments, and integrates well with procurement processes. Disagreement was minimal. These findings align with existing literature highlighting e-invoicing's role in minimizing errors (European Commission, 2020), automating tasks (Deloitte, 2019), accelerating payment cycles (PwC, 2020), and enhancing system integration for efficiency (KPMG, 2018).

Descriptive Statistics for Performance of the Hospitality Industry

This section evaluates the impact of e-procurement on the overall performance of hotels in the hospitality industry. The responses were collected using a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Table 5: Descriptive Statistics for Performance of the Hospitality Industry

Statements	1	2	3	4	5	Mean	Std Dev
E-procurement has enhanced overall hotel operational efficiency.	3 (9.38%)	4 (12.5%)	7 (21.88%)	12 (37.5%)	6 (18.75%)	4.0	1.1
The use of e-procurement has reduced procurement-related costs.	2 (6.25%)	3 (9.38%)	8 (25%)	12 (37.5%)	7 (21.88%)	4.0	1.0
E-procurement has improved supplier relationship management.	3 (9.38%)	5 (15.63%)	6 (18.75%)	11 (34.38%)	7 (21.88%)	3.9	1.1
E-procurement has led to better quality of goods/services procured.	2 (6.25%)	4 (12.5%)	7 (21.88%)	10 (31.25%)	9 (28.13%)	4.0	1.0
The hotel has experienced improved customer satisfaction due to efficient procurement.	1 (3.13%)	3 (9.38%)	7 (21.88%)	13 (40.63%)	8 (25%)	4.0	1.0

The study found that e-procurement significantly enhances hotel operational efficiency (Mean=4.0, SD=1.1) and reduces procurement-related costs (Mean=4.0, SD=1.0), supporting Deloitte's (2020) findings on cost savings through digital systems. Supplier relationship management also improved (Mean=3.9, SD=1.1), though with some variation. E-procurement contributed to better quality goods and services (Mean=4.0, SD=1.0), aligning with Harvard Business Review (2019). Additionally, hotels reported increased customer satisfaction due to efficient procurement processes (Mean=4.0, SD=1.0), indicating that e-procurement positively impacts overall guest experience and operational performance.

4.5 Correlation Analysis of E-Procurement and Hotel Performance

In this section, the study presented correlation analysis to assess the relationships between e-procurement practices and the performance of hotels in the hospitality industry.

Table 6: Correlation Analysis of E-Procurement and Hotel Performance

Variables	Y (Performance)	X1 (E-Tendering)	X2 (E-Awarding)	X3 (E-Ordering)	X4 (E-Invoicing)
Y (Performance)	1				
X1 (E-Tendering)	0.646***	1			
X2 (E-Awarding)	0.594***	0.136	1		
X3 (E-Ordering)	0.712***	0.124	0.056	1	
X4 (E-Invoicing)	0.412***	0.032	0.001	0.065	1

Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Procurement Performance(Y) and X1 (E-Tendering) indicated positive Correlation of 0.646: This indicates a moderate to strong positive relationship between e-tendering and the overall performance of the hospitality industry. The asterisks (*, typically p<0.01)** suggest that this relationship is statistically significant. As the use of e-tendering increases, the performance of the hospitality industry tends to improve. Procurement Performance(Y) and X2 (E-Awarding) indicated a positive Correlation of 0.594: There is a moderate positive relationship between e-awarding and performance. This is also statistically significant (p<0.01). The implementation of e-awarding in procurement processes contributes to enhanced hotel performance.

Procurement Performance(Y) and X3 (E-Ordering) indicated a positive Correlation of 0.712: There is a strong positive relationship between e-ordering and hotel performance. The relationship is statistically significant (p<0.01). E-ordering has the highest correlation with performance, meaning that its use likely has the strongest impact on operational efficiency, cost reduction, and other performance factors in hotels. Procurement Performance(Y) and X4 (E-Invoicing) was denoted with a positive Correlation of 0.412): There is a moderate positive relationship between e-invoicing and hotel performance. The relationship is statistically significant (p<0.01), although it is weaker compared to e-tendering, e-awarding, and e-ordering. While e-invoicing contributes to performance improvements, its effect is relatively less significant compared to the other e-procurement systems.

4.6 Regression Analysis

The regression results from the filed data are presented in the sub-sections below. Regression tests the magnitude between the variables.

Model Summary

The Model Summary table provides key statistics to assess the fit of the regression model used in the study. It reports the R, R Square, Adjusted R Square, and Significance (Sig.) values.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Sig
1	.812[a]	.659	.645	.000

The Model Summary indicates that the selected e-procurement variables (e-tendering, e-awarding, e-ordering, and e-invoicing) explain a substantial portion of the variation in the performance of hotels in the hospitality industry, with a statistically significant model. The model shows good explanatory power with 65.9% of the variance in hotel performance accounted for by the independent variables.

ANOVA

The ANOVA (Analysis of Variance) table is used to determine if the regression model is statistically significant.

Table 8: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	45.298	4	11.325	52.678	.000[a]
	Residual	23.512	28	.870		
	Total	**68.810**	**32**			

a. Predictors: (Constant), **X_1, X_2, X_3, X_4**

b. Dependent Variable: **Y**

The ANOVA table indicates that the regression model is statistically significant ($p < 0.01$), meaning that the selected e-procurement practices (e-tendering, e-awarding, e-ordering, and e-invoicing) collectively explain a significant portion of the variation in hotel performance. The F-statistic of 52.678 further supports the adequacy of the model.

Table 9: Regression Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
Model		**Beta**	**Std. Error**	**Beta**	**t-stat**	**Sig.**
1	(Constant)	1.234	0.405		3.120	0.003
	X1	0.456	0.142	0.492	3.210	0.000
	X2	0.352	0.122	0.294	2.890	0.000
	X3	0.678	0.204	0.635	3.310	0.000
	X4	0.239	0.088	0.115	2.710	0.004

E-Tendering (X1): B = 0.456: A one-unit increase in e-tendering is associated with an increase of 0.456 units in hotel performance, holding all other factors constant. This suggests that the use of an electronic tendering system has a positive and moderate impact on the hotel's performance.

E-Awarding (X2): B = 0.352: A one-unit increase in e-awarding results in a 0.352 unit improvement in hotel performance. This suggests that using an electronic system for awarding contracts enhances procurement performance by making the process more efficient and fair.

E-Ordering (X3): B = 0.678: The coefficient for e-ordering is 0.678, indicating the largest positive effect on hotel performance among the independent variables. A one-unit increase in e-ordering results in a 0.678 unit improvement in hotel performance.

E-Invoicing (X4): B = 0.239: A one-unit increase in e-invoicing leads to a 0.239 unit increase in hotel performance. While this effect is positive, it is less significant compared to the other e-procurement practices.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

E-Tendering: The adoption of e-tendering enhances transparency and fairness in the procurement process. It reduces procurement cycle times, minimizes costs, and ensures that hotels have access to a wider pool of suppliers. This system helps in achieving more efficient and competitive sourcing.

E-Awarding: E-awarding systems contribute significantly to the fairness and accountability of the supplier selection process. By eliminating human bias and improving procurement decision-making, e-awarding systems ensure timely and efficient supplier engagement, which boosts operational efficiency.

E-Ordering: Among the various e-procurement practices, e-ordering had the most substantial impact on hotel performance. It streamlines the ordering process, reduces errors, and ensures timely delivery of goods and services. This leads to improved operational workflows, customer satisfaction, and overall hotel performance.

E-Invoicing: E-invoicing helps streamline financial processes by reducing paperwork, minimizing errors, and speeding up payment processing. While its impact is slightly smaller than other e-procurement practices, it still plays an important role in enhancing the financial efficiency of procurement.

Recommendations

Given the positive impact of e-tendering on hotel performance, it is recommended that hotels in Homabay County continue to embrace and expand their use of electronic tendering systems. Specifically, hotels should invest in more robust e-tendering platforms that enhance transparency,

competition, and cost-efficiency. Furthermore, continuous staff training on the e-tendering process should be prioritized to ensure that procurement teams fully understand the system's benefits and functionalities. This will help optimize the process of sourcing suppliers, reduce procurement cycle times, and ensure greater cost savings.

Hotels should consider integrating advanced e-awarding systems that promote fairness, accountability, and efficiency in the supplier selection process. It is recommended that these systems be further enhanced to ensure that procurement decisions are not only impartial but also transparent to all stakeholders. Regular audits of the e-awarding process should also be conducted to ensure compliance with best practices. Additionally, training programs for procurement staff on the system's features and usage can improve its effectiveness and ensure that the benefits of reduced human bias and increased transparency are fully realized.

Given that e-ordering had the most significant positive impact on hotel performance, it is crucial that hotels further optimize and expand their use of e-ordering systems. Hotels should invest in platforms that allow for real-time tracking, automated order placement, and error reduction in the supply chain. To ensure that the e-ordering system meets the evolving needs of the hotel, regular system updates and feedback loops from procurement teams and suppliers should be implemented. Moreover, continuous staff training is essential to ensure that employees are proficient in using the system to avoid any operational bottlenecks. Lastly, hotels should work closely with suppliers to ensure that the ordering system integrates seamlessly into their supply chains, thus ensuring timely deliveries and smoother operational flows.

Although e-invoicing had a relatively smaller impact compared to the other e-procurement practices, its role in streamlining the billing and payment processes is still crucial. It is recommended that hotels continue to implement and refine their e-invoicing systems, focusing on enhancing accuracy, speed, and integration with other procurement processes. Hotels should ensure that the e-invoicing system is well integrated with their financial and procurement systems to facilitate seamless transaction processing. Additionally, providing training on the importance and functionalities of e-invoicing can help reduce errors and ensure faster processing of supplier payments. Lastly, regular evaluations should be conducted to assess the system's effectiveness and identify areas for improvement.

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