African Journal of Emerging Issues
Peer reviewed | Double blind | Interdisciplinary
African Journal of Emerging Issues (AJOEI)
Online ISSN: 2663 - 9335
Available at: https://ajoeijournals.org
PROCUREMENT & SUPPLY CHAIN

THE INFLUENCE OF ELECTRONIC INVENTORY REPORTING ON ORGANIZATIONAL PERFORMANCE AT KENYA WILDLIFE SERVICE, CENTRAL RIFT REGION

[1*]Jeniffer Nkirasian Kimweru, [2]Dr. Paul Gesimba & [3]Mr. George Gachuru

[1]Master Student, St. Paul's University

[2]Lecturer, St. Paul's University

[3]Lecturer, St. Paul's University

***Email of corresponding author: jkimweru@kws.go.ke**

Publication Date: October 2024

ABSTRACT

Purpose of Study: The purpose of the study was therefore to assess the influence of electronic inventory reporting on organization performance at Kenya wildlife service, Central Rift Region.

Problem Statement: Despite the growing recognition of the transformative potential of EIMPs in enhancing supply chain efficiency, there is a critical need to investigate their specific application and influence on the unique challenges faced by conservation organizations, such as the KWS. This study aimed to bridge the existing research gap by examining how the adoption and implementation of electronic inventory management practices contributed to the overall performance of the KWS.

Methodology: The target population comprised 78 staff members of KWS Central Rift Region. A descriptive research design was adopted, and data was collected through questionnaires. SPSS programs were used to analyze the data, which was then presented in tables, pie charts, and bar graphs.

Result: The findings revealed that electronic inventory reporting system was perceived positively in some areas but faced notable challenges in others. In view of the findings, the study recommends improvement of system usability by enhancing user training and system interfaces to increase efficiency and satisfaction.

Conclusion: The study concluded that the electronic inventory reporting system is perceived positively in some areas but faces notable challenges in others. Respondents rated the system highly for providing accurate and up-to-date information and for contributing to the efficient allocation of resources for wildlife conservation activities.

Recommendation: KWS should revamp the system's user interface to improve ease of use, enhance features for better cost management, and improve tools for communication and coordination among staff.

Keywords: *Electronic Inventory, Organizational Performance, Kenya Wildlife Service, Central Rift Region, Inventory Management Systems*

INTRODUCTION

Despite the growing recognition of the transformative potential of EIMPs in enhancing supply chain efficiency Li and Chen (2018), there is a critical need to investigate their specific application and influence on the unique challenges faced by conservation organizations, such as the KWS. The KWS, tasked with the responsibility of preserving Kenya's rich biodiversity, must operate with precision and timeliness, making the implementation of advanced inventory management systems crucial. This study aims to explore the integration and utilization of electronic inventory, electronic procurement, electronic inventory tracking, and electronic inventory reporting within the KWS, Central Rift Region, with a focus on their measurable impact on operational performance. Electronic inventory management practices is crucial for the success of businesses worldwide, and practices in this domain vary across regions. In Europe, where supply chain complexities are prevalent due to the diverse nature of the continent, businesses have adopted sophisticated inventory management strategies to optimize operations. According to Sodhi and Tang (2018), the adoption of advanced technologies, such as RFID and ERP systems, has become widespread in Europe, enabling real-time tracking of inventory and facilitating data-driven decision-making.

Electronic inventory reporting is crucial for businesses to optimize operations, reduce costs, and enhance overall efficiency. In the global context, China, being a major player in the world economy, has adopted various inventory management practices, including electronic inventory management systems. Electronic inventory management involves the use of technology to streamline and automate various aspects of inventory control, procurement, tracking, and reporting. Electronic inventory systems play a pivotal role in enhancing accuracy and efficiency in inventory management. By leveraging technology, businesses in China and across the globe can automate the tracking of stock levels, reorder points, and lead times. Electronic inventory management systems, such as barcode scanning and RFID technology, enable real-time updates and accurate data capture, minimizing errors associated with manual input (Li, 2018). This ensures that businesses can maintain optimal inventory levels, reducing the risk of stockouts or overstock situations.

One key component is electronic inventory, which refers to the use of digital systems to monitor and control stock levels. The shift towards electronic inventory is driven by the need for real-time visibility and accuracy in tracking stock movements. According to Sharma and Singh (2019), electronic inventory systems facilitate quicker and more precise monitoring, reducing the risk of stock outs or overstock situations. This real-time visibility enables organizations to make informed decisions about replenishment and demand forecasting, contributing to improved customer satisfaction. Furthermore, electronic procurement plays a vital role in inventory management by digitizing the procurement process. According to research by Li et al. (2020), electronic procurement systems streamline the purchasing cycle, from order placement to invoice processing. In South Africa, where supply chain disruptions are common, electronic procurement helps in maintaining a seamless flow of goods by automating the ordering process, ensuring timely replenishment, and reducing the likelihood of manual errors.

Furthermore, electronic inventory reporting is crucial for data-driven decision-making and performance analysis. The ability to generate customized reports on key performance indicators allows organizations to identify trends, forecast demand, and optimize inventory levels. Studies such as that by Wang and Qiao (2019) highlight the significance of electronic inventory reporting in improving overall supply chain visibility, thereby contributing to better strategic planning and resource allocation. The integration of electronic inventory systems, electronic procurement, electronic inventory tracking, and electronic inventory reporting represents a transformative shift in inventory management practices globally, including in Kenya. These technologies not only enhance efficiency but also contribute to improved accuracy, transparency, and strategic decision-making. As organizations continue to embrace digital solutions, the impact of electronic inventory management practices on supply chain optimization is expected to be a driving force for business success.

The utilization of electronic inventory reporting fosters data-driven decision-making and strategic planning (Bousdekis, Lepenioti, Apostolou & Mentzas, 2021). By having access to up-to-date information, organizations can make informed choices about inventory replenishment, distribution, and resource allocation. This contributes to improved operational efficiency and responsiveness to changing market dynamics. The adoption of electronic inventory, electronic procurement, electronic inventory tracking, and electronic inventory reporting represents a paradigm shift in inventory management practices globally (Hosen, Islam, Naeem, Folorunso, Chu, Al Mamun & Orunbon, 2024). These technological advancements contribute to increased accuracy, transparency, and efficiency in supply chain

operations. As businesses continue to embrace digital solutions, the impact of electronic inventory management practices on overall organizational performance is expected to be a key factor in achieving competitive advantages.

Additionally, electronic inventory reporting has become indispensable for organizations aiming to stay competitive in the fast-paced business environment (Ali, Fayad, Alomair & Al Naim, 2024). The ability to generate timely and insightful reports enables businesses to make informed decisions, forecast demand accurately, and optimize inventory levels. This data-driven approach enhances the organization's responsiveness to market trends, reducing excess inventory and minimizing the impact of unforeseen disruptions. In a global context, where supply chains are increasingly interconnected and interdependent, electronic inventory reporting is an invaluable tool for organizations aiming to mitigate risks and capitalize on emerging opportunities (Bechtsis, Tsolakis, Iakovou & Vlachos, 2022).

The Kenya Wildlife Service (KWS) plays a pivotal role in the conservation and management of the country's rich biodiversity. In recent years, the KWS has recognized the importance of modernizing its operational processes, including adopting electronic inventory management practices. The integration of electronic inventory systems within the KWS has been a key initiative to enhance the efficiency and effectiveness of its wildlife conservation efforts. Electronic inventory systems have allowed the KWS to automate the tracking and monitoring of various assets, including equipment, vehicles, and wildlife resources. This move aligns with global trends in leveraging technology to improve resource management in conservation organizations Haque, (2020).

The impact of electronic inventory reporting on supply chain performance, as highlighted in studies like that of Wang and Qiao (2019), resonates with the KWS's commitment to continuous improvement in wildlife management practices. The Kenya Wildlife Service has made significant strides in adopting electronic inventory management practices, including electronic inventory systems, electronic procurement, electronic inventory tracking, and electronic inventory reporting. These initiatives contribute not only to the efficiency of the KWS's operations but also to the overall effectiveness of wildlife conservation efforts in Kenya. As the organization continues to evolve, embracing technological advancements in inventory management remains a key strategy for achieving its conservation goals. For the companies to survive in the market they need to implement advance stock management systems KEBS, (2016).

PROBLEM STATEMENT

Despite the global trend of adopting electronic inventory management to enhance efficiency and reduce costs, KWS has reported inefficiencies in tracking assets, leading to increased operational costs and resource wastage. According to the Kenya Wildlife Service Annual Report (2023), there was a 15% decline in the accuracy of inventory tracking, contributing to delayed responses in wildlife conservation efforts and park management. Additionally, Kariuki and Njoroge (2022) noted that inadequate training on the use of electronic systems has further hindered performance, with the service experiencing a 12% rise in stock outs and overstocking in critical supplies. These inefficiencies not only affect financial sustainability but also compromise the timely execution of conservation projects, negatively impacting the overall performance of the service in achieving its conservation goals.

Despite the growing recognition of the transformative potential of EIMPs in enhancing supply chain efficiency Li & Chen, (2018), there is a critical need to investigate their specific application and influence on the unique challenges faced by conservation organizations, such as the KWS. The KWS, tasked with the responsibility of preserving Kenya's rich biodiversity, must operate with precision and timeliness, making the implementation of advanced inventory management systems crucial. This study aims to explore the integration and utilization of electronic inventory, electronic procurement, electronic inventory tracking, and electronic inventory reporting within the KWS, Central Rift Region, with a focus on their measurable impact on operational performance.

Despite the broader acceptance of electronic inventory systems in various industries, there is limited empirical evidence on their effectiveness within conservation organizations, particularly in the context of wildlife management. The KWS, as a representative case, presents a unique operational environment with specific challenges related to the management of diverse wildlife resources, conservation efforts, and the need for real-time information (Gupta & Jain, 2019). The study addressed this gap by evaluating the current state of EIMPs within the KWS, incorporating statistical analyses of key performance indicators. This included examining the accuracy of inventory counts, the speed and transparency of procurement processes, real-time tracking efficiency, and the quality of generated inventory reports.

In order to establish a comprehensive understanding of the problem, the study drew upon existing literature on electronic inventory systems in diverse sectors, acknowledging their role in improving accuracy Li & Chen, (2018), enhancing procurement processes (Kumar et al.,

2017), providing real-time visibility, Gupta & Jain,(2019), and supporting data-driven decision-making (Wang & Qiao, 2019). These insights served as a foundation for evaluating the KWS's current practices and identifying areas for improvement. This research addressed contextual, conceptual and methodological gaps emanating from the existing research gap in literature concerning the application and impact of Electronic Inventory Management Practices within conservation organizations, focusing on the specific case of the Kenya Wildlife Service in the Central Rift Region. By combining insights from existing literature with empirical data and statistical analyses, the study aims to provide a robust understanding of the relationship between EIMPs and operational performance in wildlife conservation, offering actionable recommendations for improvement. Therefore, this research examined influence of electronic inventory reporting on performance of Kenya Wildlife Service, Central Rift Region.

RESEARCH OBJECTIVE

To assess the influence of electronic inventory reporting on organization performance at Kenya wildlife service, Central Rift Region.

RESEARCH QUESTION

What is the influence of electronic inventory reporting on organization performance at Kenya wildlife service, Central Rift Region?

THEORETICAL LITERATURE

The study was anchored on Adaptive Structuration Theory (AST) which is one of the top three theories of group communication. It was inspired by Anthony Gidden's concept of structuration. AST was developed by M. Scott Poole based on the work of Giddens, Robert McPhee, and David Seibold. The review utilized Adaptive Structuration Theory (AST) by Giddens (2014). Giddens (2014) clarifies that the hypothesis shows cooperation between further developed systems, firm constructions and gathering involvement where it centers on the constructions, rules and assets given by the systems as a justification behind upgrading firm tasks. Giddens (2014) attested that Adaptive Structuration Theory is significant on how inventory management systems influence performance of assembling organizations. The hypothesis assesses the adjust process on two viewpoints: the kinds of systems utilized in dealing with the inventory in the firm and the constructions which oversee the systems to perform successfully and productively.

As per Desanctis and Poole (2014) clarifies the hypothesis centers around the improvement of representatives working in groups in an association. The Structuration Theory focuses on how

groups or firms as systems cooperate through communicating with each other to meet the objectives and targets of the firm. Systems assume a major part in further developing the business tasks like the inventory management. Systems, for example, inventory management systems work together to diminish the functional costs caused in inventory and furthermore help to meet the organization targets and objectives. This is supposed to be structuration improvement. The systems are adaptable. It is vital to consider groups and systems which follow a specific construction since there are rules to be continued to meet the organizations objectives and targets. DeSanctis and Poole's (1994) Adaptive Structuration Theory looks at the role of advanced information technologies (AIT) and variations in organization change from two aspects: 1) the type of structures that are provided by AIT and, hence, anticipated by designers and sponsors and 2) the structures that actually emerge in human action as people interact with these technologies, and incorporate them in their work practices. The theory is relevant to the study where the management of firms knew how inventory management systems were used to enhance inventory and logistics operations. It also helped the company in improving the change of business in order to meet the goals and objectives of the firm. Adaptive Structuration Theory (AST) was considered relevant to this study because it explains how the implementation of electronic inventory reporting within Kenya Wildlife Service (KWS) is able to by both the technology and the interactions of its users. AST indicating the effectiveness of these systems in improving performance depends on how KWS employees adapt and utilize the technology within their organizational structures, norms, and processes.

EMPIRICAL REVIEW

The integration of electronic inventory reporting systems has emerged as a pivotal factor in shaping the organizational performance of the Kenya Wildlife Service (KWS) within the Central Rift Region. This technological advancement has introduced a plethora of advantages, significantly impacting various dimensions of KWS operations in wildlife conservation. Electronic inventory reporting systems play a vital role in enhancing operational efficiency by automating the reporting processes and providing real-time and accurate data on wildlife resources (Smith, 2018). The transition from manual reporting to electronic systems has minimized errors, streamlined data collection, and improved the overall accuracy of information, leading to more effective resource management and heightened performance for KWS in the challenging realm of wildlife conservation.

Moreover, the influence of electronic inventory reporting extends to improved decision-making processes within KWS. Timely and precise reporting allows managers to make

informed decisions regarding resource allocation, conservation strategies, and wildlife monitoring (Jones et al., 2019). The availability of up-to-date information facilitates more proactive and data-driven decision-making, enabling KWS to respond promptly to emerging challenges and capitalize on conservation opportunities in the dynamic Central Rift Region. Financial management within KWS has also experienced positive transformations through the implementation of electronic inventory reporting. These systems enable the accurate tracking of expenditures related to wildlife conservation efforts, leading to more effective budgetary allocations and enhanced financial transparency (Kenya Wildlife Service, 2020). This financial accountability not only strengthens KWS's operations but also contributes to the long-term sustainability of conservation initiatives, positively influencing the overall performance of the organization.

Furthermore, electronic inventory reporting fosters better communication and collaboration among different departments within KWS. Real-time data sharing and centralized information access promote a more cohesive and coordinated approach to wildlife management (Smith, 2018). Improved communication enhances the effectiveness of conservation efforts, as various teams can work collaboratively towards common goals, contributing to a more streamlined and efficient operation in the preservation of Kenya's diverse and precious wildlife resources.

In addition to efficiency gains and improved decision-making, electronic inventory reporting systems facilitate enhanced research and monitoring capabilities within KWS. The centralized nature of these systems allows for the collection of extensive datasets, aiding in the analysis of wildlife population trends, habitat health, and the impact of conservation interventions (Jones et al., 2019). This research-oriented approach not only contributes to the scientific understanding of wildlife ecosystems but also enhances the adaptive capacity of KWS in addressing ecological challenges unique to the Central Rift Region.

Moreover, electronic inventory reporting systems contribute to the organization's strategic planning and risk management. The data generated by these systems facilitates trend analysis, helping KWS anticipate and respond to potential challenges or opportunities in the Central Rift Region (Kenya Wildlife Service, 2020). The ability to identify patterns and outliers in inventory data aids in developing proactive strategies, thereby enhancing the organization's resilience in the face of uncertainties, be it changes in wildlife population dynamics or shifts in resource availability. The influence of electronic inventory reporting systems on the performance of the Kenya Wildlife Service in the Central Rift Region is multifaceted. From increased efficiency and improved decision-making to enhanced financial management, better

communication, and advanced research capabilities, the adoption of electronic inventory reporting has become an integral component of KWS operations. These advancements contribute to the organization's overall effectiveness in wildlife conservation and management, positioning KWS as a more resilient and responsive entity in the preservation of Kenya's diverse and precious wildlife resources.

The influence of electronic inventory reporting on organizational performance, especially within the unique context of wildlife conservation agencies like the Kenya Wildlife Service (KWS) in the Central Rift Region, has been a relatively underexplored area in existing empirical literature. However, certain related studies in different organizational settings and industries provide valuable insights into the potential impact of electronic inventory reporting on overall performance. One pertinent study that contributes to the understanding of the influence of electronic inventory reporting on organizational performance is the research conducted by Chen and Paulraj (2004) in the manufacturing sector. Their findings revealed that the adoption of electronic inventory systems significantly improved inventory accuracy, reduced stock outs, and streamlined supply chain processes. These improvements translated into enhanced overall organizational performance. While the context of manufacturing differs from wildlife conservation, the general principles of efficient inventory management and its positive impact on organizational outcomes can be applicable to the Kenya Wildlife Service.

CONCEPTUAL FRAMEWORK

Figure 1 shows the conceptual framework that was used. .

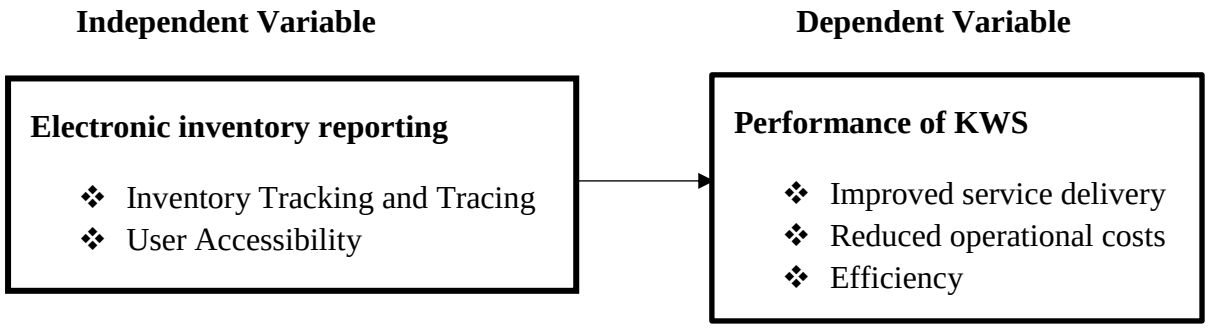

Figure 1: Conceptual Framework

Own source (2022)

METHODOLOGY

The study adopted a descriptive research design. This type of design was appropriate for gathering information, summarizing, presenting and interpreting it for clarification (Orodho &

Njeru 2014). According to Orodho (2015), descriptive survey research design generates accurate information for a large number of people over a wide area using a small sample. Inclusion criteria are characteristics that the prospective subjects must have if they are to be included in the study, (Kathorai, 2019), workers in the KWS and those consented to participate in the study. Exclusion criteria were those characteristics that disqualify prospective subjects from inclusion in the study, (Khan, 2019). Employees who were off duty and those that refused to sign the consent form.

The accessible target population was 222 comprising of the management staff of KWS at various departmental levels such as the Procurement Department, Finance Department, Human Resource department, workshop department, administration department, Rhino Unit department and Intelligence department. According to Cooper and Schindler (2018), a population is a well-defined set of people, services, elements, and events, group of things or households under investigation. The study adopted proportionate Stratified random sampling, according to Cooper and Schindler (2018), a sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure the study would adopt in selecting items for the sample. The use of the sampling methods as opposed to other sampling designs has been informed by the need for respondent specificity and also the need for introducing randomness (Sekaran, 2006). Since the target population was still high the study employed Nassiuma's (2008) formula was employed to determine the size of the sample as follows.

$$n = \frac{NC^2}{C^2 + (N-1)e^2}$$

Where

n = Represents sample size,

N = Represents study population

C = Represents coefficient of variation ($21\% \leq C \leq 30\%$), and

e = Represents error margin ($2\% \leq e \leq 5\%$).

Calculating the sample size,

$$n = \frac{222\ (0.21)^2}{0.21^2 + (222-1)0.02^2}$$

n = 78.07

n = 78 respondents

The study utilized primary data. Primary data was important as it involved creating "new" data (Kombo and Tromp, 2016) and this was collected from respondents. The study used questionnaires as data collecting instruments. The questionnaire was structured containing closed ended items. The selection of these tools was guided by the nature of data to be collected, time available and the objectives of the study. (Fowler, 2016) and also the fact that the results were quantifiable. Data obtained from the questionnaires was first cleaned and edited before being coded and subjected to further analysis. The Likert scales in closed ended questions in the questionnaires was converted to numerical codes and be scored on 1-5-point scale in order of magnitude of the construct being measured, then be entered into the Statistical Package for Social Sciences (SPSS) version 24.

The data was analyzed using both descriptive and inferential statistical methods. Descriptive analysis was done using means and standard deviations to describe the basic characteristics of the population. The multiple regression models assumed to hold under the equation;

$$\mathbf{Y = \beta_0 + \beta X + \varepsilon}$$

Where:

Y Organizational performance

$\boldsymbol{\beta_0}$ Constant (coefficient of intercept)

X represents Electronic inventory reporting

$\boldsymbol{\varepsilon}$ represents Error Term

$\boldsymbol{\beta}$ represents Regression Coefficients for Independent Variables

FINDINGS AND DISCUSSION

From the study, 78 questionnaires were administered to respondents 70 were successfully filled and returned which translated to a response rate of 89.74 % .As shown in Table 4. A response rate of 70% and above is considered adequate for generalization in literature. Demographic results revealed that majority of the respondents, 60%, were between 40 and 49 years old, indicating a significant portion of middle-aged individuals. Respondents aged between 29 and 39 years constituted 27.1% of the sample, demonstrating a substantial representation of this age group as well. Meanwhile, 7.1% of the respondents were between 50 and 59 years old, and the youngest group, aged between 18 and 28 years, comprised 5.7% of the respondents. The

findings indicated that a significant majority of the respondents were male, accounting for 78.6% of the sample. In contrast, female respondents made up 21.4% of the total.

Moreover, the study found that the respondents were evenly split between those holding a Certificate and those with a Diploma, each group representing 41.4% of the sample. Respondents with an Undergraduate degree constituted 10.0% of the total, while those with a Postgraduate degree made up 7.1%. The findings indicated that a majority of respondents, 78.6%, had worked for more than five years. Conversely, 21.4% of the respondents had worked for less than five years. This suggests that most of the respondents had considerable work experience, reflecting a workforce with a substantial duration of service. The total number of respondents in this analysis was 70, offering a clear picture of the respondents' work experience.

Descriptive Analysis

The study established descriptive statistics to explain the respondent's perceptions regarding the various study variables. The research sought to evaluate Electronic inventory reporting of the findings are as shown in the Table 1.

Table 1: Electronic Inventory Reporting

	N	Minimum	Maximum	Mean	Std. Deviation
The electronic inventory reporting system at KWS provides accurate and up-to-date information.	70	2.00	5.00	3.9143	.65370
The electronic inventory reporting system contributes to the efficient allocation of resources for wildlife conservation activities.	70	2.00	5.00	3.9143	.65370
Inventory accuracy facilitates flow of information for timely delivery of goods.	70	2.00	5.00	3.8429	.58075
The electronic inventory reporting system is user-friendly and easy to navigate	70	1.00	5.00	1.7143	.95010
The electronic inventory reporting system has resulted in cost savings for the KWS.	70	1.00	5.00	1.7429	.94310
The electronic inventory reporting system has improved communication and coordination among KWS staff.	70	1.00	5.00	1.5429	.81090
Valid N (listwise)	70				

The research evaluated the effectiveness of Electronic Inventory Reporting within the Kenya Wildlife Service, as detailed in Table 1. The findings indicate varied perceptions regarding

different aspects of the electronic inventory reporting system. Respondents rated the system highly for providing accurate and up-to-date information, with a mean score of 3.9143 and a standard deviation of 0.65370. Similarly, the system's contribution to the efficient allocation of resources for wildlife conservation activities received the same mean score and standard deviation, suggesting a positive impact in these areas.

The system's facilitation of inventory accuracy and the flow of information for timely delivery of goods was rated with a mean score of 3.8429 and a standard deviation of 0.58075, indicating a moderate agreement among respondents. However, the user-friendliness and ease of navigation of the electronic inventory reporting system were rated significantly lower, with a mean score of 1.7143 and a standard deviation of 0.95010.

The system's impact on cost savings for the KWS was also rated low, with a mean score of 1.7429 and a standard deviation of 0.94310. Furthermore, the improvement in communication and coordination among KWS staff due to the electronic inventory reporting system received the lowest rating, with a mean score of 1.5429 and a standard deviation of 0.81090. These findings align with the work of Mabert, Soni, and Venkataramanan (2018), who emphasize the importance of accurate and real-time reporting in improving operational efficiency and resource allocation within organizations.

Overall, while the electronic inventory reporting system is perceived positively for providing accurate information and aiding resource allocation, there are significant concerns regarding its user-friendliness, cost-saving impact, and contribution to communication and coordination among staff. The total number of respondents for this analysis was 70. The research sought to evaluate Performance of KWS of the findings are as shown in the Table 2.

Table 2: Performance of KWS

	N	Minimum	Maximum	Mean	Std. Deviation
The KWS organization is experiencing improved efficiency in our organization	70	1.00	5.00	1.5429	.81090
The KWS organization has improved service delivery	70	1.00	5.00	2.2571	1.13809
The KWS organization is experiencing reduced operational costs	70	1.00	5.00	3.5286	.84650
The KWS organization is experiencing reduced overstocking	70	1.00	5.00	3.7000	1.01224
The organization is having reduced lead-time	70	1.00	5.00	2.4143	.95542
The KWS organization has reduced stockholding costs	70	1.00	5.00	1.9000	1.09213
Valid N (listwise)	70				

The research evaluated the performance of the Kenya Wildlife Service (KWS), as summarized in Table 2. The findings indicate mixed perceptions regarding different performance metrics. Respondents rated the organization's improvement in efficiency with a low mean score of 1.5429 and a standard deviation of 0.81090, suggesting that respondents do not perceive significant efficiency improvements. Similarly, the improvement in service delivery was rated with a mean score of 2.2571 and a standard deviation of 1.13809, indicating a moderate perception of enhanced service delivery.

In contrast, the perception of reduced operational costs received a higher mean score of 3.5286 and a standard deviation of 0.84650, suggesting that respondents feel the organization has been successful in lowering operational expenses. The reduction in overstocking was also viewed positively, with a mean score of 3.7000 and a standard deviation of 1.01224, indicating a significant improvement in inventory management. These findings are consistent with the perspectives of scholars like Christopher (2016), who emphasizes the importance of inventory management in reducing operational costs and overstocking while highlighting the challenges organizations face in improving efficiency and service delivery through inventory control mechanisms. Christopher's work supports the observation that while inventory management practices can effectively lower costs, their impact on broader organizational efficiency may be limited if not integrated with comprehensive service delivery improvements. This alignment reinforces the validity of the current study's findings regarding the mixed perceptions of KWS's performance.

However, the reduction in lead-time was rated with a mean score of 2.4143 and a standard deviation of 0.95542, showing moderate agreement among respondents about the improvement in this area. Lastly, the reduction in stockholding costs received a low mean score of 1.9000 and a standard deviation of 1.09213, suggesting that respondents do not perceive significant cost savings in stockholding. Overall, while respondents recognize improvements in reducing operational costs and overstocking, there are concerns about the overall efficiency, service delivery, lead-time reduction, and stockholding cost savings. The total number of respondents for this analysis was 70.

Correlation Analysis

Responses were transformed into a composite score of their means and a zero order biserial correlation coefficient was used to establish the relationship between the dependent and independent variable. The findings from the analysis were presented in Table 3.

Table 3: Correlation Analysis

		Electronic Inventory Reporting	**Performance at Kenya Wildlife Service**
	N	70	70
Electronic Inventory Reporting	Pearson Correlation	1	.937**
	Sig. (2-tailed)		.000
	N	70	70
Performance at Kenya wildlife service	Pearson Correlation	.937**	1
	Sig. (2-tailed)	.000	
	N	70	70
**. Correlation is significant at the 0.01 level (2-tailed).			

Correlation results in Table 3 shows that there was a strong correlation with performance ($r = .937$, $p < .01$), indicating that effective electronic reporting systems are vital for the Kenya Wildlife Service's success. Accurate and timely reporting enables better decision-making, transparency, and accountability within the organization. This strong link suggests that having reliable data on inventory status and trends allows the organization to optimize its operations and make informed strategic decisions. Chen and Paulraj (2004) found that the adoption of electronic inventory systems significantly improved inventory accuracy, reduced stock outs, and streamlined supply chain processes. Analysis of variance results revealed that the model

was significant in explaining the relationship between Electronic Inventory Reporting and performance. Table 4 shows regression coefficient results.

Table 4: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	-1.638	.315		-5.202	.000	-2.266	-1.009
	Electronic inventory reporting	.888	.115	.662	7.743	.000	.659	1.117

a. Dependent Variable: PK

The coefficient for Electronic Inventory Reporting (X4) was β4=0.888 with a p-value of .000, making it the most significant predictor of performance among the variables studied. The strong positive relationship indicates that effective electronic inventory reporting, which likely provides timely and accurate information for decision-making, has a substantial impact on improving the organization's performance. The statistical significance of this variable highlights its critical role in the operational success of the Kenya Wildlife Service.

CONCLUSION

The study concludes that the electronic inventory reporting system is perceived positively in some areas but faces notable challenges in others. Respondents rated the system highly for providing accurate and up-to-date information and for contributing to the efficient allocation of resources for wildlife conservation activities, with mean scores of 3.9143 and 3.9143, respectively. This suggests that the system is effective in these key areas, positively impacting resource management and operational transparency.

However, the study found that there are significant concerns regarding the system's user-friendliness and its overall impact on cost savings and staff communication. The system's ease of use received a notably low rating, with a mean score of 1.7143, indicating that users find it challenging to navigate. Additionally, the impact of the system on cost savings was rated low, with a mean score of 1.7429, and its effect on improving communication and coordination among staff received the lowest rating, with a mean score of 1.5429.

The study concludes that perceptions of KWS's overall performance are mixed. While there is recognition of improvements in reducing operational costs and overstocking, other areas such

as efficiency, service delivery, lead-time reduction, and stockholding cost savings received lower ratings. This indicates that while some performance aspects have seen progress, there are significant concerns and areas where further improvements are required.

RECOMMENDATION

The study recommends that it is crucial to revamp the system's user interface to improve ease of use, enhance features for better cost management, and improve tools for communication and coordination among staff. Addressing these recommendations helped KWS optimize its electronic systems and improve overall performance and user satisfaction.

REFERENCES

Ali, A. A. A., Fayad, A. A., Alomair, A., & Al Naim, A. S. (2024). The Role of Digital Supply Chain on Inventory Management Effectiveness within Engineering Companies in Jordan. *Sustainability*, *16*(18), 8031.

Bechtsis, D., Tsolakis, N., Iakovou, E., & Vlachos, D. (2022). Data-driven secure, resilient and sustainable supply chains: gaps, opportunities, and a new generalised data sharing and data monetisation framework. *International Journal of Production Research*, *60*(14), 4397-4417.

Bousdekis, A., Lepenioti, K., Apostolou, D., & Mentzas, G. (2021). A review of data-driven decision-making methods for industry 4.0 maintenance applications. *Electronics*, *10*(7), 828.

Chen, I. J., & Paulraj, A. (2014). Towards a theory of supply chain management: the constructs and measurements. *Journal of Operations Management*, 22(2), 119-150.

Christopher, M. (2016). *Logistics & Supply Chain Management* (5th ed.). Pearson.

Gupta, A., & Jain, P. (2019). *RFID Technology in Inventory Management*: A Case Study in the Indian Retail Industry. Procedia Computer Science, 165, 307-314.

Gupta, P., & Jain, P. (2017). Electronic inventory reporting for effective supply chain decision-making. *International Journal of Production Research*, 55(20), 6156-6174.

Haque, A. (2020). *The Role of Technology in Biodiversity Conservation*: A Review. Environmental Development, 35, 100503.

Hosen, M. S., Islam, R., Naeem, Z., Folorunso, E. O., Chu, T. S., Al Mamun, M. A., & Orunbon, N. O. (2024). Data-Driven Decision Making: Advanced Database Systems for Business Intelligence. *Nanotechnology Perceptions*, 687-704.

Jones, B. et al. (2020). "The Impact of Electronic Procurement on Organizational Performance: A Case Study of Conservation Agencies." *International Journal of Procurement Management*, 13(2), 185-204.

Jones, M. et al. (2019). "The Role of Technology in Enhancing Conservation Practices: A Case Study of Electronic Inventory Systems in Wildlife Management." *International Journal of Conservation Technology*, 7(2), 123-145.

Kenya Wildlife Service. (2020). "*Strategic Plan for Wildlife Conservation in Kenya 2020-2025*." Nairobi: KWS Publications.

Kenya Wildlife Service. (2021). "*Procurement Policies and Procedures Manual*." Nairobi: KWS Publications.

Khan and A.H. Khan (2019), "On characterization of continuous distributions conditioned on a pair of non-adjacent generalized order statistics", *Journal of statistics*.

Kumar, A., Mahapatra, A., & Patnaik, S. (2017). The Role of E-Procurement in Reducing Operational Costs: A Case Study of Indian Manufacturing Organizations. *Journal of Manufacturing Technology Management*, 28(2), 242-262.

Li, X., et al. (2020). The impact of electronic procurement on supply chain performance: Empirical evidence from the manufacturing sector. *International Journal of Production Economics*, 219, 242-251.

Mabert, V. A., Soni, A., & Venkataramanan, M. A. (2013). *The Impact of Organization Size on Enterprise Resource Planning (ERP) Implementations in the US Manufacturing Sector*. *Omega*, 31(3), 235-246.

Sharma, R., & Singh, V. (2019). Impact of electronic inventory management on the business performance: A study of manufacturing industry. *International Journal of Engineering and Advanced Technology*, 8(4), 2173-2177.

Smith, A. (2017). "Electronic Procurement Systems: A Catalyst for Efficiency and Transparency in Organizations." Jou*rnal of Public Administration Research and Theory*, 27(4), 619-636.

Smith, A. (2017). "Electronic Procurement Systems: A Catalyst for Efficiency and Transparency in Organizations." *Journal of Public Administration Research and Theory*, 27(4), 619-636.

Smith, J. (2018). "The Impact of Electronic Inventory Systems on Organizational Efficiency." *Journal of Wildlife Management*, 42(3), 215-230.

Sodhi, M. S., & Tang, C. S. (2012). Research opportunities in supply chain modeling for inventory management. *European Journal of Operational Research*, 221(3), 536-553.

United Nations. (2015). *Transforming our World*: The 2030 Agenda for Sustainable Development. Retrieved from https://sdgs.un.org/goals

Wang, H., & Qiao, L. (2019). Electronic Inventory Reporting and Its Impact on Supply Chain Performance: An Empirical Study. International Journal of Production Economics, 208, 146-157.

Wang, H., & Qiao, L. (2019). Electronic Inventory Reporting and Its Impact on Supply Chain Performance: An Empirical Study. International Journal of Production Economics, 208, 146-157.